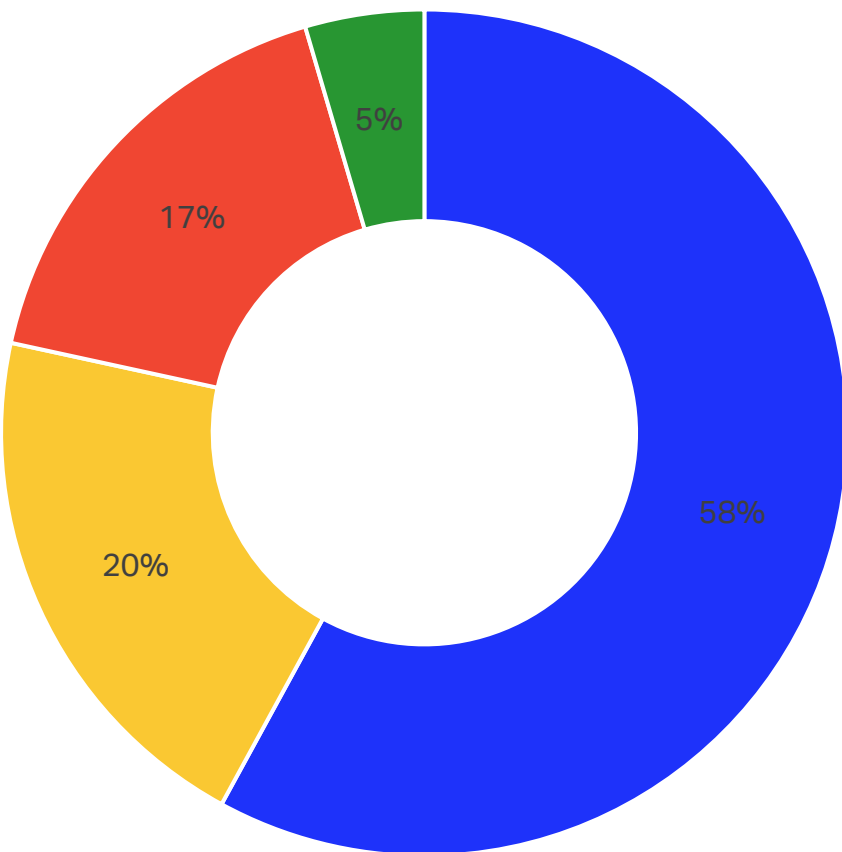


Retailing Implementation Forum

September 2023 Edition



Participating Organizations



- Airlines
- Sellers
- System provider for Airlines and Sellers
- Industry Body;

- 10xRich Travel Technology PVT LTD
- Aeronology
- AlTahadi Travel & Tours
- Air Canada
- Air France / KLM
- AirGateway
- Airretailer Technology LLC
- Alaska airlines
- Amadeus IT Group
- Amex GBT
- ARC
- Atlas
- Avianca
- British Airways
- Cathay Pacific Airways
- Clarity Travel Management
- Copa Airlines
- EL AL Israel airlines Ltd.
- Egyptair

- Finnair
- Flightroutes24 Travel Company Limited
- Gulf Air
- Hahn Air
- Hitit
- IBERIA
- IBS Software
- JAL Information Technology Co., Ltd
- Japan Airlines
- Kenya Airways PLC
- LATAM Airlines Group S.A.
- Lufthansa Group
- Midoco GmbH
- MINSAIT/INDRA
- PROS
- Qatar Airways
- Quadlabs Technologies Pvt Ltd
- Sabre
- SAP Concur

- SAS
- Saudia
- Scandinavian Airlines System
- SIA
- Singapore Airlines
- Spotnana
- Swiss International Air Lines LTD
- Thomalex
- Travel in Motion
- Travelfusion
- TravelINDC Technology Co. Ltd.
- Travelport
- Travix
- TUI GmbH
- TWAI
- Turkish Airlines
- Verteil Technologies Private Limited

Welcome & Opening



What's on your mind for this meeting

(an extract from your registration)

Industry, scale, sharing experiences

- commitment to standard implementation
- see industry knowledge increases in Implementation guidance
- Understanding of where we are in the adoption of NDC
- Scaling up in a cost effective manner: increasing partners adds cost to upgrade or add new functionality
- E2E seamless deployment of NDC
- many airlines and travel agencies are not utilizing NDC content
- Future changes that might address some of the challenges faced, industry best practices and interlining/payments/markup
- understanding solutions for aggregators and corporates to get on board NDC
- Timeline on 17.2 support and future NDC versions
- Benchmark of 21.3 deployment
- Performance in NDC, especially shop
- challenges that the other airlines have faced while migrating to 21.3
- what sellers consider the most valuable benefits of the new distribution
- Servicing options to help improve TMC adoptions
- Interline support

Schema functionalities

- disruption management with notifications
- Best practices in Servicing
- Ticket time limits for Private fares like seamen, student, Corporate fares etc.
- Waiver codes

Other

- Reporting for Non-BSP markets
- Building IT expertise
- Onboarding methodology

Competition law compliance

(simplified slide for display, please see full description on the meeting page)

This meeting is being conducted in compliance with the Provisions for the Conduct of the IATA Traffic Conferences. Pursuant thereto, this meeting will not discuss or take action to develop fares or charges, nor will it discuss or take action on remuneration levels of any intermediaries. This meeting also has no authority to discuss or reach agreement on the allocation of markets, the division of sharing of traffic or revenues, or the number of flights or capacity to be offered in any market. Delegates are cautioned that any discussion regarding such matters, or concerning any other competitively sensitive topics outside the scope of the agenda, either on the floor or off is strictly prohibited.

The foregoing **applies equally** to email discussions, instant messaging and social media discussions whether directed to announced participants or other parties not present in the meeting. Participants are reminded that live streaming of this meeting to parties not present in person is not permitted except as indicated by and with the express permission and knowledge of the Chairperson and IATA and only in the event that specific participation on a given item from a party not present in person is required. Unauthorized recording of the meeting is prohibited.

Guidelines in very simple terms

Do not discuss:

- Any element of prices, including fares or service charges
- Commissions
- Allocations of customers or markets
- Marketing plans, commercial terms or any other strategic decision
- Group boycotts
- Contractual relations with agents, airlines, system providers or other third parties
- Any other issue aimed at influencing the independent business decisions of competitors

Implementation Forum Agenda

9:00 Welcome, Competition Law Compliance

Industry NDC adoption reality check and implementing with the end in view

Participant introductions

Implementation Guidance Highlights

10:40 – 11:00 Break

Servicing in NDC – Part 1

Migrating to 21.3 (IBS, Verteil, presentations, fireside chat)

12:10 – 13:30pm Lunch

Performance in NDC

Industry conversations (Performance, 21.3)

15:00 – 15:20pm Break

A Merchandising Platform Implementation (Turkish Airlines)

Industry conversations: Delivering Servicing despite legacy constraints – what are the opportunities

Reviewing “the Parking lot”

Open Q&A

17:00pm Close day 1

17:30 Airline session in Bale

9:00 Welcome Back

Variations in Industry Implementations

Workflows & Data Elements in 21.3

Industry conversations (Achieving consistency)

10:30-10:55 Break

Servicing in NDC – Part 2

Self-service voluntary changes (LHG, Travix)

12:30-13:50pm Lunch

Interlining in NDC

Airline – partner setup best practice (LATAM, Finnair, AFKL)

Industry conversations (Setup impacts to implementation)

15:00 – 15:20 Break

Setup conversations impacting payment and settlement

Your Implementation Takeaways and next Steps

Resources, next events

17:00 Close day 2

Industry NDC Adoption Reality Check and Implementing with the End in View

Shaunelle Harris Drake, IATA

Ionut Badea, IATA

Sebastian Touraine, IATA



NDC adoption reality check and implementing with the end in view – industry perspectives



NDC Adoption

- # NDC Transactions
- Industry adoption
- Headwinds and Tailwinds



Our Industry Realities

- Ref Architecture
- "The wrapper"
- Use case examples



The End Game

- A new workflow
- Offers & Orders only
- Transition

Thank you



Room introductions

Implementation Headwinds and
Tailwinds

Airline Retailing Adoption

Headwinds

1. Limited large player readiness
2. Implementation variations
3. Standard readiness for transition
4. "Legacy"
5. Investment for the transformation

Tailwinds

1. More joint up conversations
2. Gearing up for 21.3 and beyond
3. New entrants in the landscape
4. More airlines showcasing value
- 5 More airline team connectedness

conversations

Achieving implementation convergence

Addressing technical adoption topics impacting interoperability

Achieving Industry mindset shifts

Achieving the retail mindset, customer-first & value creation vs. tech at industry level

