CASE STUDY

Singapore Airlines: The NDC and ONE Order pilot that underpins the future of interlining

Singapore Airlines, Scoot, Amadeus, Navitaire, and Accounting Centre of China Aviation are the first to pilot IATA's NDC and ONE Order live in production to deliver recommendations for the future of interlining.



The challenges for airlines to modernize and digitalize interoperability

Over the last few years, airlines have begun to rethink retailing. Passengers demand more from their end-to-end shopping experience like greater choice, convenience, speed, transparency, and comparability, regardless of how they book or the carrier combination they fly (full-service, hybrid, and/or low-cost) from one destination to the other. The industry disruption caused by COVID-19 brings this even more sharply into focus.

"Today's interline framework was developed before deregulation and built around paper-based distribution processes. As industry and technology evolved, airline distribution and interline processes were replicated within computer systems, and interactions were automated through industry standards. Despite this, the process flow has remained largely unchanged, presenting many challenges and limitations that negatively impact the customer such as the lack of transparency and data, processes which don't support ancillaries or retailing. Overall, this complex ecosystem creates a barrier to entry for new players."



Henry Coles
Head, Airline Distribution Standards, IATA

THE PAIN POINTS FOR AIRLINES

Airline retailing processes today present a series of challenges, particularly when it comes to interlining.

For many years, interline sales have mainly involved airlines of the same type. Airline partnerships are still limited to flights and are unable to support ancillary services efficiently at scale across airlines from different business models and offers. The lack of visibility and timeliness of accurate data complicate business processes, resulting in a loss of commercial control. In addition, the complexity of airline industry processes and solutions to manage multiple records related to PNRs, e-tickets, and EMDs limits the cooperation between any type of airline, be it ticketless, hybrid, or full-service. As a result, travelers must join together multiple tickets or payments to complete one journey. For example, a traveler may need to collect their bag, and check-in again at a connecting airport, instead of a simple connection and bag collection at the final destination. This repetitive process can be confusing and frustrating.

Modernizing and digitizing interoperability can only be achieved gradually. A very good place to start is to allow end-to-end interline sales between any type of airline partner to deliver a transparent experience to customers.

"We see new interline relationships as a key enabler to support the airline industry on its path to recovery. Airlines will need new types of relationships to expand their network, operate with more efficiency, and meet customer demands. We, at Amadeus and Navitaire, are very pleased with the results Singapore Airlines and Scoot achieved using NDC and ONE Order to simplify interlining and interoperability, and will continue working hand in hand with our customers and key industry players to drive airlines' retailing transformation forward, to the benefit of the whole travel ecosystem."



Cyril Tetaz
Executive Vice President, Airlines APAC, Amadeus

A new framework for interlining

In 2019, the IATA Interline Group, under the Plan Standards Board of the Passenger Standards Conference, began work on a new framework aiming to address some of the current challenges by introducing generic “retailer” and “supplier” relationships. The Standard Retailer and Supplier Interline Agreement (SRSIA) framework is currently being developed. Offer and order management concepts and the standards should form the basis of distribution, delivery, and financial processes within this new framework.

ONE ORDER

The industry initiative ONE Order, led by IATA, aims to modernize the order management process in the airline industry and replace the multiple and rigid booking, ticketing, delivery, and accounting processes.

The ONE Order standard enhances the capability of communications between airlines, delivery providers, and accounting systems and is open to any third party, intermediary, IT provider or non-IATA member to implement and use.

It introduces concepts such as delivery status and internal values to replace current paper-based mechanisms used for delivery tracking and accounting purposes. ONE Order eliminates the need for current booking and ticketing records and combines them into a single retail and customer-focused order. Full information can be found at www.iata.org/oneorder.

ONE ORDER USE CASES

Over the past few years, IT providers and their airline partners have conducted various ONE Order proofs-of-concept for use cases covering shopping, ordering, payment, and accounting.

Interlining and interoperability between full-service and low-cost carriers are use cases with high potential to deliver significant value for the traveler experience and airline partnership relations.



The NDC and ONE Order interlining pilot

Amadeus and Navitaire (an Amadeus company), in partnership with Singapore Airlines, its low-cost carrier subsidiary Scoot, and the Accounting Centre of China Aviation, conducted a live pilot using NDC and ONE Order standards. Performed in live production with real passengers, the objective was to simplify and enhance interlining and interoperability between the full-service and the low-cost carrier, each respectively hosted on Amadeus Altéa and Navitaire New Skies®. This pilot has been recognized by IATA as an official ONE Order and Future of Interline pilot.

THE WAY OF WORKING

Singapore Airlines played a leading role in determining the scope of the pilot at each stage of the project. Following the direction of Singapore Airlines, each company worked collaboratively, taking on specific roles to move the project forward in the most agile and efficient way across different time zones in Asia Pacific, North America, and Europe.



