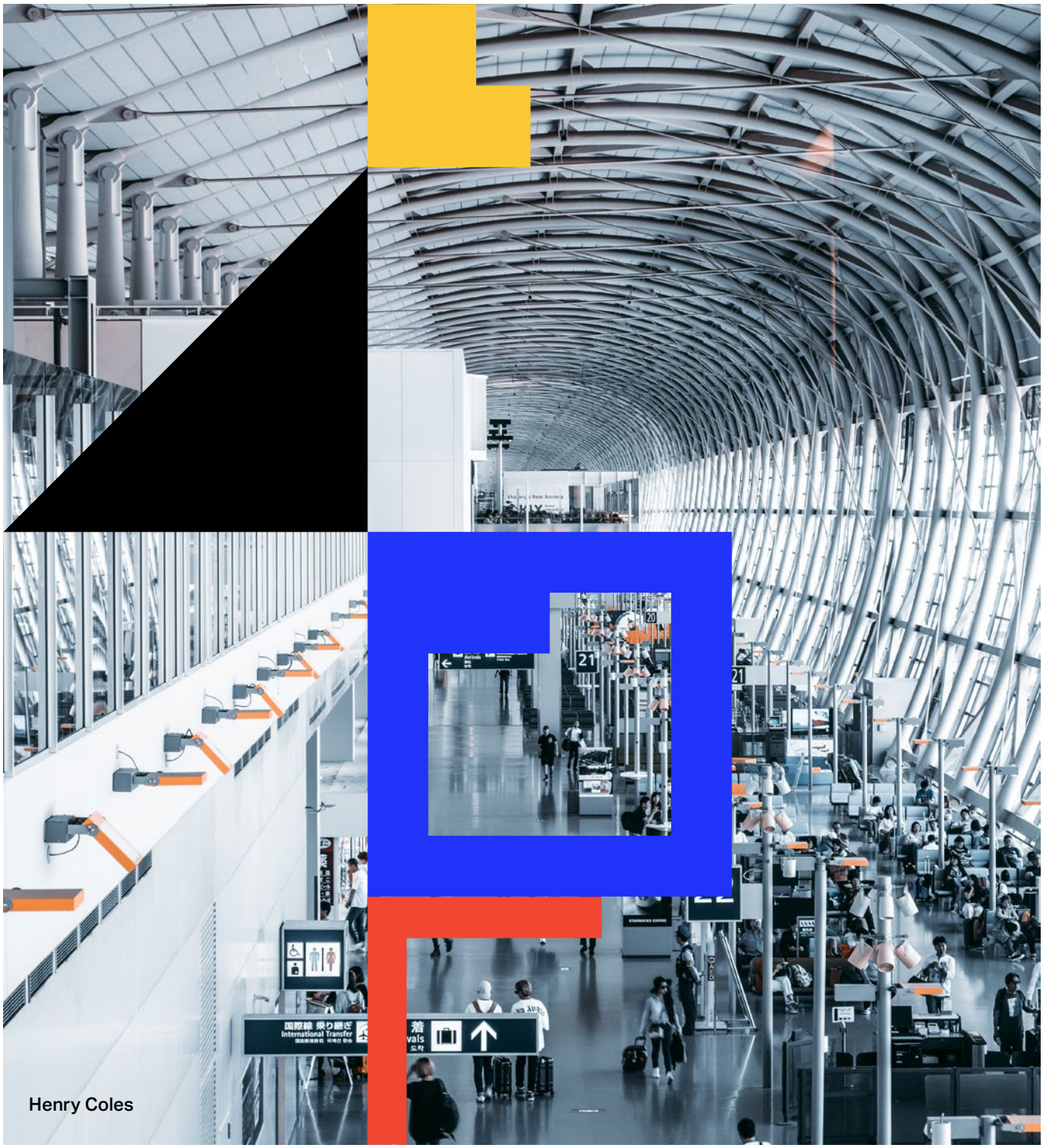
The Future of Interline

A new model for seamless customer journeys

IATA White Paper, October 2019



Executive Summary

Interline is a relationship between airlines which allows one airline sells services to a customer that are provided by another airline. Airlines use interline to sell itineraries that they would otherwise not be able to serve alone. The IATA interline framework has been a cornerstone of the airline industry for almost as long as the industry has been operating.

Today's interline framework creates challenges for airlines to maintain commercial control. In many interline itineraries there is limited transparency for customers, and limited support for ancillary services, leaving customers with less choice on interline itineraries.

The complexity of today's interline environment limits the involvement of many players such as low cost carriers, and surface transport operators. The IATA interline framework is a one-sized-fits-all model. Airlines often now negotiate and manage many separate agreements that compliment or replace a traditional interline agreement. Interline models are also emerging in the market that provide alternatives to traditional IATA interlining.

A new framework for interline is needed to address these challenges. Customers should know exactly what they are buying. The responsibility for the customer at every touch point should be clear and communicated to customers. Most importantly, at all customer-touchpoints, real-time data should support a seamless customer service.

The foundation of the new interline framework will be a standard agreement, the Standard Retailer and Supplier Interline Agreement (SRSIA). The first version of this agreement has been developed by airlines within the Interline Group and will be presented to the Passenger Standards Conference for adoption. This agreement will continue to evolve to meet the changing requirements of the industry. The SRSIA can be used to support many different interline models, between different operators, and across different customer service models and different distribution processes.

The new framework seeks to introduce a flexible and dynamic product catalogue, seamlessly combining scheduled flights with ancillary products and services available for interline partners to request

The IATA offer and order management standards will evolve to meet the requirements of retailer and supplier interline interactions. This work is currently underway by leading airlines and technology partners, and the first standards will be published early in 2020. Offer and order management allows each supplier to respond to interline requests in real-time and gives each supplier full commercial control.

Offer and order management standards allow order change processes (a request to the Retailer to allow a change to order originally purchased) to be initiated by any system at any touchpoint.

In today's interline environment, the settlement between airlines is often based on the fare that the customer has paid being shared between airlines. This model made sense when the industry was heavily regulated and airlines charged the same fares, but makes very little sense in a competitive market. Offer and order management allow suppliers to propose settlement value at the time of shopping. Settlement can then occur using this value. A settlement value can be proposed in the currency in which settlement will occur, reducing the number of unnecessary conversions and the impact of currency fluctuations. The new interline framework also gives carriers the opportunity to explore settlement at the time of sale.

Changes to the Interline Framework will address the underlying requirements that today drive codeshare, building a solution that provides simplicity and transparency.

As with all industry initiatives, the role of IATA is to represent, lead and serve the industry. IATA enables airlines to develop standards, and supports airlines by operating platforms and services, and through advocacy and education.

The new interline framework will continue to be discussed by IATA member airlines and partners within IATA's governance groups, and airlines will shape the direction of the new framework.