New entrants "Legacy" Airlines showcasing value More joint up conversations

Variations, servicing

conversations

Augmenting readiness of large players

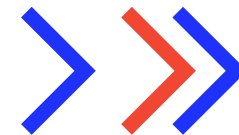
Encouraging transparent roadmaps, having joint-up stakeholder conversations

Delivering retail value leveraging value enablers

- Live airlines maximize value, non-live airlines start better
- Payment, settlement, sustainability, accessibility, other content differentiation

More airline team connectedness More airlines showcasing value

Today's forum addresses Airline Retailing within today's legacy constraints



LET US SHARE WHAT IS
WORKING WELL



WE MAY NEED TO RAISE GAPS
OR CHANGE REQUESTS TO
THE STANDARD



OR PLACE ITEMS IN THE
“PARKING LOT”

NO SUITABLE ANSWER, NO TIME TO ANSWER
INDUSTRY TOPIC E.G. LEGACY CONSTRAINT

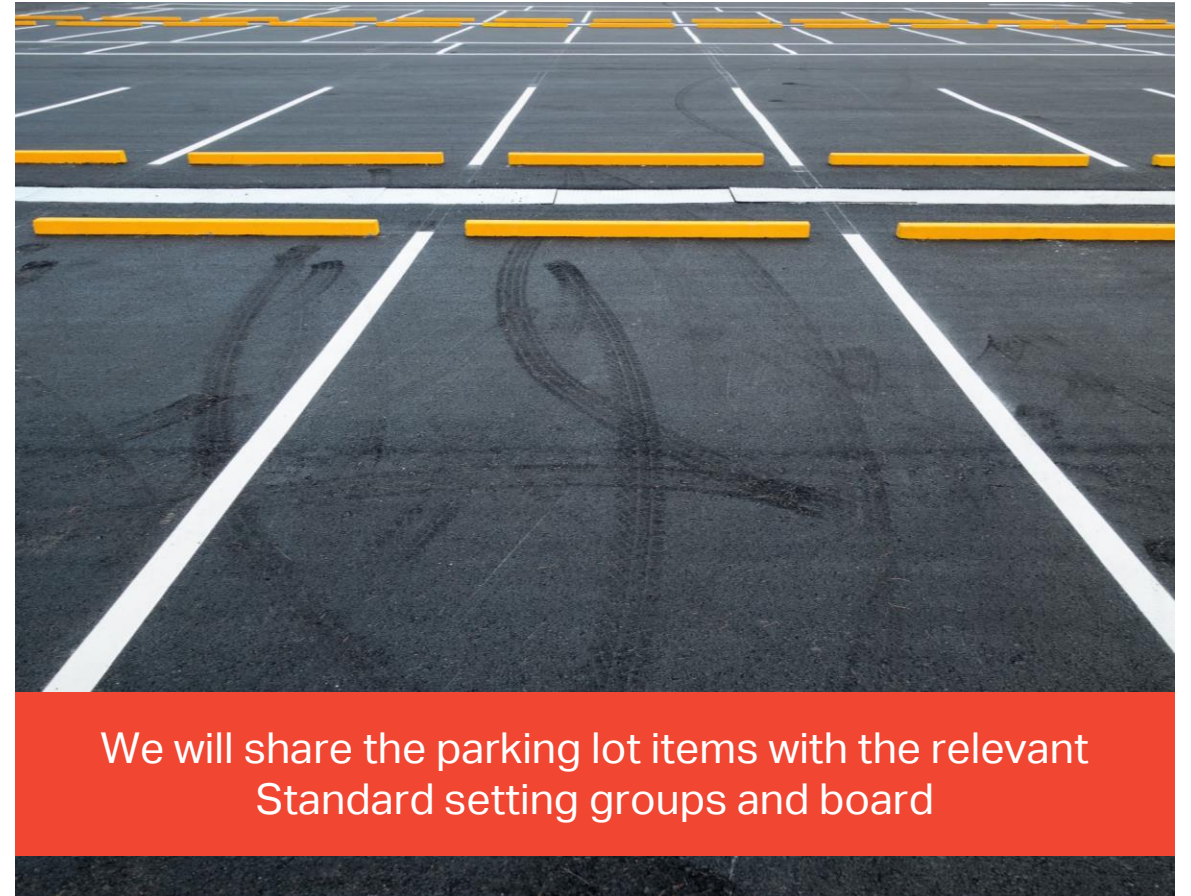
It goes in the Parking Lot

No suitable answer

Not enough time to answer

Goes beyond individual implementation e.g.

- Legacy constraint
- Industry constraint



Implementation Guidance Highlights

Vicente Zepeda Cabral, Hahn Air

Implementation Guidance



EDUCATED (OR AWARE)



EXPERIENCED



EXPERT

Implementation Guide Update

Vicente Zepeda Cabral
Hahn Air



Implementation Guide on IATA Developer Portal (developer.iata.org)

The screenshot displays the IATA Developer Portal interface. The top navigation bar includes the IATA logo, 'Standards Development', and links for 'Home', 'Recent', 'Spaces', 'Teams', 'Apps', and 'Templates'. A 'Create' button and a search bar are also present. The left sidebar shows a tree view with 'Enhanced and Simplified Distribution' expanded, containing 'Overview', 'Space Settings', 'Pages', and 'Worked Examples'. Under 'Worked Examples', 'Offer Worked Examples' is selected, showing a list of use cases, with 'UC01 - Shop and Order a...' highlighted. The main content area shows the details for 'UC01 - Shop and Order a flight for a single passenger'. It includes the title, authors (MV, JB), ownership (Owned by Mladenka Vukmirovic), last update (Jul 11, 2023 by Jakub Bielecki), read time (2 min read), and view count (14 people viewed). The 'Description' section states: 'This use case covers a prime booking flow, i.e. the steps between simple shopping (no a la carte seats or services) and order creation without payment.' The 'Capabilities Demonstrated' section lists: 'Shop for flights', 'Price a flight offer', and 'Order creation without payment'. The 'Preconditions / Assumptions' section lists: 'Airline has already communicated to seller accepted payment methods'.

Enhanced and Simplified Distribution

Overview

Space Settings

Pages

General

Capabilities

Concepts

Worked Examples

Offer Worked Examples

UC01 - Shop and Order a...

UC02 - Shop and Order a...

UC03 - Shop and Order a...

UC04 - Shop and Order s...

Archived pages

Enhanced and Simplified Distribution / Worked Examples / Offer Worked Examples

UC01 - Shop and Order a flight for a single passenger

Owned by Mladenka Vukmirovic

Last updated: Jul 11, 2023 by Jakub Bielecki • 2 min read • 14 people viewed

Description

This use case covers a prime booking flow, i.e. the steps between simple shopping (no a la carte seats or services) and order creation without payment.