This timeline illustrates the two key stages of the pilot, with an end-to-end new interline solution delivered in just five months.

- **Singapore Airlines and Scoot** reviewed and validated the initial scope, conducted testing, refined initial scope, and monitored pilot performance with Amadeus and Navitaire, as well as communication and testing with the Accounting Centre of China Aviation (ACCA).
- **Amadeus and Navitaire** provided the NDC, offer management, order management, and flight operation solutions for Singapore Airlines and Scoot, enabling the creation and operation of interline offers and orders. Amadeus was also responsible for the end-to-end testing, monitoring the production environment, and generating the necessary reports for all parties.
- **Accounting Centre of China Aviation (ACCA)** provided the revenue accounting solution, enabling recognition and accounting of the sales without the need for proration processes as settlement values were defined at the time of offer creation.

"Amadeus has been a great partner, committing resources, time, and effort to help us deliver on our pilot and in NDC. Singapore Airlines uses multiple Amadeus solutions: Passenger Service System (PSS), merchandising, and revenue management, so it was natural for us to work together on ONE Order to simplify downstream processes. It's been a continuous journey of partnership and mutual value and growth."



Bryan Koh
Divisional Vice President E-Commerce and Distribution,
Singapore Airlines

OBJECTIVES OF THE PILOT

1. Enhance the customer retailing experience with single payment and order, providing increased clarity and consistency of the items ordered.
2. Explore how NDC and ONE Order can simplify and improve interoperability between a full-service and a low-cost carrier, hosted in Amadeus Altéa and Navitaire New Skies.
3. Assess the ability of NDC and ONE Order to cover complex airline scenarios: interline offers created using NDC, orders created in an order management system and operated by a full-service and a low-cost carrier, with departure control systems at each end.
4. Conduct the pilot in a controlled, production environment with real passengers and live bookings.
5. Leverage and prove specific functionalities covering interline end-to-end: shopping and pricing, pre-definition of offer values at time of creation, single payment, interline order creation, order cancellation, and real-time ONE Order capabilities for sales reporting to simplify revenue accounting and enable seamless delivery.
6. Provide recommendations and feedback to the industry to contribute to the development of the future of interlining framework including NDC and ONE Order.

LESSONS LEARNED

New retailing capabilities were introduced, and legacy-based processes removed to enable interoperability between a full-service carrier and a low-cost carrier to provide a seamless customer experience. This made it possible to provide shopping, pricing, offer and order management, accounting, and settlement both during testing and production. The pilot also had to ensure that there was minimal impact on both the low-cost and full-service carrier processes when deploying and operating the solution.

Being independent of legacy processes facilitated a more dynamic communication between the retailer and supplier airlines. As a result, the new retailing capabilities were able to share information securely and transparently to allow for ID mapping between the retailer and supplier airlines, with both airlines communicating each other's itineraries and securely adding missing payment approval codes to enable the capture of payment.



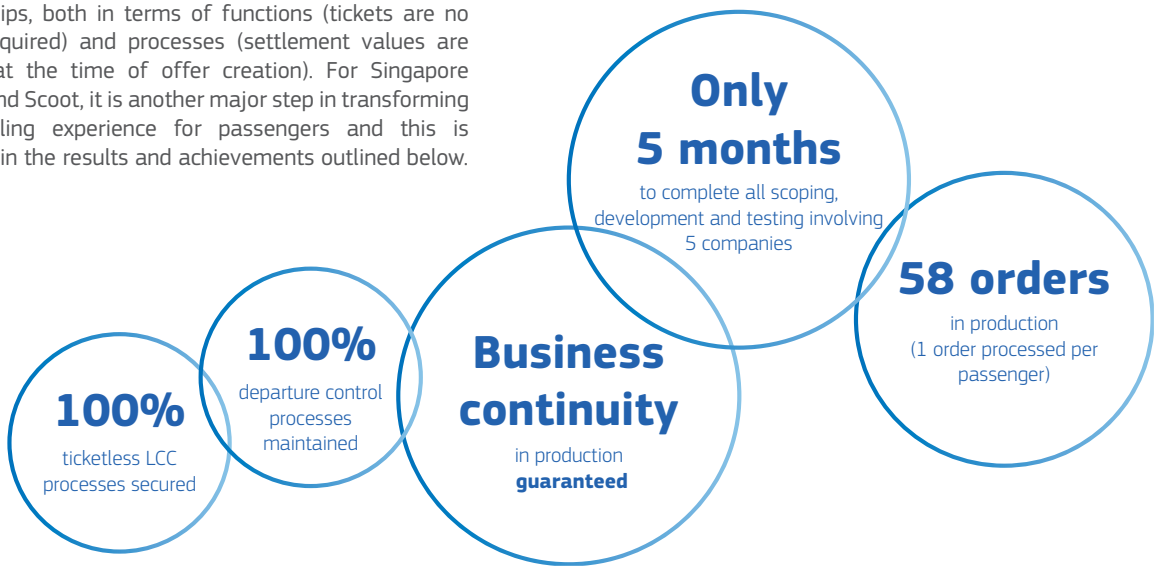
"For Singapore Airlines and our subsidiary Scoot, this pilot is extremely important because it's an extension of our entire portfolio strategy to enlarge our multi-brand offer and meet today and future customer expectations. We're delighted with the value we gain blending the simplicity of our low-cost subsidiary with new interlining capabilities from the full-service side. The exploration of new retailing concepts helped us accomplish seamless interoperability throughout shopping, pricing, order management, delivery, and accounting processes"