This whitepaper seeks to introduce to the industry some of the themes that have emerged within discussions on interline. We look forward to progressing these discussions with the industry across 2020 and beyond.

We encourage you to share this whitepaper with internal teams. Interline involves many stakeholders, and there are plenty of opportunities to pilot and test these new concepts to take the first step. For information on standards development activities, visit iata.org/PSC.

Henry Coles
Head, Airline Distribution Standards
IATA, October 2019

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1. It's time to rethink IATA interline

1.1 Background

What is interline?

Interline is a broad term used to describe one airline selling an itinerary to a customer that involves services provided by another airline. The term has also expanded to include ancillary products and services, and to intermodal transport. Interline itineraries sometimes involve connections between different airlines, but often do not. Interline occurs within many different commercial agreements which include the IATA Multilateral Interline Traffic Agreement (MITA), individual interline agreements, codeshare agreements, joint ventures and alliances. Interline relationships are often supported by other agreements such as frequent flier earn and redemption agreements, and premium guest recognition agreements and other forms of cooperation.

Why do airlines interline?

Airlines use interline to serve origin to destination markets that they would otherwise not be able to serve alone. This allows airlines to access new markets and new customers. Airlines also use interline to build network reach, and to secure the loyalty of customers, increasing their market share with individual customers or corporate clients. Finally, interline relationships often allow airlines to participate in markets where they are prevented from operating due to bilateral air service agreements and foreign ownership restrictions.

Over 8% of passenger segments flown by IATA member airlines have been sold by other airlines[1]. Across the entire airline industry, interline revenue is estimated at over USD $52b annually[2]. The proportion of itineraries that involve interline is even higher, at around 10%. Interline continued to be very important for customers, and for airlines.

The IATA Interline Framework

IATA standards, multi-lateral agreements and settlement platforms combine to create the IATA interline framework. This framework facilitates a standard model of interline that is used between IATA member airlines, and by many other airlines IATA standards support common processes around scheduling, reservations, ticketing, pricing, baggage, departure control, irregular operations, interline billing and settlement. In addition to these standards, IATA also administers the Multilateral Interline Traffic Agreement (MITA), a standard interline agreement under which airlines may form an interline relationship. This agreement establishes a legal framework for interline and describes liability and general procedural obligations.

Finally, IATA also administers the Prorate Agency, which manages the Multilateral Proration Agreement Passenger (MPA-P), a default agreement that describes processes for the proration of interline through-fares.

The customer promise of IATA interline

Interline creates many benefits for customers. Customers are able to access many more different itineraries, and often at lower prices. The IATA interline framework involves three key customer promises:

1. Customers pay one price, with one payment in one currency for travel, regardless of the number of different airlines involved in their itinerary.
2. Connections between airlines for both customers and their bags are seamless.
3. In the event of an operational disruption, customers are carried to their final destination.

Interline relationships support customer choice, competition, and better service.

$52b+

Estimated value of interline segments annually

1 Estimated from IATA Direct Data Solutions data, 2018, IATA member airlines only.
2 Estimated from IATA World Air Transport Statistics (WATS) 2018, total airline industry.

1.2 A product of the past

Interline emerged in a regulated industry

The IATA interline framework was developed in time before deregulation. Many of the mechanisms supporting interline do not allow airlines to easily control commercial outcomes. Furthermore, many airlines also do not actively manage interline, given the foundation position interline holds within the industry.

The IATA interline framework was developed at a time when airlines essentially cooperated on international traffic, and charged the same fares. Accordingly, the development of common procedures and default revenue proration methods made perfect sense. As the industry was deregulated and competition increased, multilateral interline continued to be an important component of international air transport. The framework for interline has shifted, however. Interline relationships are now being driven by the commercial objectives of each airline. As airlines have sought to exert more commercial control over interline, the complexity of the system has increased. Codeshare was developed, alliance groupings emerged and joint ventures have received regulatory immunity in some markets.

Interline follows paper-based distribution processes

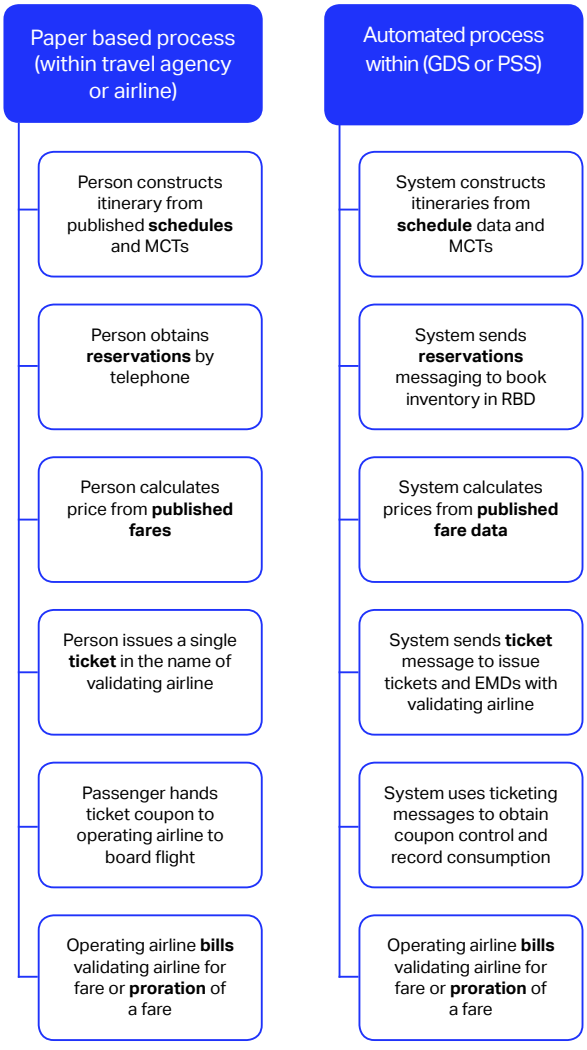
Airline distribution processes evolved in an era before computers. Processes were based on distinct activities: schedule and fare publication, reservations, pricing, ticketing, and delivery.

In the paper-based era, airlines published schedules and fares, which specialist organisations would aggregate and distribute. Travel agents or airline ticketing offices could then refer to these schedules to construct an itinerary, and would need to manually contact each airline in an itinerary to secure a reservation for each flight segment. Once reservations were confirmed, published fares could be combined to price the total itinerary. If suitable for the customer, the itinerary and price would be recorded on a single ticket, issued in the name of one airline, the validating carrier. The travel agent would then report ticket issuance to the airline, and settled the payment collected from the customer with that airline. Beyond the initial contact to secure a reservation, airlines participating in the itinerary would essentially have no information of the fare collected, the customer, or the itinerary until the customer presented the flight coupon to board the flight. The flight coupon would then be used by the participating airline to bill the validating carrier for their share of the fare.