Capabilities Demonstrated

- Shop for flights
- Price a flight offer
- Order creation without payment

Preconditions / Assumptions

- Airline has already communicated to seller accepted payment methods

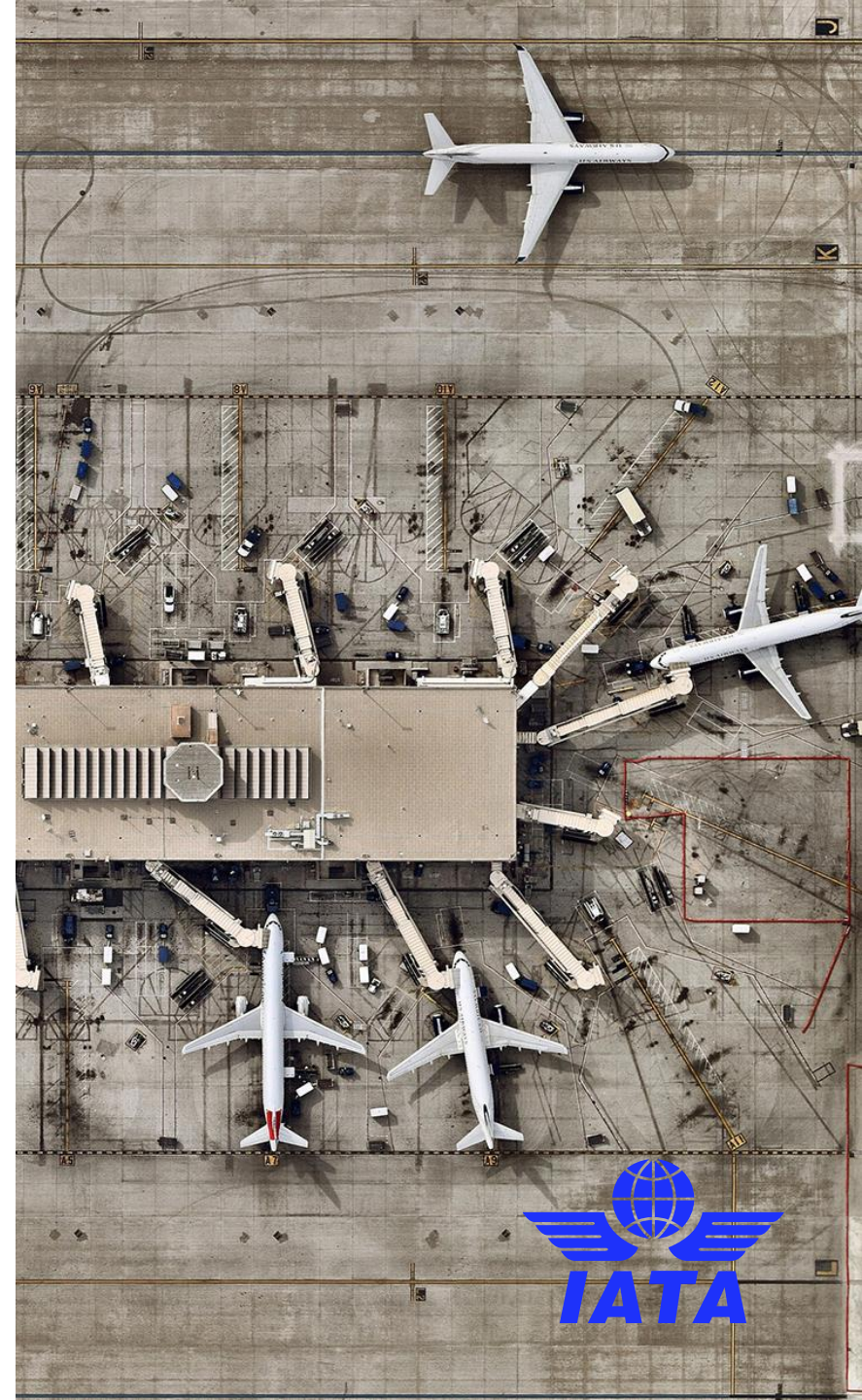
Implementation Guide Structure

Document Types

- Introduction
- Capabilities
- Concepts
- Worked Examples
 - + XMLs

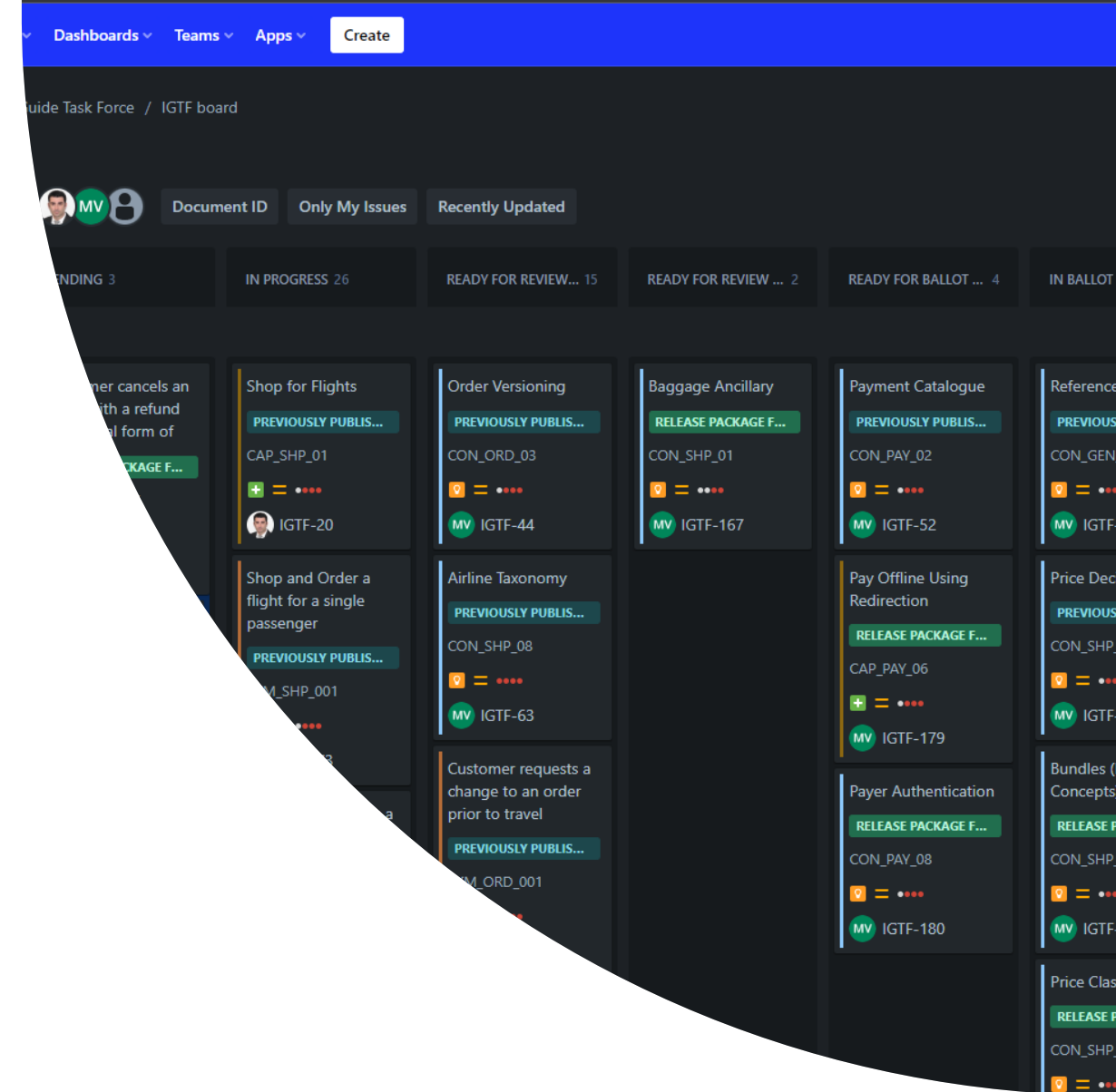
Document Categories

- Shop
- Order
- Pay
- Legacy
- General



Recent changes to review of baseline scope

- Item-by-item review & refactoring of content & quality
- Introduction of JIRA as progress management platform
 - Progress management
 - Collaboration
 - Transparency + reporting
- Simplified document templates



Working Groups Involved in Development

Business
requirements

Offer and Order
Working Group
(OOWG)

Order Payment
Working Group
(OPWG)

Order Accounting
Working Group
(OAWG)

Solution
design

Implementation Guide Task Force

XML Focus group

Implementation Guide – live highlights

guides.developer.iata.org

- [Standard Flows](#)
- Capability: [Create Order Without Payment](#)
- Concept: [Price Decimals](#)
- Worked example: [UC01 – Shop and Order a flight for a single passenger](#)

Upcoming in the next Imp Guide release

- Offers (Offer Concept)
- Baggage Ancillary
- Shop and Order a flight for a single passenger
- Customer Views Their Order
- Order Versioning
- XML Samples - Order Management (EXM_ORD_019)
- XML Samples - Offer Management (EXM_SHP_001)

How can you contribute?

- Anyone can submit a proposal to enhance or correct the Implementation Guide.
- All IATA Members and Strategic Partners can actively contribute in working groups reviewing proposals and developing content



How to propose a change ?

1. Complete a simple agenda item
2. Refer it to IATA Secretary of relevant Working Group (or standards@iata.org)

Subject: [Title of agenda item]

Submitted by: [Name, Organization (email)]

Background

[Provide necessary context to understand why the agenda item is being submitted and why to this group. Refer to ToR of the group if needed]

Business need

[Describe the business need that needs to be met including timeline if possible. If the business need concerns legacy standard, provide clarification of business necessity such as a change of government regulation.]

Proposed solution

[Provide here those elements of the solution that are already known including options that may need to be considered.

For change requests and, if known, specify which artifacts are impacted by the proposed change such as

- Proposed change in Implementation guide (what section, what should be added/changed/removed);

Upcoming meetings

Groups working in business requirements

- OOWG F2F Mtg, 8-9 Sep (GVA)
- OPWG F2F Mtg, 11-13 Sep (GVA)
- OAWG F2F Mtg, 12-15 Sep (GVA)

Implementation Guide Task Force

- F2F Mtg, 16-20 Oct (MAD)

Thank you!