Bryan Koh
Divisional Vice President E-Commerce and Distribution,
Singapore Airlines

KEY RESULTS

This pilot represents the first step in modernizing, diversifying and simplifying the operability of interline partnerships, both in terms of functions (tickets are no longer required) and processes (settlement values are defined at the time of offer creation). For Singapore Airlines and Scoot, it is another major step in transforming the retailing experience for passengers and this is reflected in the results and achievements outlined below.



WHAT DID THE PILOT ACHIEVE?

All objectives of the pilot were met successfully in record time:

Better collaboration:

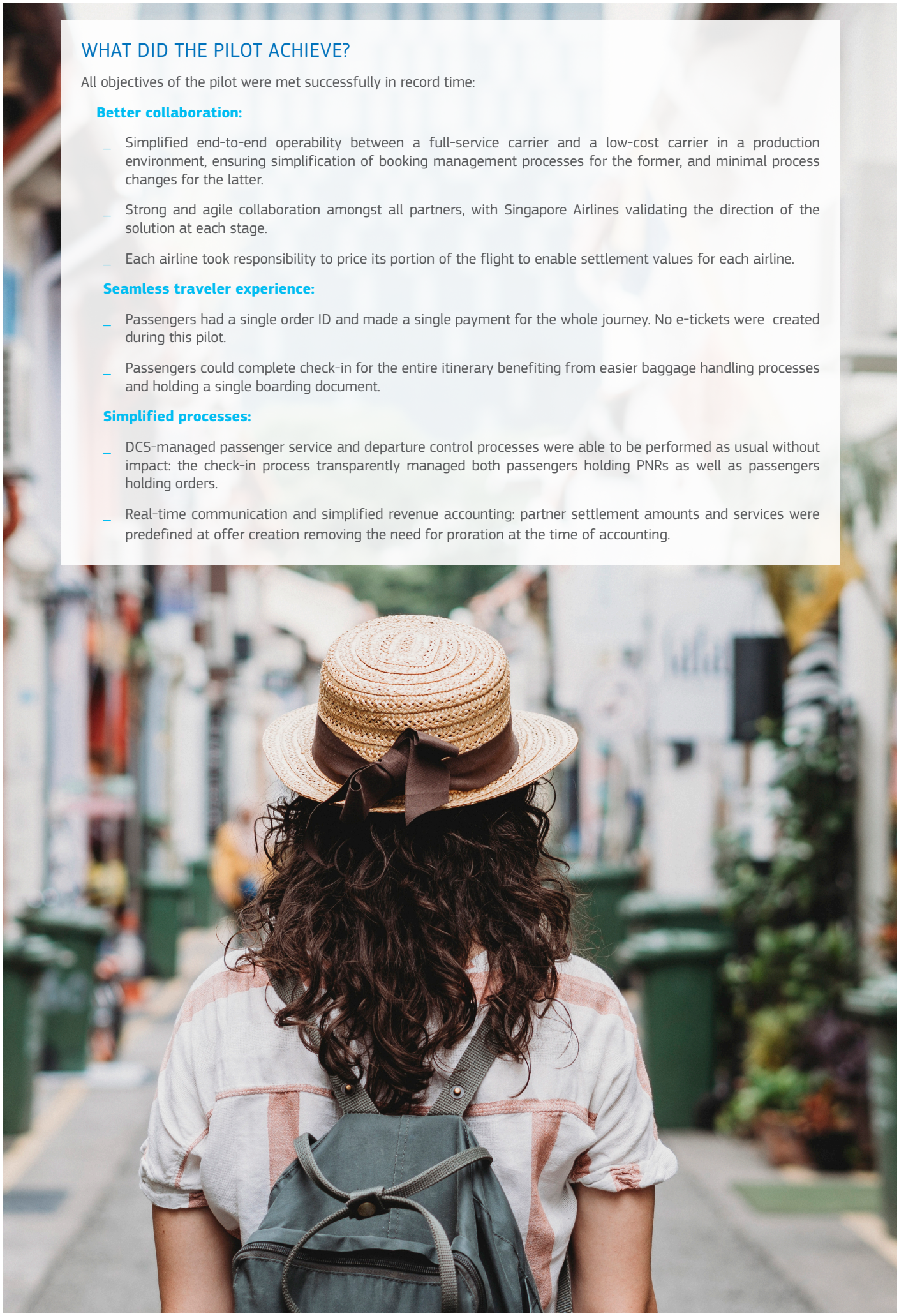
- Simplified end-to-end operability between a full-service carrier and a low-cost carrier in a production environment, ensuring simplification of booking management processes for the former, and minimal process changes for the latter.
- Strong and agile collaboration amongst all partners, with Singapore Airlines validating the direction of the solution at each stage.
- Each airline took responsibility to price its portion of the flight to enable settlement values for each airline.