As technology evolved, these processes were replicated within computer systems, and interactions were automated through industry standards. Despite this, the process flow has remained largely unchanged. This paradigm explains many of the challenges within today's interline environment.

Today, most of these processes are managed by Global Distribution System (GDS) or Passenger Service System (PSS) providers. These systems still typically follow a workflow of itinerary building from a neutral display, obtaining unpriced reservations from each airline within the itinerary, pricing the entire itinerary using published fares and then ticketing and reporting.

Automation of paper-based processes in interline



The reliance on these processes to facilitate interline negatively impacts the customer, prevents airlines from achieving commercial objectives, and creates cost and complexity.

1.3 Challenges within today's framework

Lack of transparency and lack of data negatively impacts the customer

Today's interline framework creates gaps for the customer. In many interline itineraries the distribution environment does not allow transparency around product attributes, service levels and transfer processes. This leads to significant gaps between expectations and reality.

In the 2019 IATA Global Passenger Survey, one in five passengers admitted that in interline itineraries they did not know which airline was operating their flight, or where to check in. Two out of five did not know which airline to approach if they encountered a problem during their journey.

In today's framework, every airline may have a separate and incomplete record of the customer's itinerary, and incomplete access to information stored across multiple reservation records, tickets and electronic miscellaneous documents (EMDs). This limits the ability of every airline to best serve the customer at any touchpoint.

Processes don't support ancillaries or retailing

Today's interline framework was not designed to support ancillary services, leaving customers with less choice on interline itineraries. This presents an obstacle for airlines embarking on a retailing strategy, and providing personalized offers to customers through all distribution channels. Interline processes for ancillaries are often proprietary by nature and involve many separate agreements and workarounds. Industry standardisation (such as the EMD) has not been widely implemented for interline. The complexity of EMDs creates a barrier to entry for technology providers, and the cost of solutions makes business case justification a challenge for airlines.

It is estimated that the incremental revenue from having full capability to sell ancillary products across all interline itineraries would be great than $3.3b annually[3].

Commercial Control

In today's interline framework, a validating carrier often does not have complete data around what has been sold until after a sale has been made, when a ticket is issued and the sale is reported. The validating airline must file complex fare rules, reservation booking designator mapping, schedule restrictions, and ticketing policies to ensure that it only sells the itineraries that it wants to, with the partners it chooses. This is supported by a complex web of technical and commercial agreements with other airlines that attempt to ensure that the revenue that the validating airline retains (after interline billing) is adequate and recovers the costs of sale and operation.

Operating carriers have even less access to information, and less control over the revenue they will receive for committing inventory and providing services. In many situations today, an operating carrier will not know the amount of revenue that they will be able to bill until *after* a customer has taken a flight. Operating carriers may attempt to file RBD restrictions and negotiate special prorate agreements to control revenue outcomes. Most fundamentally, operating carriers may lack access to information about the customer and the customer's itinerary.

$3.3b

Estimated incremental revenue from selling ancillaries across interline journeys

Complexity creates a barrier to entry for new players

The complexity of today's interline environment, and the reliance on current distribution processes limit the involvement of many players. Low cost carriers, and surface transport operators typically do not wish to make the investment in systems and processes to facilitate interline relationships with airlines under compliance with IATA standards. This ultimately reduces the options that are available to customers.

One size no longer fits all

The IATA interline framework is a one-sized-fits-all model based around the concept of a validating carrier and a participating carrier. This model entrenches processes such as interline billing at the time of consumption (rather than the time of sale), and concepts such as the participating

3 Estimated from 2018 ancillary revenue estimates at industry level, applied to estimated interline itineraries, from IATA World Air Transport Statistics (WATS) 2018.

carrier bearing the risk of holding inventory and not being compensated for non-consumption. This lack of flexibility further discourages new entrants (such as LCCs) from interlining with airlines that use the traditional interline framework.

Many different agreements are now required with each partner

Traditional interline agreements (and the MITA) are no longer sufficient to stand as an all-encompassing agreement formalizing an interline relationship.

> A new interline framework should leverage the agility and flexibility of "virtual interline" while ensuring all suppliers in an itinerary retain commercial control.

Airlines often now negotiate and manage many separate agreements that compliment or replace a traditional interline agreement (or MITA concurrence). This may include special prorate agreements, Involuntary rerouting agreements, codeshare agreements, selling agreements, interline e-ticketing agreements, and customer recognition or premium service agreements.

1.4 Other interline models

Non-IATA interline models

Interline models are emerging in the market that provide an alternative to traditional IATA interlining. Examples of these models include Worldwide by easyJet, where easyJet flights are sold in conjunction with flights from other carriers, and where traditional interline services (such as processing of baggage, or protection in disruptions) are provided by third parties such as airport operators.

New partners

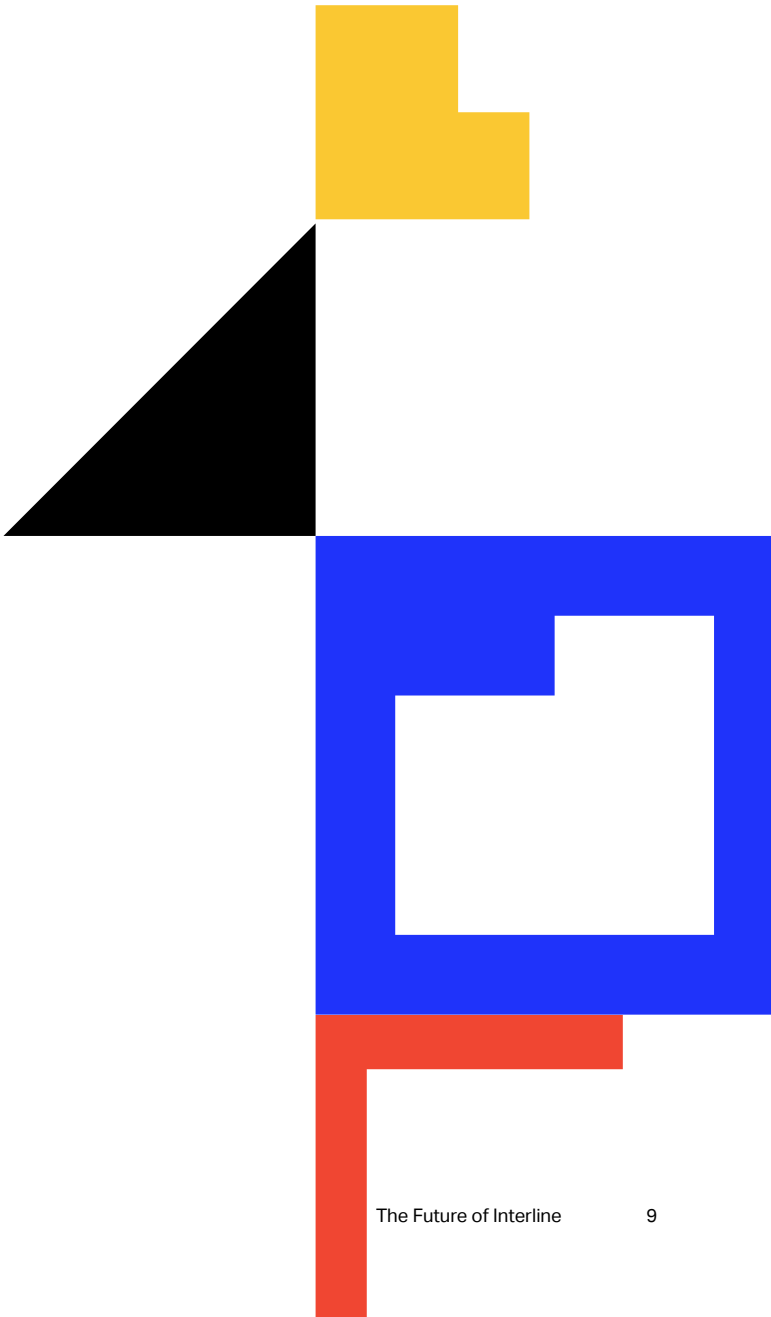
IATA member airlines are also increasingly pursuing interline relationships with carriers that do not use IATA standard tickets (such as low-cost carriers), and with surface transport operators. Beyond partnerships with transport operators, many airlines are also investigating moving toward a more generic retail model, with offers and orders combining the services of different transport operators together with non-transport suppliers.