BREAK



Servicing in NDC – where are you? Part 1

Shaunelle Harris Drake

Head Implementation
Distribution, IATA



Servicing



EDUCATED (OR AWARE)



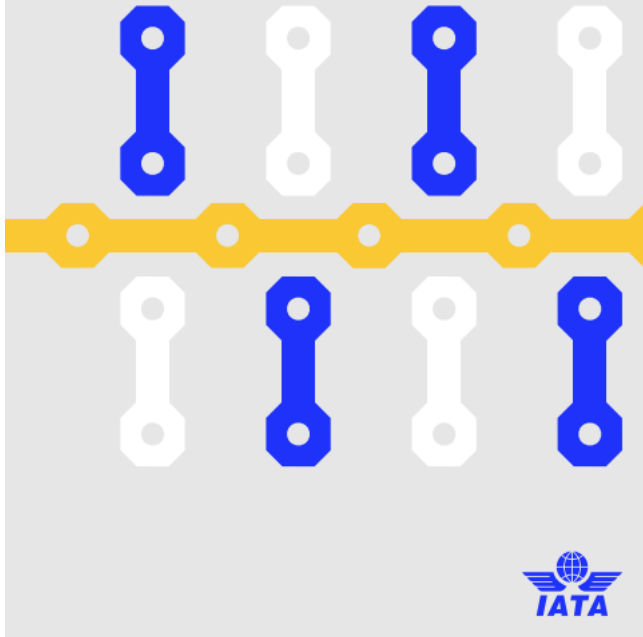
EXPERIENCED



EXPERT

Servicing in NDC

Where are you?



2 Servicing in NDC — Where are you?

Contents

1. Servicing in NDC — Why this paper?	3
Assumption and references in this paper	3
2. The true industry position on servicing	4
Servicing — What do we mean?	4
Are there servicing gaps in NDC?	5
What the ARM index tells us	6
3. Addressing the points of friction	7
Fitting NDC into legacy	9
An industry example of value in servicing today	10
Servicing in the marketplace	11
4. Aligning the value chain to deliver servicing	12
What we learned from SWAT (TMC Adoption)	12
The most difficult nut to crack (potentially)	13
Ironing out the kinks through a value chain conversation	13
5. NDC Servicing — Where are you?	14
Checklist for your implementation team	14
In closing	14

Disclaimer

The information contained in this document is subject to regular review in the light of changing business needs of the industry, government requirements and regulations. The views expressed in this guide are based on the views and opinions of the IATA Distribution team, airlines, other stakeholders, and public information, including from sources that have not been independently verified. This document is designed as a thought piece and the information contained is provided for general information purposes only and does not purport to be commercial or legal advice. Nothing contained in this document constitutes a recommendation or endorsement by IATA.

This guide should not be relied on without seeking the advice of a competent legal counsel. This information is not intended to substitute for or induce any business decision. Any strategy to transition to airline retailing will vary by airline, subject to each airline's individual commercial decision-making.

Available [here](https://www.iata.org/retailing)

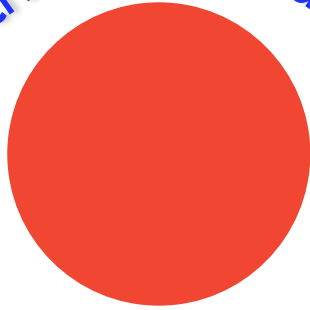
- [iata.org/retailing](https://www.iata.org/retailing)
- Meeting materials on event page

1. Servicing is first about the customer impacted

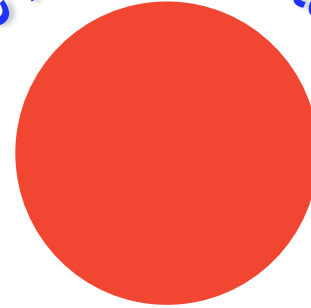


2. Solving servicing - 2 dimensions

the standard

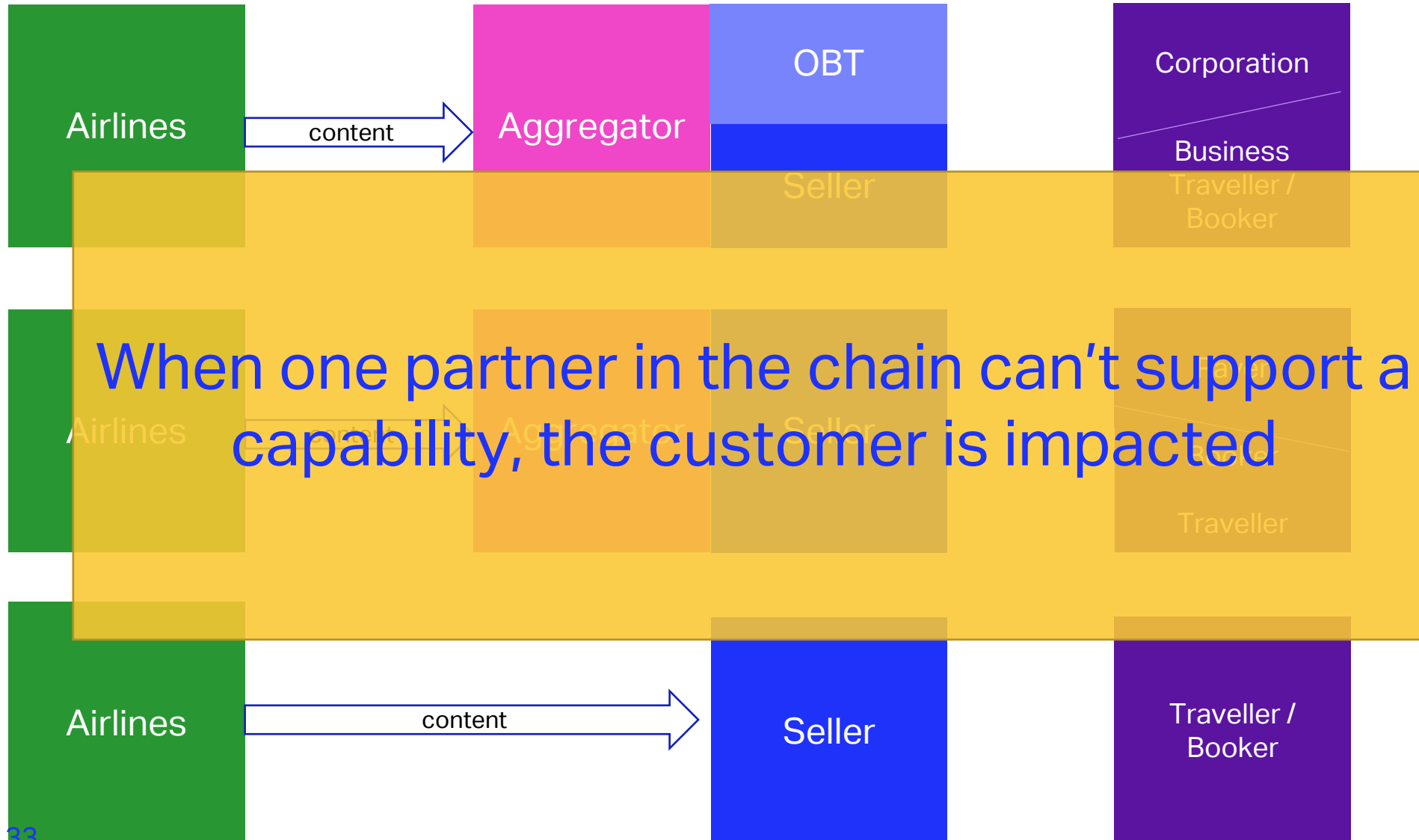


the implementation



Each organization plays a part in delivering servicing to the customer

[The diagrams below are integration examples. Other integrations are possible]



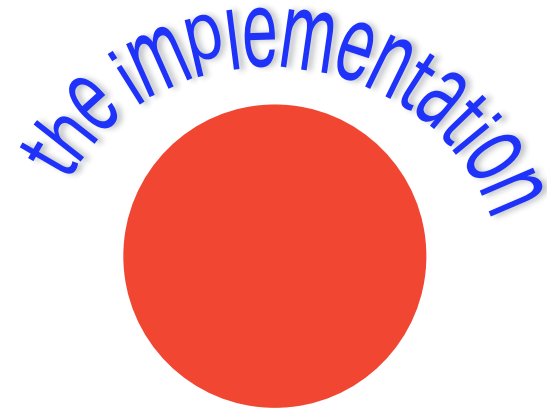
Include

- Duty of care/traveller security
- Reporting
- Payment

Each organization plays a part in delivering servicing capability

There is a role for everyone in the value chain

Your implementation is constrained by the reality of legacy



Zoom: Migrating to 21.3 and beyond

Verteil and IBS present their migration experience

Schema migration



EDUCATED (OR AWARE)