Seamless traveler experience:

- Passengers had a single order ID and made a single payment for the whole journey. No e-tickets were created during this pilot.
- Passengers could complete check-in for the entire itinerary benefiting from easier baggage handling processes and holding a single boarding document.

Simplified processes:

- DCS-managed passenger service and departure control processes were able to be performed as usual without impact: the check-in process transparently managed both passengers holding PNRs as well as passengers holding orders.
- Real-time communication and simplified revenue accounting: partner settlement amounts and services were predefined at offer creation removing the need for proration at the time of accounting.



Vision for the future of interlining

The evolution of frameworks such as NDC and ONE Order creates exciting opportunities for airlines to deploy new forms of airline partnerships and interlining between full-service, hybrid, and low-cost carriers. For these modern cooperation models to be successful, a series of gradual changes need to take place: processes, organizational cultures, and, of course, technological capabilities for airline offer and order management.

> *"The interline vision starts from a customer perspective and aims for more transparent customer choice, and real-time data at all touchpoints. The future of interline will ensure seamless processes for flights and all ancillary services, full control of airline products, services and revenue, including full access to real-time data. This is supported by an open framework and common standards for all processes and suppliers, including LCC and intermodal operators."*



Oana Savu
Senior Manager, Future of Interline,
IATA

Amadeus and Navitaire are committed to supporting airlines as they move towards a more modern interoperability environment. Both companies are focused on delivering solutions that offer tangible value for airlines and their customers in all areas of interoperability and providing new capabilities to simplify shopping, offer management, order management, delivery, disruption management, accounting and settlement processes. Through these new capabilities, airlines will have the tools to build new and exciting models for airline cooperation, and diverse partnerships.

> *"This pilot demonstrates Amadeus' commitment to airline retail transformation through re-engineering outdated and complex processes and leveraging modern technologies that enable airlines to focus on their customers. We are honored to work with like-minded progressive partners, Singapore Airlines, Scoot, and ACCA, to create better interline partnerships."*



Christophe Bousquet
Chief Technology Officer,
Amadeus

SINGAPORE AIRLINES

Singapore Airlines (SIA) is the flag carrier airline of Singapore with its hub at Singapore Changi Airport. Today, SIA operates a modern passenger fleet of 116 aircraft (as of 1st Dec 2018). Together with wholly owned subsidiaries SilkAir and Scoot, the SIA Group fleet comprises over 190 aircraft. The combined passenger network covers 140 destinations in 37 countries. More than 33 million passengers were carried by the SIA Group's three Singapore-based passenger airlines in the 2017/18 financial year.

AMADEUS AND NAVITAIRE

Amadeus and Navitaire serve most of the world's leading airlines operating with different business models. Amadeus' solutions allow airlines to grow revenue, optimize efficiency, and build brand loyalty. Amadeus supports airlines so they can provide travelers with a consistent, personalized customer experience throughout every stage of the journey – from inspiration to booking, check-in, and boarding. Navitaire delivers proven digital e-commerce-first solutions enabling advanced retailing using a single record approach. Together, we combine a deep understanding of airline's business with the ability to design and deliver the most complex, trusted, and critical capabilities our customers need to power their retailing transformation and create new cooperation models for airlines.

ACCA

ACCA was established in 1991 and has become the largest provider of application services and business outsourcing services in the revenue accounting area of China, and also serve as the settlement and clearing center of China aviation and the largest BSP DPC in the world. At present, customers of ACCA cover 60 airlines, 150 airports, and air traffic management authorities. Meanwhile, ACCA is one of IATA's suppliers and also provides applications and business processing services to other companies and organizations.

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