Virtual Interline

Another alternative interline model that is emerging is often referred to as "virtual interline". Itineraries sold under this model involve flights operated by multiple carriers where none of the airlines may have an interline relationship, and where each airline may be unaware of others' segments that have been sold to the customer. This is typically performed by specialised online travel agents (OTAs) who may also guarantee the connection or sell a connection protection as an ancillary service.

This model, while offering flexibility for customers, may result in service issues. This is due to the customers' expectations not being met, and each airline operating without the knowledge of the customer's full itinerary. A new interline framework should leverage the agility and flexibility of "virtual interline" while ensuring all suppliers in an itinerary retain commercial control and have the data they need to provide a seamless customer experience.

The airline's pricing logic may also result in many one-way or local point to point fares being combined, leaving the customer paying a higher price.



2. A new framework for Interline

2.1 The vision

A new framework for interline must address the major gaps identified above.

Challenge	Vision
Limited customer transparency, and fragmented data.	Transparent customer choice, and real-time data at all touch-points
Limited support for ancillaries.	Seamless processes for flights and all ancillary services.
Airlines have limited methods of commercial control, and limited real-time data.	Airlines in control of products, services and revenue, with full access to real-time data
Complexity creates a barrier to entry	A framework open to all suppliers including LCC and intermodal operators.
One model with entrenched features such as settlement after consumption.	Opt-in model for all processes, including settlement at time of sale.
Many supplemental agreements must be negotiated and maintained with all partners.	A flexible standard agreement, common standards for all processes
Codeshare is used to improve commercial outcomes within the current distribution environment.	The business requirements driving codeshare can be fulfilled in other ways.

2.2 Starting with the customer

Transparency

Customers should know exactly what they are buying when they are buying it. For itineraries involving different airlines, this includes who will operate services, product attributes and service standards and connection information. Shopping should allow comparability and personalisation.

Who is responsible when things go wrong?

Many customer service issues today relate to uncertainty between interline partners around who is responsible for the customer. The customer may not know which airline to contact when things go wrong, and the airlines may not have a clear understanding of who needs to resolve issues that arise before and during travel. The new framework needs to ensure that responsibility for the customer at every touch point is clearly agreed between interline partners, and that this can be clearly communicated to customers.

Real-time data at all customer touchpoints

Most importantly, at all customer-touchpoints, the party that is interacting with the customer should have all the data that they require to provide seamless customer service. Within the limitations of privacy and data protection regulations, this should include contextual data about the customer's entire itinerary. The customer must also have complete control over how they access and interact with their data, and how they access self-service options. This may be through an airline's digital channels, a seller's digital channels, or any other third party such as a trip management application or an airport's digital channels.

> "A modernized partnership model will bring simplicity and an enhanced end-to-end experience to the traveler. Amadeus has been working side-by-side with IATA, our airline customers and other partners on industry-wide digital transformation initiatives such as interlining, in order to streamline processes, stimulate profitable growth and diversify partnership opportunities. Amadeus' current interoperability pilot with Full Service and Low-Cost airlines is one example of our ongoing investments to establish successful partnerships in tomorrow's travel ecosystem."
>
> **Fabrizio Calcabrini, Executive Vice President, Airlines Solutions, Amadeus**

2.3 The foundation of the new framework: A new standard agreement

The Standard Retailer and Supplier Interline Agreement (SRSIA)

The Multilateral Interline Traffic Agreement (MITA) framework is a cornerstone of the Interline Framework. The MITA is a standard interline agreement under which IATA and non-IATA member airlines may concur to create an interline relationship. This agreement establishes a legal framework for interline and describes responsibilities, liability provisions and general procedural obligations.

The foundation of the new Interline Framework will also be a standard agreement, the Standard Retailer and Supplier Interline Agreement (SRSIA). The first version of this agreement has been developed by airlines within the Interline Group under the Plan Standards Board across 2019 and will be presented to the Passenger Standards Conference for adoption. This agreement will continue to evolve to meet the changing requirements of the new interline framework.

Retailers and Suppliers

The SRSIA moves away from ticketing concepts of validating and participating carriers, and away from scheduling concepts of marketing and operating carriers. The framework introduces the concept of a Retailer and a Supplier. A Retailer initiates a relationship with a customer at the time of the customer making a shopping request and provides products and services to a customer either directly or by engaging Suppliers. These concepts are more aligned with non-industry specific retail concepts, and better support an open framework where the products and services of many different suppliers can be combined into an offer for a customer.

How will the agreement work?

The SRSIA is a standard agreement that is developed as an industry standard, and published as a Recommended Practice, and available at iata.org/srsia.

The SRSIA exists in parallel to the existing Multilateral Interline Traffic Agreement (MITA) which is multilateral agreement, published as IATA Resolution 780. IATA member airlines may wish to form an interline relationship under the MITA, or under the SRSIA.

The SRSIA contains a foundation agreement, and a set of Annexes which create an a la carte structure, where many different types of interline relationship can be formalized. The SRISA provides a common structure and common set of language, reducing the administrative burden of creating different agreements with different parties. Parties may also add additional Annexes by mutual agreement.

Unlike the existing MITA, execution of the agreement would not require notification to IATA, and parties or concurrences would not be published by IATA. The SRSIA is designed to operate in an environment where Retailer airlines are in control of constructing offers. Because a third party does not construct offers independently, it is not necessary for concurrences to be published externally.