EXPERIENCED



EXPERT

IATA IMPLEMENTATION FORUM

Sharing Verteil's Experience of
Migrating to NDC Version 21.3

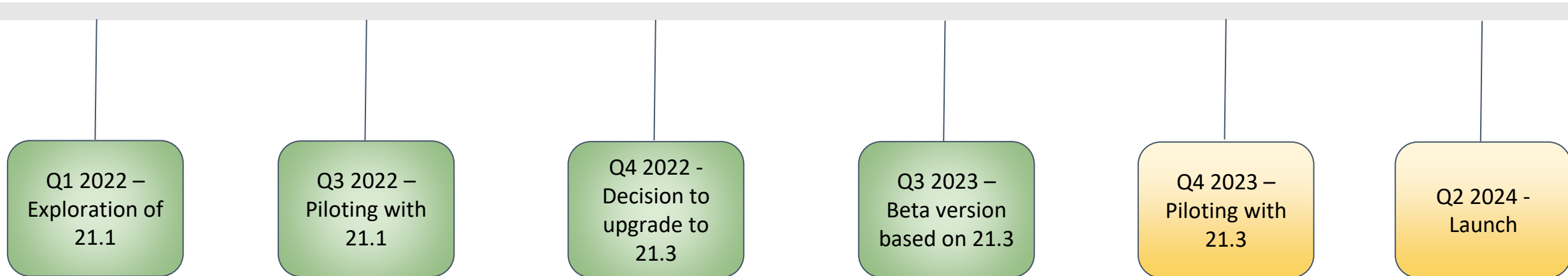
Geneva, 5 September 2023

About Verteil Technologies

- Provider of NDC based Distribution Technology to Airlines & Travel Sellers globally, from 2016.
- HQ & Dev Centre based in Kochi, India. Significant Domain Experience in Airline Travel Tech.
- Working with 40+ Airlines & Travel Sellers in 15+ geographies.
- Solution Offering to Travel Sellers: NDC based Booking Tool & APIs.
- Solution Offering to Airlines: NDC Aggregation Services, NDC Agency Booking Tool, NDC Payment & Settlement Solution.



21.3 Transition



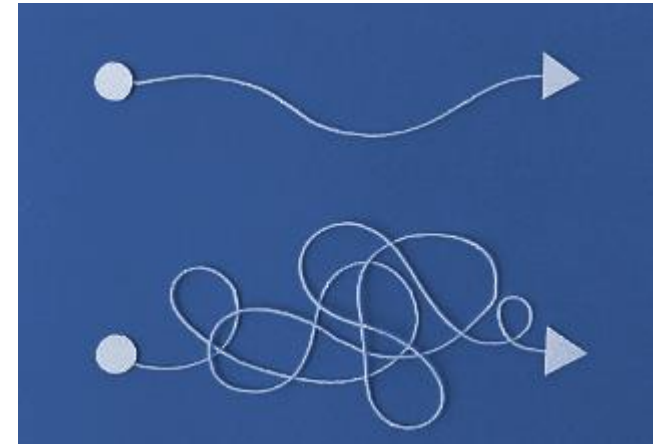
Verteil's Implementation Experience Using 21.3



Sharing Key Highlights from our
implementation experience.

Natural Element Structures

- Easier Interpretation
 - Faster airline onboarding.
 - Faster seller API integration.
- Examples to follow in coming slides



Fare rules

NDC 17.2

```
<Penalty ChangeFeeInd="true" ObjectKey="Rule1" refs="FS1 FS2 FS3 FS4 T1">
  <Details>
    <Detail refs="RuleMetadata1">
      <Type>Change</Type>
      <Application>3</Application>
      <Amounts>
        <Amount>
          <CurrencyAmountValue Code="AED">400</CurrencyAmountValue>
        </Amount>
      </Amounts>
    </Detail>
  </Details>
</Penalty>
```

NDC 21.3

```
<ns2:ChangeRestrictions>
  <ns2:AllowedModificationInd>true</ns2:AllowedModificationInd>
  <ns2:DescText>Reissue permitted</ns2:DescText>
  <ns2:Fee>
    <ns2:Amount CurCode="INR">36440</ns2:Amount>
  </ns2:Fee>
  <ns2:JourneyStageCode>Prior To Departure</ns2:JourneyStageCode>
</ns2:ChangeRestrictions>
```


Reshop Differential

NDC 17.2

```
<ReshopDifferential>
  <OriginalOrderItem>
    <Total>
      <Amount Code="INR">10905</Amount>
      <Purpose>Base</Purpose>
    </Total>
    <Taxes>
  </OriginalOrderItem>
  <NewOfferItem>
    <Total>
      <Amount Code="INR">31315</Amount>
      <Purpose>Base</Purpose>
    </Total>
    <Taxes>
  </NewOfferItem>
  <PenaltyAmount>
    <Total>
      <Amount Code="INR">3150</Amount>
      <AmountType>NOADC</AmountType>
      <Purpose>Base</Purpose>
    </Total>
  </PenaltyAmount>
  <ReshopDue>
    <ByPassenger>
      <Total>
        <Amount Code="INR">24580</Amount>
        <AmountType>ADC</AmountType>
        <Purpose>Net</Purpose>
      </Total>
    </ByPassenger>
    <Taxes CollectionInd="true">
  </ReshopDue>
  <DifferentialTypeCode>AddCol</DifferentialTypeCode>
</ReshopDifferential>
```

NDC 21.3

```
<ns2:ReshopPrice>
  <ns2:PriceDifferential>
    <ns2:DifferentialTypeCode>AddCol</ns2:DifferentialTypeCode>
    <ns2:DiffPrice>
      <ns2:FareDetail>
        <ns2:Price>
          <ns2:DueByAirlineAmount CurCode="INR">0.00</ns2:DueByAirlineAmount>
          <ns2:DueToAirlineAmount CurCode="INR">14715</ns2:DueToAirlineAmount>
          <ns2:TotalAmount CurCode="INR">2265.00</ns2:TotalAmount>
        </ns2:Price>
      </ns2:DiffPrice>
      <ns2:NewPrice>
        <ns2:FareDetail>
          <ns2:Price>
            <ns2:BaseAmount CurCode="INR">37800</ns2:BaseAmount>
            <ns2:TaxSummary>
              <ns2:TotalTaxAmount CurCode="INR">9369</ns2:TotalTaxAmount>
            </ns2:TaxSummary>
            <ns2:TotalAmount CurCode="INR">47169</ns2:TotalAmount>
          </ns2:Price>
        </ns2:NewPrice>
        <ns2:OldPrice>
          <ns2:Price>
            <ns2:BaseAmount CurCode="INR">35535</ns2:BaseAmount>
            <ns2:TaxSummary>
              <ns2:TotalTaxAmount CurCode="INR">9369</ns2:TotalTaxAmount>
            </ns2:TaxSummary>
            <ns2:TotalAmount CurCode="INR">44904</ns2:TotalAmount>
          </ns2:Price>
        </ns2:OldPrice>
      </ns2:PriceDifferential>
    </ns2:ReshopPrice>
```

Documentation

- Verteil's use cases for referring documentation
 - Upgrading NDC airline to 21.3 version of NDC
 - Design Verteil's Universal API based on NDC 21.3
- Overview of the messages
 - Workflow of messages.
 - Usage of messages.
- Understand concepts
 - Remove misconceptions.
 - Normalise interpretation



PriceClassList usage

Airline Implementation

```
<ns2:Desc>
  <ns2:DescID>BAGGAGEALLOWANCE_CARRYON</ns2:DescID>
  <ns2:DescText>0 pc</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>BAGGAGEALLOWANCE_CHECKED</ns2:DescID>
  <ns2:DescText>0 pc</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CANCEL_AFTERDEPARTURE</ns2:DescID>
  <ns2:DescText>No refund after departure (included insurance surcharge)</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CANCEL_BEFOREDEPARTURE</ns2:DescID>
  <ns2:DescText>No refund before departure (included insurance surcharge)</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CARRYONBAGDETAILS</ns2:DescID>
  <ns2:DescText>56x45x25 cm (22x18x10 in)</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CHANGE_AFTERDEPARTURE</ns2:DescID>
  <ns2:DescText>Not permitted</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CHANGE_BEFOREDEPARTURE</ns2:DescID>
  <ns2:DescText>Not permitted</ns2:DescText>
</ns2:Desc>
<ns2:Desc>
  <ns2:DescID>CHECKBAGDETAILS</ns2:DescID>
  <ns2:DescText>23 kg (50 lb) / 158 cm (62 in)</ns2:DescText>
</ns2:Desc>
```

IATA Documentation Snippet

Price Classes



Owned by Vanni Sanvincenti •••
Last updated: Jul 11, 2023 by Jakub Bielecki • 2 min read

Overview

A Price Class is a retailing element that showcases a branding or commercial naming of the overall level of service of an Offer, PaxJourney or FareComponent. It is a simplified description of the benefits (or specificities, including lack of benefits) meant to be shown to the traveller to improve transparency and ease disclosure of the product properties.

Feature Shopping using Taxonomy Structures

- Verteil took advantage of implementing Taxonomy feature in 21.3
 - Product can be uniquely identified in RQ and RS using machine readable codes rather than using descriptions
- Verteil's capability
 - The implementation is adapted for the seller to requested based on taxonomy E.g. Fully refundable offers, Free seat etc.



Additional Checked baggage in ServiceList

Airline Implementation-1

```
<ServiceDefinition ServiceDefinitionID="C-OC-0C3-BG" Owner="XX">  
  <Name>ADDITIONAL BAGGAGE</Name>
```

Airline Implementation-2

```
<ServiceDefinition ServiceDefinitionID="SRVC-BAGS-PRICE-6" Owner="XX">  
  <Name>ExcessBags6</Name>
```

Taxonomy ID	Parent ID	Name	Description
1450	13EC	Bag	Any Product or Service which denotes the same of a standard bag



Thank You



Learnings from migration to 21.3: A holistic shift to Offers and Orders

5th Sep 2023

Mohsin Basheer [Head of Product-Offer and Order Management]
Lakshmi Balachandran [Principal Product Consultant-Offer and Order Management]

AGENDA



Introduction and context setting

Migration and go-live with 21.3

21.3 and shift to Offers and Orders

Roadmap

Summary

Intro & Context



2016



2019



2020



2020



2021

Shift to 21.3

Airline Retailing

ARM index Home / Registry / Company Profile

ibsoftware

Home

ARM index

Tools

iata.org

IBS Software

Export to xlsx

Back to List

Type	System Provider
Customer type	Airline
Website	https://www.ibsplc.com
Product name	IFly Res
Contact details	Mohsin Ahmed Basheer, mohsin.basheer@ibsplc.com
Partners	SunExpress , Tway Air Co., Ltd
Original entry date	2021-10
Expiration date	2024-06
Last changed	2023-06

A detailed list of certified capabilities and messages is available [here](#).

Capabilities Validated

CAPABILITY GROUP	NAME	VERSIONS	ENTRY DATE
Account	Accounting Order Sales Reporting with No Tickets and EMDs	19.2	2021-10-11
	Order Status Change for Revenue Recognition	19.2	2021-10-11
Order	Create Order Without Payment	21.3, 17.2	2021-10-11

21.3 Live in production

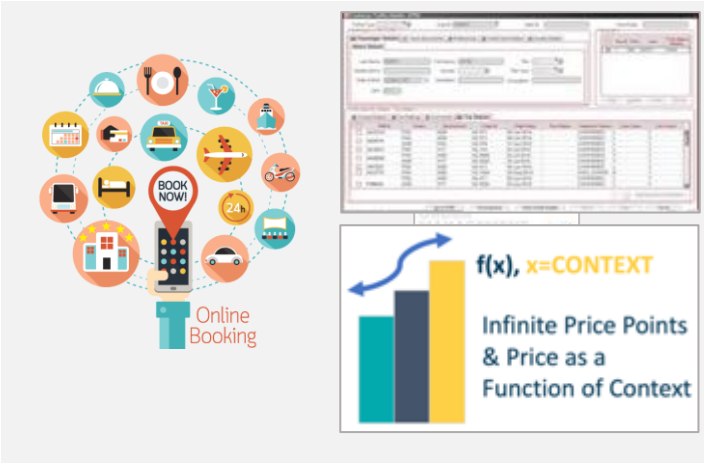
	SeatAvailabilityRS	2021-10-11
	ServiceListRQ	2021-10-11
	ServiceListRS	2021-10-11
19.2	IATA_OrderSalesInformationNotIFRQ	2021-10-11
	IATA_ServiceDeliveryNotIFRQ	2021-10-11
	IATA_ServiceStatusChangeNotIFRQ	2021-10-11
20.2	IATA_OrderChangeNotIFRQ	2021-11-25
21.3	IATA_AirShoppingRQ	2022-10-14
	IATA_AirShoppingRS	2022-10-14
	IATA_OfferPriceRS	2022-10-24
	IATA_OrderChangeRQ	2022-11-10
	IATA_OrderCreateRQ	2022-10-24
	IATA_OrderQuoteRQ	2022-11-10
	IATA_OrderReshopRQ	2022-11-10
	IATA_OrderReshopRS	2022-11-10
	IATA_OrderRetrieveRQ	2022-10-14
	IATA_OrderViewRS	2022-10-14
	IATA_SeatAvailabilityRQ	2023-03-31
	IATA_SeatAvailabilityRS	2023-03-31
	IATA_ServiceListRQ	2022-11-10
	IATA_ServiceListRS	2022-11-10

16 messages certified | 10 Offer Order capabilities certified - ARMI Registry

Feature Highlights from previous 18 months

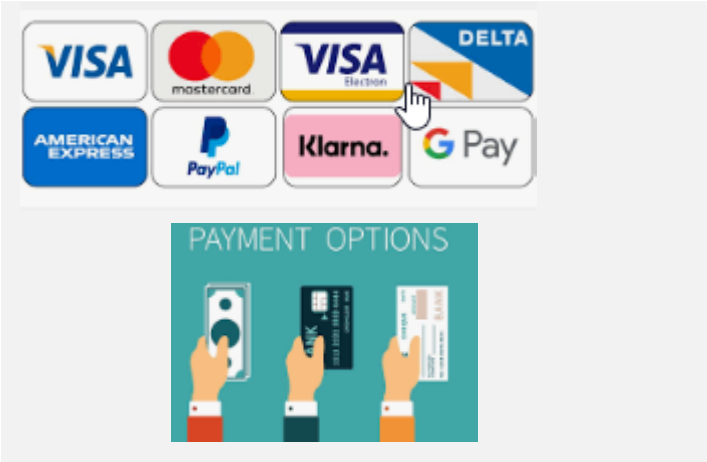
NDC 21.3 capabilities- Shop

- Shop for flights - *SHPFLLT*
- Multicity/open jaw itineraries- *SHPOPE*
- Shop for ancillaries - *SHPANC*
- Use of airline taxonomy - *SHPSRV*
- Seat map and availability - *SHPSTA*
- Seat map and price points - *SHPSTA*
- Returns Flights Operated by Other Airlines- *SHPITL*
- Additional Airline Supplied Ancillaries (e.g. meals, WIFI,) *SHPAN2*
- Seat options- *SHPSTO*
- Airline Offers with Localization - *SHPLCC*



NDC 21.3 capabilities- Pay

- Pay Using Customer Card- *PAYCP*
- Pay Using Payment Gateway- *PAYGTW*
- Pay Using Vouchers- *PAYVCH*
- Pay Using Mixed Payment Instruments- *PAYMIX*



Apr - Jun '22

Jul - Sep '22

Oct - Dec '22

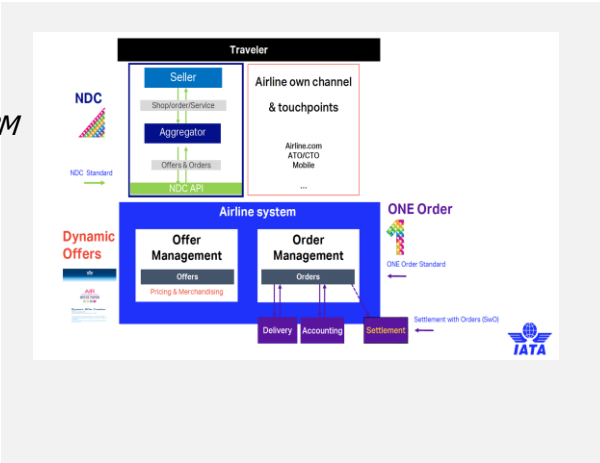
Jan - Mar '23

Apr - Jun '23

Jul - Sep '23

NDC 21.3 capabilities- Order create

- Create Order Without Payment- *ORDWPM*
- Order Creation With Instant Payment- *ORDCRE*
- Order Creation with Ancillaries