What types of relationships can the SRSIA support?

The SRSIA can be used to support many different interline models, between different operators, and across difference customer service models and different distribution processes. This could include:

- Full offer and order based interline of flights and ancillaries where a retailer forms a single contract with a customer and manages all customer interactions and supports seamless connections of customers and bags.
- Self-connect models, where a retailer facilitates the creation of separate contracts with the customer for different products and services and does not facilitate the connection of passengers or baggage.
- Cross-sale of ancillaries using offer and order management, even where the interline processes for flights use the existing interline framework.
- Settlement at time of sale.

3. Interline with offers and orders

3.1 Products and services: ancillaries and flights

Control over products and services

Regardless of the specific commercial model, Retailer and Supplier relationships will always involve a Retailer presenting a Supplier's products and services to a customer. The Supplier must have control over which of their products and services are offered, and the conditions under which they are offered.

The Retailer must have the ability to combine and present different products and services from different Suppliers into a single cohesive offer for a customer, within the limitations of their commercial agreements with each Supplier.

Integrity of branded products

The new interline framework must allow products and services to be bundled or unbundled depending on the commercial agreements between the Retailer and Supplier.

Enabling control over how products and services are bundled ensures that the Supplier is able to deliver what has been promised, within their own operational processes. For example, a Supplier may have a standard economy product with buy-onboard catering and chargeable in flight entertainment. The same supplier may also have an all-inclusive economy product with full catering and free in flight entertainment. The supplier may prefer to maintain these two standard bundles of services, even within their interline relationships, to maintain a single delivery process within the cabin and to protect the integrity of their own product offerings.

A flexible shopping shelf for interline partners

In today's environment, interline agreements are essentially "all or nothing". Once an interline agreement is in place, the full published flight schedule of both partners is used to build itineraries. Airlines then have a limited ability to control access and commercial outcomes through mechanisms such as schedule restrictions, fare and RBD filing, and special prorate agreements. For ancillaries, access to an interline shopping shelf is much more fragmented and typically involves bespoke arrangements.

The new framework seeks to introduce a flexible and dynamic "product catalogue", seamlessly combining scheduled flights with the products and services available for interline partners to request.

This product catalogue concept may also be used to ensure that offer requests between partners are targeted and relevant, to address issues with scalability and messaging volumes that interline offer and order management may create.

This concept is under exploration and will be an area of industry focus in 2020. This may involve a dynamic catalogue of available products, or enhancements to the airline profile standard which is already a component of existing IATA enhanced distribution standards.

Schedule and Minimum Connecting Time data

The new framework continues to support the exchange of schedules using IATA scheduling standards, either bilaterally between partners or through a data aggregator. Similarly, partners may wish to directly exchange Minimum Connecting Time (MCT) exception data or use a data aggregator to access this data.

3.2 From fares, availability, reservations and tickets to offer and order management

Offer and order management for interline

Many of the challenges with interline today relate general limitations within the distribution environment such as customer transparency and flexibility. These obstacles led to IATA member airlines embarking on the New Distribution Capability (NDC) transformation program, which has involved shifting distribution processes away from fares, availability and reservations and towards offer and order management. Offer and order management standards have been developed to support interactions between airlines and sellers, allowing sellers to make shopping requests and for airlines to respond to requests in real time with priced offers.

The same processes can be used between airlines (or between a Retailer and a Supplier), and this approach to offer and order management will provide a foundation for the new interline framework.

The IATA offer and order Management standards (the basis of NDC) will evolve to meet the requirements of Retailer and Supplier interline interactions. This work is currently underway by leading airlines, and the first standard processes will be published early in 2020. The standard will continue to evolve as more airlines become involved.

Real time requests and responses

Offer and order Management processes are based around real-time requests and responses. When creating an offer to fulfil a customer's request, a Retailer may request specific content from a Supplier with whom they have an interline relationship.

This request will include necessary contextual information and allow the Supplier to determine whether it wishes to participate. The Supplier may then respond with an interline offer. The Retailer takes this offer and incorporates the Supplier's products and services into a total offer to the customer. If the customer accepts this offer, this is communicated back to each Supplier with the full context of the customer's full offer. A customer order is then created by the Retailer and communicated to the customer.

This allows each Supplier to respond to interline requests in real-time and gives each Supplier full commercial control of which itineraries they wish to participate in, and the terms and conditions under which they will participate. It also allows the Retailer to build a personalised offer directly for the customer, and maintain complete commercial control over the product, price, promotion and distribution of their offer. This is a significant change from the current environment where an interline itinerary is typically constructed by a third party, and both the Retailer and Supplier airlines have limited control and very little access to real-time data.

Dynamic settlement values

Most importantly, offer and order management for interline allows the Supplier to present a settlement value to the Retailer for each product and service. This value may be used for the billing between the retailer and supplier. This allows Suppliers to dynamically adjust settlement values based on their own commercial objectives. Retailers can immediately determine the most optimal customer price for the total offer.

For suppliers, this allows interline to be considered as simply another sales channel, through which revenue management objectives can be achieved. The industry shift to Dynamic Offer Creation is being explored by IATA together with member airlines and stakeholders, and interline offers form part of this exploration.

Customer payment

Within today's interline environment, customer payment is essentially irrelevant, as each participating carrier will always bill the validating carrier after uplift, regardless of customer payment method. The new interline framework allows flexibility to this model.

For example, the Retailer and Supplier may agree to a model where the Retailer presents the Supplier's products and services under separate order and passes customer payment information (such as a payment card) directly to the supplier at the time of order creation. Such a model may be especially simple and effective for the cross-sale of ancillaries across interline itineraries. Options such as moving interline settlement to the time of sale also bring payment and interline settlement closer together.

3.3 Seamless delivery: simplifying the airport experience

Transparency and data access

With offer and order management, richer and more contextual data can be provided to customers during shopping, at time of order creation, and at other touchpoints. For interline itineraries, this includes the actual products and services that will be provided, and also where to check (or re-check) bags, how to check in, and the transfer processes. Most importantly, order management processes ensure that a customer order record contains real-time information on the customers complete itinerary, and that this order record can be accessed at every touchpoint, through the customer's preferred channel. The complexity linked to the use of different PNRs, tickets and EMDs in interline itineraries is removed.

Order changes in the airport environment

Offer and order management standards allow order change processes (a request to the Retailer to allow a change to order originally purchased) to be initiated by any system. This could include the Supplier's check-in and transfer desks, digital channels, or common use self-service kiosks. This capability is limited only by the commercial agreement between the Retail and the Supplier and has already been explored within the SRSIA. The standards to support these processes will continue to be developed.

One Identity and biometrics will have applications in interline journeys. One Identity will continue to shape the future interline framework.