NDC 21.3 capabilities- Order retrieve/servicing

- Seller-Initiated Change to a flight only Order Requiring a Re-shop- *ORDRSH*
- Order information upon request- *ORDRET*
- Re-shopping for Ancillaries- *ORDRE2*



Implementation and Go-live experience

Key Considerations to move to 21.3



Key highlights and enabling shift to Offers and Orders

Product Taxonomy



- Machine Readable Product Taxonomy
- Enables comparison shopping

Product Catalogue

Offer Restrictions



- Machine Readable Offer Restrictions
- Enables comparison shopping

Offer Management

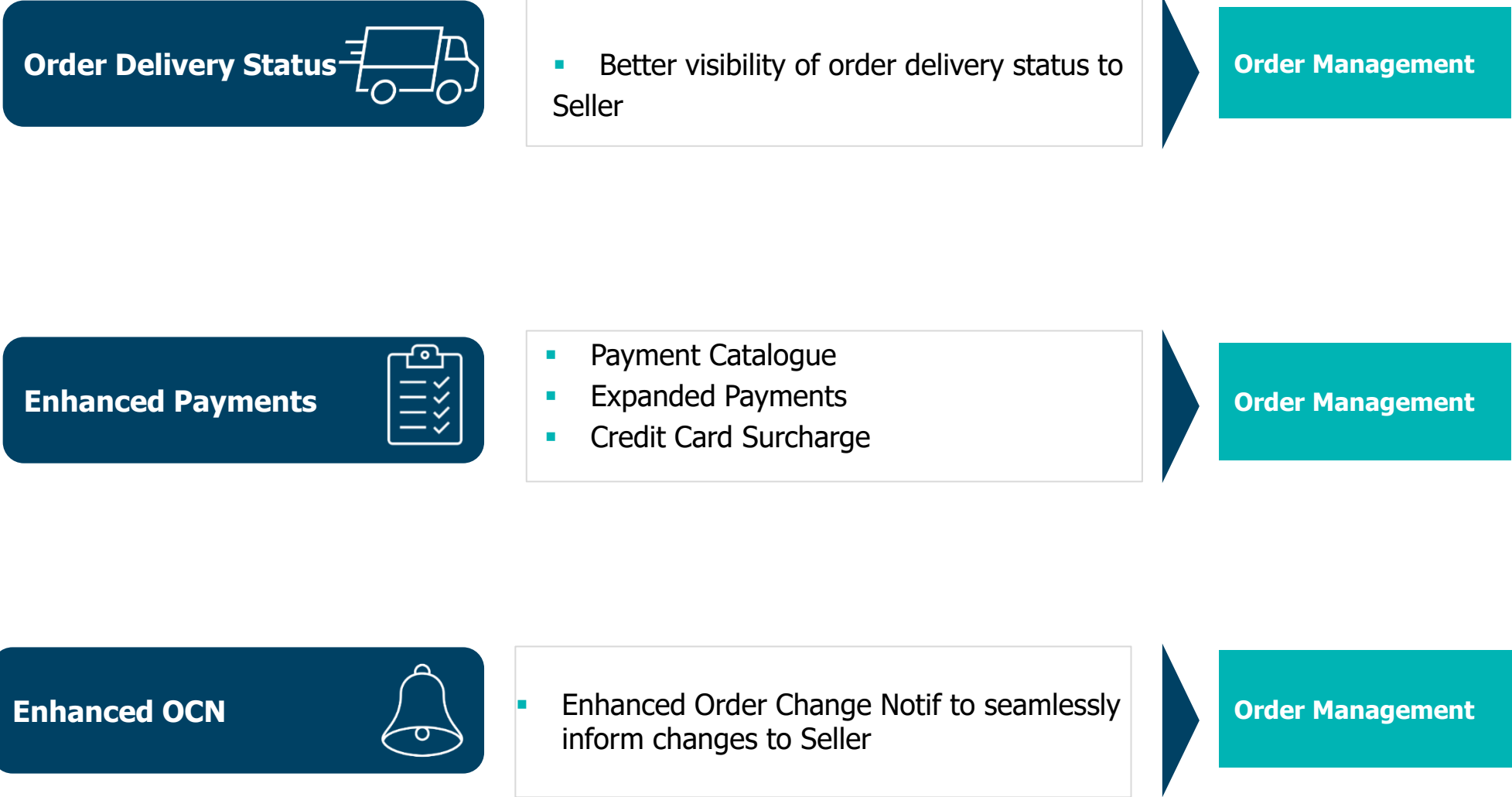
Repricing Offers



- Price Differential
- Order Quote

Offer Management

Key highlights and enabling shift to Offers and Orders




21.3 and Partnerships with Offers and Orders Standards



Pilot on Partnerships with Offers and Orders

- | | | |
|--|--|--|
| <ul style="list-style-type: none">• Shop• Price• Order• Seat Map• Seat Assignment• Contextual Pricing | <ul style="list-style-type: none">• Order Servicing• Ancillaries• Order Cancel• Penalty Handling• Disruption | <ul style="list-style-type: none">• Counter Check-In• Delivery• Interline Through Check-In |
|--|--|--|

17.2/19.2 schema	21.3 schema 
Had retrofitted taxonomy feature in 19.2 to filter /request specific ancillaries.	This is now directly available in 21.3
Used supplier (PoA)/retailer (ORA) participants in party to inform the supplier that it's a request from retailer	Key difference in 21.3 schema was that the Interline Messages were found to be now decoupled from the normal distribution messages with specific placeholders.
Used journey information in request to feed the context information	The interline message has specific placeholders to pass the entire journey context

21.3 Schema Support: Enabling Interline Servicing and Through Check-in Capabilities



Order Servicing - The Enhanced OrderServiceNotif message was utilized to notify the retailer/supplier regarding modifications in the order.



Interline Through check-in - Through the inclusion of bags and seats at the service level within ServiceDeliveryRS, the passage of this information from the Supplier's OMS to the Retailer system became feasible, particularly in scenarios involving Interline Through check-in.

Developer perspective – Advantages of 21.3



Better Documentation

- Documentation with greater granularity, use cases and examples for aligned interpretation
- Included use case based worked XML samples

- ✓ Consistent Implementation
- ✓ Reduced Support Costs
- ✓ Accelerated Onboarding and Training



Simplified Message structure

- Reintroduction of Common Types, reducing the complexity of code generation
- Common DataLists object removed ambiguity of the same object in earlier version

- ✓ Enhanced Developer Experience
- ✓ Faster Development and Integration



Backward compatible APIs

- IATA assures backward compatibility which takes away a big burden from an API consumers point of view