The futures of interline check-in

Most IATA members today use a community based non-IATA standard to facilitate inter-airline through check-in (IATCI). The future of this standard, and the possible synergies with order management (and with facilitation, and the One Identity project) is being explored by the Travel Standards Board under the IATA Passenger Standards Conference. This may also involve an exploration into the future of "check-in" as a concept. The seamless exchange of information about customer's readiness for service delivery, and the ability to provide customers with a boarding token (such as a bar-coded boarding pass) is a critical component of the interline framework and will continue to be explored.

Baggage

Existing baggage standards support the physical movement of baggage, and the exchange of data between parties processing baggage. The new interline framework will support existing baggage processes, and also new models such as self-connection. Further exploration may also occur to find synergies between offer and order management processes for interline.

The airport of the future, biometrics and One Identity

Airlines are now taking greater responsibility to deliver a seamless, secure and efficient process within the airport environment, and not just in flight. At the same time, airports are focussing on improving interchange facilities particularly between rail and air. These initiatives are directly connected with the future of interline.

Many airports are also exploring moving activities such as baggage acceptance, baggage collection and digital immigration processes to locations beyond the airport environment. This impacts the interline model as passengers assess the ease of every aspect and connection in their journey. Airlines have the opportunity to work with a greater range of service providers to make transparent offers including Suppliers within the airport environment offering experiences such as parking, lounges and priority access to security.

The off-airport concept, along with other emerging trends are being explored within a joint initiative run by IATA together with the Airports Council International (ACI). This initiative is known as the "NEW Experience Travel Technologies" program, or NEXTT. This provides a vision for the on-ground aspects of air travel

Biometric identification introduces an opportunity for the passenger to further streamline their journey with a document-free process. This is being explored through the IATA One Identify program. The concept relies on early validation of the passenger's identity and controlled access to this information by the various public and private stakeholders involved in the end-to-end process. This works on an authorized-to-know basis so that the passenger can be recognized and attended to in the most efficient way by all parties.

While not an interline only project, One Identity and biometrics will have applications in interline journeys. One Identity will continue to shape the future interline framework.

3.4 Disruption: Real-time data, real-time collaboration

Offer Management for Disruption

Passenger re-routing in disruption is a cornerstone customer promise of the IATA interline framework. Through IATA standards, member airlines agree to provide passengers onward travel in the event of an interruption to a confirmed itinerary. However, like many aspects of the current interline framework, processes that support this customer promise are constrained by the current environment.

A new interline framework could conceivably use offer and order management processes in disruption. This would allow all stakeholders interacting with the customer to have access to real-time information, and could even allow the seller to play a more active role.

Most importantly, offer management in disruption could also allow re-routing on a broader range of operators, and allow re-routing to better support ancillary products. New operating carriers would have control over the conditions under which they accept disrupted passengers. Some of these concepts were explored in the IATA Airline Industry Retailing (AIR) Think Tank across 2019 as "Project Lemonade. The standards development to support this capability will be explored in 2020.

Alternative models: Connection protection as an ancillary service?

The new interline framework must also accommodate other models. For example, airlines that do not typically interline may wish to provide an interline connection as an optional ancillary service, and in this case a third-party provider (such as an insurer or airport) may arrange for re-routing.

Similarly, low cost carriers or intermodal operators may be reluctant to participate in interline itineraries if there is a requirement to arrange re-routing for an entire itinerary if something goes wrong. The new interline framework must also allow for flexible options. This may include the Retailer *always* arranging re-routing, even if a disruption was caused by a Supplier. Regardless of the model, the most important thing is that this should be clear for both partners and should be clearly disclosed to the customer.

3.5 Settlement: More options, less complexity

Real-time accounting, No more proration, no more disputes

In today's interline environment, the settlement between airlines is often based on the fare that the customer has paid being shared between airlines. This model made sense when the industry was heavily regulated and airlines charged the same fares, but makes very little sense in a competitive market where carriers compete and determine their own fare levels. Settlement on the basis of published fares leads to complex proration and billing processes, and to many disputes.

Offer Management for interline allows a settlement value to be established at the time of shopping. Settlement will then occur based on this value. Proration of a fare, or validation of a published fare is never required. This vastly simplifies interline billing and shifts interline settlement into a process that more closely resembles generic accounts payable and receivable processes. This removes the requirement for specialised Passenger Revenue Accounting (PRA) systems. The settlement value also allows financial accounting entries (such as the recognising or releasing an accurate liability for un-earned revenue, or accurately recognising earned revenue) to be processed instantly and without the need for estimation.

New models: Settlement at time of sale, and non-consumed settlement values

Today's interline framework supports just one model: a validating carrier accepts payment from a customer (or through a seller), and participating carriers bill the validating carrier when services have been consumed. Depending on the balance of trade between partners, this can impact cash flow, and often results in participating carriers holding inventory for no compensation if a confirmed reservation is changed or cancelled close to departure. The validating carrier essentially benefits from free funding, and interest revenue, at the expense of the participating carriers.

The new interline framework gives carriers the opportunity to settle at the time of sale, and also provides an option for partners to agree that settlement may occur even if products are not consumed, within agreed conditions.

A reason that is often provided for not settling at the time of sale is that itineraries are often changed or refunded before a flight departs. This is entirely true but results in a process being designed around a small proportion of itineraries that are subject to change, instead of the many that are not. With order-based processes, a "ledger" approach to interline billing (with debits for sales made and credits for refunds or adjustments) is entirely conceivable. Indeed, this is essentially how the IATA Billing and Settlement Plan (BSP) currently functions, where settlement between agents and airlines occurs at time of sale and refunds or changes simply result in adjustment billings as they occur.

Reducing currency distortions

In today's interline environment, IATA standards require that itineraries are priced by constructing a fare in the currency of commencement of international travel. This calculation may be made using many different fares that have been filed in different currencies. A conversion occurs at the time of sale, but utilizes a reference rate (the IATA Rate of Exchange, or IROE) which may be over one month out of date. Where payment is made in a different currency, another industry reference rate (the IATA Consolidated Exchange Rate, or ICER) is used. Interline settlement may then occur many months later and is converted into a currency of clearance and currency of settlement using different reference rates at the time of billing.

This leads to many currency conversions occurring between the time that a participating carrier determines the revenue it wishes to receive (by filing fares, or concurring to another carriers fares, and making inventory available), and the time when settlement occurs. There is also a considerable delay between these conversions, during which time currency rates may shift significantly. This can impact cash flow and profitability.

With offer and order management processes for interline, a settlement value can be proposed in the currency in which settlement will occur, effectively locking in the currency rate, and reducing the number of unnecessary conversions.

Interline taxes, fees and charges

Many issues arise in today''s distribution environment due to different customer attributes that change tax application. These attributes often cannot be collected or automatically processed at the time of pricing. Offer and order management brings with it the opportunity to resolve many of these issues, as a broader set of data can be collected where required to accurately calculate taxes fees and charges.

Within interline, this is also true. Offer and order management processes for interline can be used so that a Supplier is able to calculate the taxes that they will be required to remit, and to propose these to the Retailer for collection and disclosure to a customer. This removes a required element of sales audit, and also further reduces interline billing disputes. The SRSIA facilitates this model, and also allows for bilateral processes where this is not possible, such as in the case of percentage based taxes remitted by a Supplier airline.

Settlement with orders

Development has already occurred at industry level on a new framework to facilitate settlement between ailrines and sellers using order management concepts. This program is called Settlement with Orders (SwO). A messaging standard to support this new framework has been developed and adopted across 2019. Member airlines within IATA's governance structure have endorsed the extension of this program to explore order based settlement in interline. This will involve further development to data exchange standards, but also an exploration into platforms and processes to leverage IATA's settlement capability while supporting new order based processes. This will continue to be explored across 2020.

3.6 New partnerships

Simple processes, modern messaging formats

Making interline easier for new players is a key objective of the new interline framework. This ensures greater choice for customers, and more revenue opportunities for airlines. The new interline framework introduces standards and processes that removes the complexity of fares, availability, reservations and tickets, and introduces simple and more generic offer and order-based interactions. Complex and expensive EDIFACT messaging formats are replaced by modern messaging formats generated from the IATA Airline Industry Data Model (AIDM).

Model flexibility

In addition to messaging formats that are more palatable for new operators, the new interline framework brings the opportunity to explore different models to cater for different relationships. This may include for example, self-connection as opposed to baggage and passenger connections, settlement at time of sale, and alternative approaches to re-routing. The SRSIA allows these options to be clearly selected in an á la carte approach, reducing the administrative burden of forming separate agreements. This allows interline partnerships to be pursued with rail and other surface transport operators, with low cost or ticketless airlines, and with non-transport providers.

3.7 What about codeshare?

The term "codeshare" appeared in the 1980s, and describes a special type of interline relationship, where:

- A marketing carrier files a schedule for a flight operated by another airline as if it was the marketing carrier's own flight.
- The marketing carrier manages the inventory for this flight, either by accessing an agreed block of seats on the operating carrier's flights or (more typically) through freesale arrangements with automated access to the operating carrier's own inventory.
- Processes such as fares, ticketing and passenger frequent flier entitlements can be determined by the marketing carrier, just as they would be determined on the marketing carrier's own coded and operated flights.

The drivers for codeshare all relate to peculiarities in the current distribution environment. A codeshare connection is typically given priority in a GDS neutral display over the same connection offered as interline, due to the preference for "online" connections over interline connections.

Codeshare gives a marketing carrier more control over itinerary combinations and pricing outcomes, especially in the GDS environment, in which default processes drive fare selection, which often references the airline code of the flights. This is especially true when another airline's flight is being sold as a "stand-alone" flight. In these situations codeshare is often the only way to circumvent default fare selection and ticketing processes.

Codeshare also gives an airline the ability to distinguish a preferred tier of interline, within which it may provide additional product offerings (lounge access, frequent flier

benefits, etc) on an interline flight sold under codeshare in comparison to those it provides on other interline flights.

Finally, codeshare allows the possibility to manage a separate allocation of inventory (under a block space arrangement), and manage alternative interline billing arrangements. Block space codeshare was once very common but is less so now.

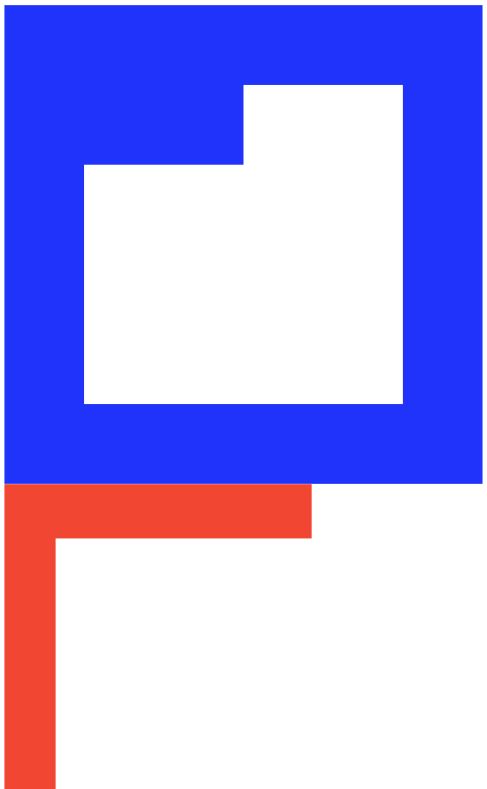
These benefits come at a relatively high cost, however. System interactions are complex, resource intensive, and are more likely to fail. From a passenger perspective (despite disclosure requirements), codeshare is still confusing.

The prevalence of filing codeshare schedules is increasing, while passengers booked under codeshare flights remains stable. In 2017, 25% of all published flights were marketing codeshare flights, with every operating flight of IATA members having on average 2.4 marketing flight numbers attached to it under a codeshare relationship.

The increased prevalence of codeshare schedules (without a corresponding increase in codeshare traffic) suggests that carriers are using more and more codeshare in an attempt to extract value from interline relationships, and to retaining control of commercial processes.

This is also leading to flight number exhaustion, as airlines rapidly assign marketing flight numbers from a finite pool of flight numbers constrained by four digit flight numbers used in industry standard data exchange formats and systems.

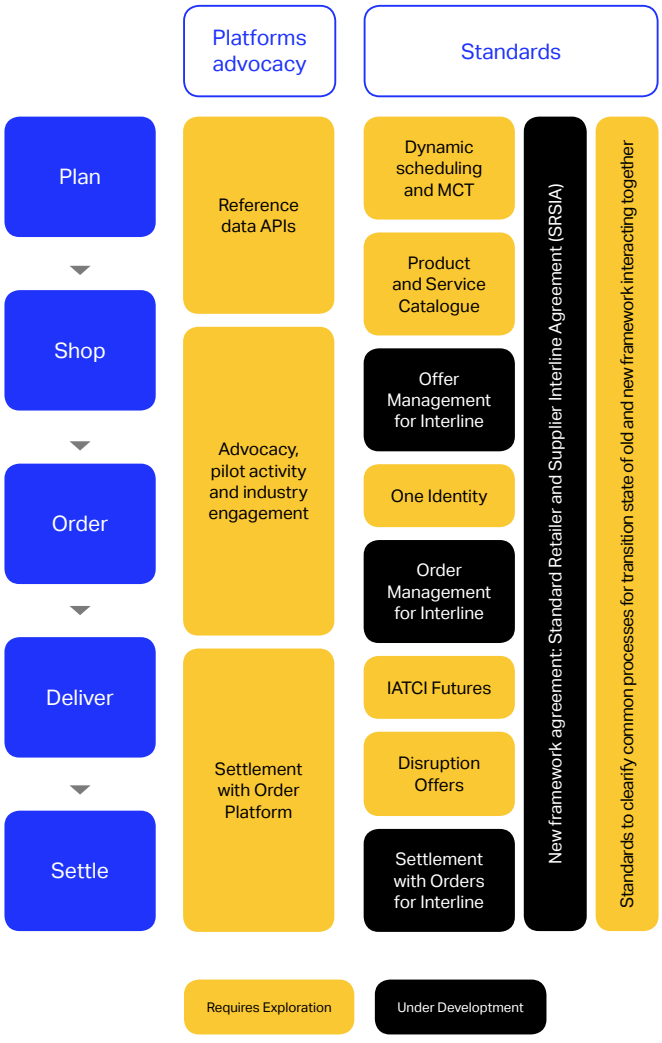
Changes to the Interline Framework should address the underlying requirements that are driving codeshare, while building a solution that provides simplicity and transparency. This was explored in 2018 within the IATA AIR Think Tank white paper, as “Project Honeymoon”.



4. How do we get there?

Industry activity is already underway, get involved!

The journey to the new interline framework is heavily linked with the industry’s journey towards retailing, through offer and order management, dynamic offer creation and Settlement with Orders. Interline does provide unique challenges, however. As with all industry initiatives, the role of IATA is to represent, lead and serve the industry. IATA enables airlines to develop standards, and also supports airlines by operating platforms and services, and through advocacy. The building blocks of the journey to a new interline framework are outlined below. Many building blocks already have active industry activities. Others are under investigation.



Don’t wait, take the first step!

Many of the opportunities the new interline framework offers can be explored with partners in parallel to today’s existing distribution environment. For example, interline itineraries sold through direct channels can begin to utilize offer and order management capabilities, and the cross-sale of ancillary products can occur using offer and order management processes even if the flight itself is fulfilled on a ticket. Further standardisation of these hybrid use cases will reduce cost and complexity, and airlines are encouraged to develop these standard approaches within the IATA standards development groups.

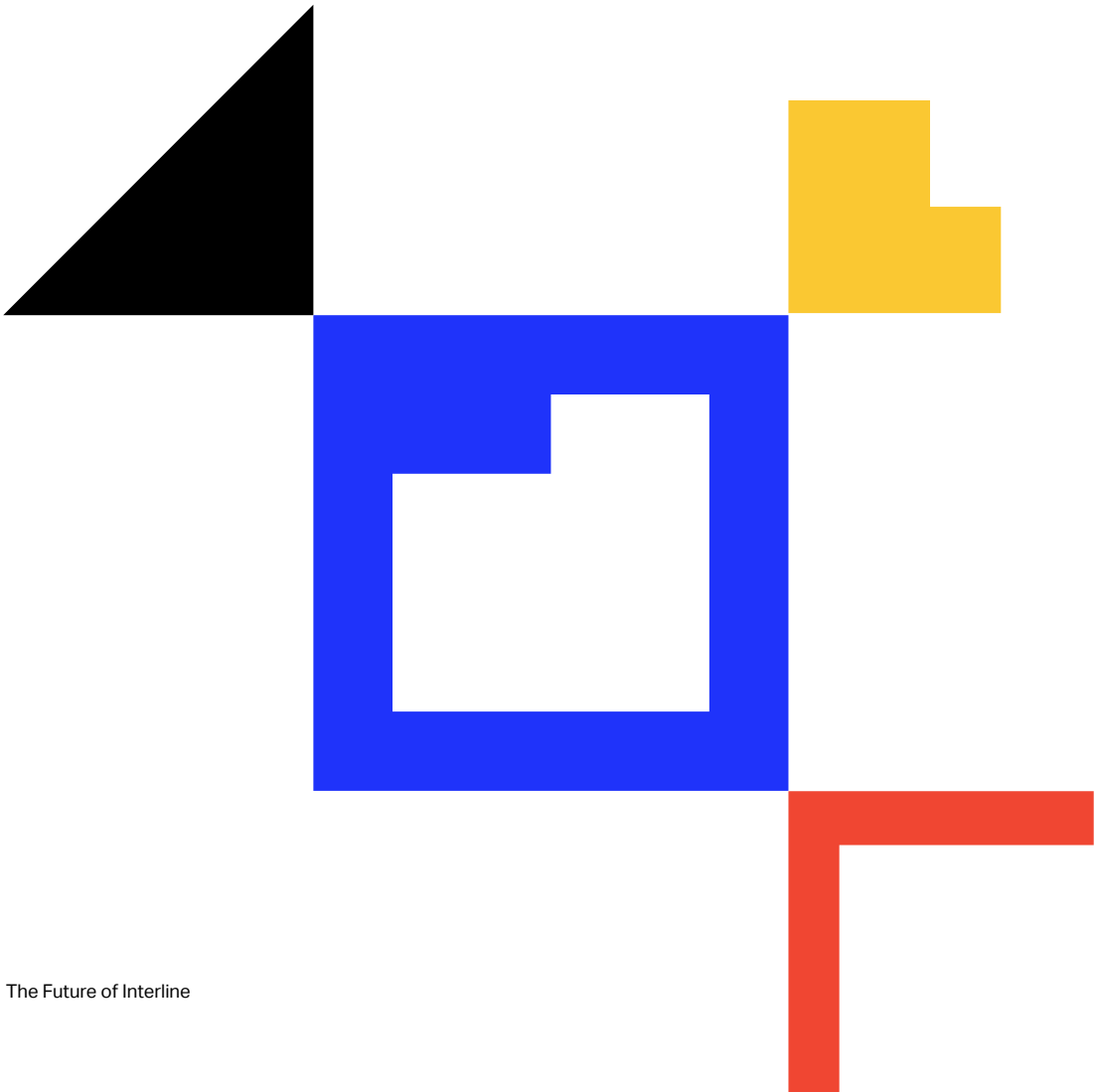
By definition, the interline framework involves interactions between partners. It is unlikely that every partner an airline interacts with will move to a new interline framework at the same time. This means that the industry will operate under two distinct models, and that this transition state may last for some time. Clear processes and standards are required to clarify how interline interactions across new and old frameworks should operate.

This is just the beginning..

As with all change programs, every stakeholder will need to embark on their own transformation journey to leverage industry activity. This involves changes to people, process and technology. As the new interline framework obtains momentum, IATA will continue to support this transformation by raising awareness, educating, and supporting airlines and other stakeholders on this journey.

How to get involved?

The new interline framework will continue to be discussed within IATA governance groups, and airlines will shape the direction of the framework, and the program for industry transformation. It is important to ensure that discussions are occurring internally within impacted teams, and that all airlines are represented within IATA governance groups. For more information, contact your local IATA team. For information on standards development activities, visit iata.org/PSC.



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