- ✓ Faster Adoption of Upgrades
- ✓ Seamless Transition

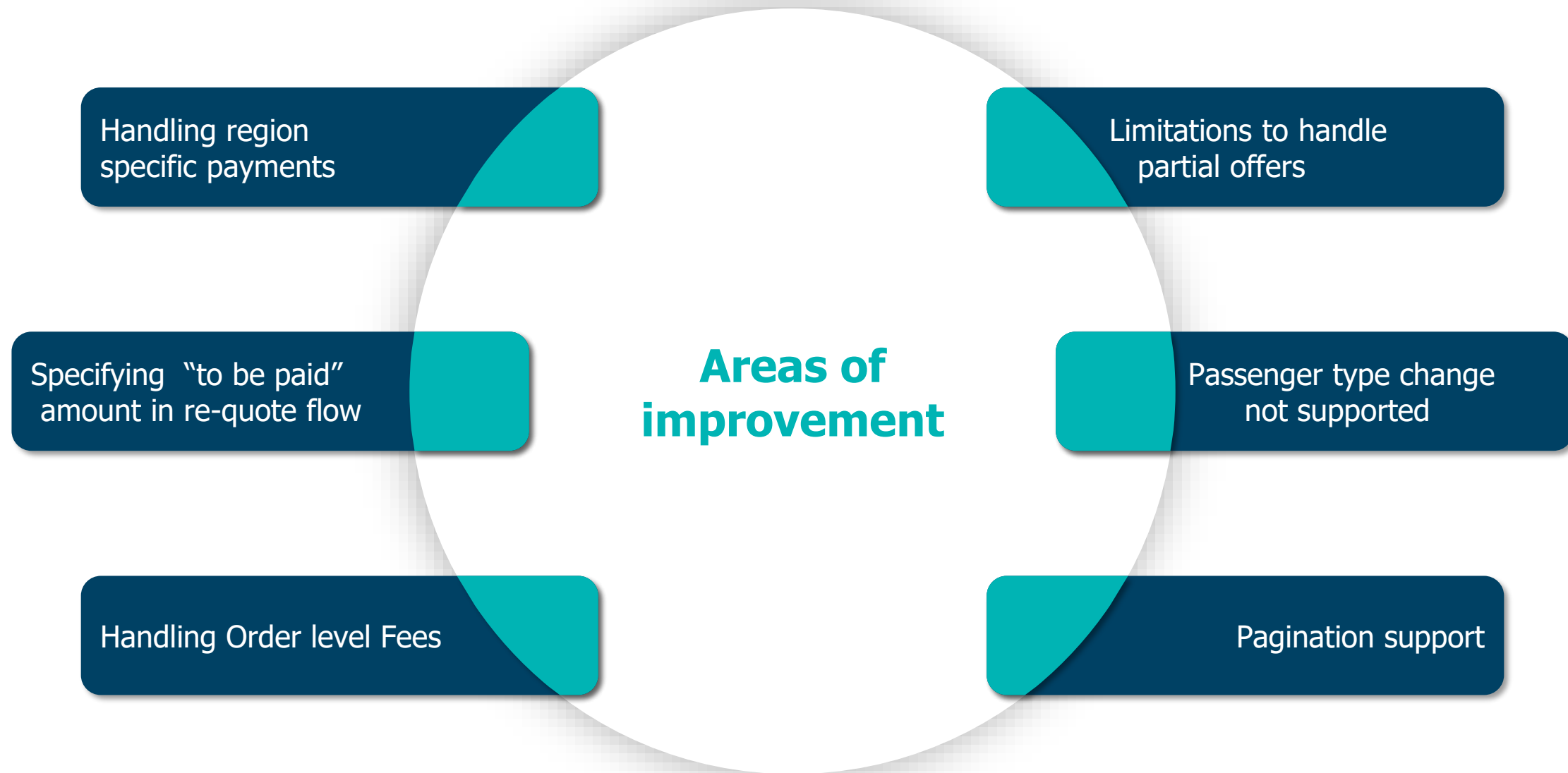


Enhanced implementation clarity

- Removal of refs and removal of metadata with augmentation points reduces development for different implementation variances at consumer side

- ✓ Consistent Implementation

Areas of improvement



Roadmap - NDC 21.3

September 2023



- Rebook with ancillaries
- NDC 21.3- Order cancel-ORDCA2
- Support of specific FOPs
- Bundle handling in order creation flow
- Pay for an Existing Unpaid Order or Order Items

December 2023



- NDC 21.3- Cancel order item-ORDCAN
- NDC 21.3- add/modify/delete contact
- NDC 21.3 Modify passenger NDC 21.3 add/modify/delete travel docs
- Ancillary modification/deletion
- Bundle handling in order servicing flow

March 2024



- Order History-ORDHIS
- Order Notification for airline-initiated actions-base use case ORDOCN
- Order list-ORDLST
- Enhanced shopping filters
- Cancel order item advanced use cases

June 2024



- Rich media handling
- Air shopping with bundles
- Enhanced Order retrieve filters
- OCN - advanced use cases
- One order use cases for delivery and accounting
- Handling of all FOPs supported by 21.3

Summary



The API is feature-rich, addressing many limitations present in older versions

The availability of improved documentation and detailed worked examples simplifies the implementation of this version

Participation in IATA XML focus groups has facilitated knowledge sharing and the creation of more effective worked examples

Shift towards 21.3 will be key in the journey towards Offers and Orders and Airline Retailing

The mass adoption of this version must be enhanced to fully leverage its potential



THANK YOU

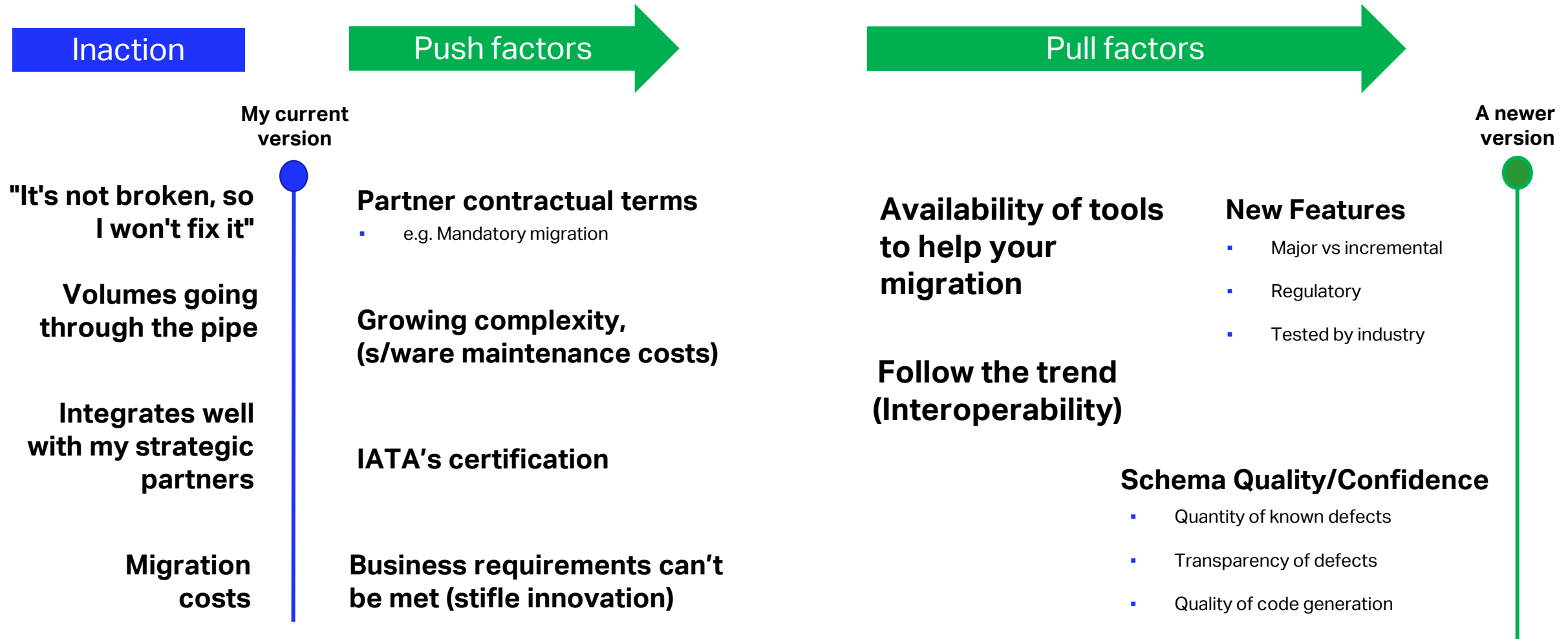
ibsoftware

Redefining the Future of Travel through Technology Innovation

Fireside Chat



What to consider when migrating versions



Lunch



Performance in NDC

Vanni Sanvincenti

Lead Architect, Distribution

3 Areas of Intervention

Through the standards



Through your implementation



Through your architecture



Mitigating Performance Constraints...

Through the standards

- Factoring AirShoppingRS (DataLists)
- Query precision
 - Flight shopping (per-bound / return)
 - Precision in date/time (avoid + or – days)
 - Include/Exclude preferences
- Airline profile (possibly helped by APMWG)
- Ancillaries as a separate step
- Coming soon:
 - Pagination
 - Limiting resultset
- Message workflows (e.g. OfferPrice)

```
226 </PriceClassList>
227 </DataLists>
228 <OffersGroup>
229 <CarrierOffers>
230 <Offer>
231 <BaggageAssociations>
232 <BaggageAllowanceRefID>BAGALL-01</BaggageAllowanceRefID>
233 <OfferFlightAssociations>
234 <PaxSegmentReferences>
235 <PaxSegmentRefID>PAXSEG-01</PaxSegmentRefID>
236 <PaxSegmentRefID>PAXSEG-02</PaxSegmentRefID>
237 </PaxSegmentReferences>
238 </OfferFlightAssociations>
239 <PaxRefID>PAX-01</PaxRefID>
240 </BaggageAssociations>
241 <BaggageAssociations>
242 <BaggageAllowanceRefID>BAGALL-02</BaggageAllowanceRefID>
243 <OfferFlightAssociations>
244 <PaxSegmentReferences>
245 <PaxSegmentRefID>PAXSEG-01</PaxSegmentRefID>
246 <PaxSegmentRefID>PAXSEG-02</PaxSegmentRefID>
247 </PaxSegmentReferences>
248 </OfferFlightAssociations>
249 <PaxRefID>PAX-01</PaxRefID>
250 </BaggageAssociations>
251 <OfferExpirationTimeLimitDateTime>2023-01-01T15:00:00Z</OfferEx
252 <OfferID>OFF-01</OfferID>
253 <OfferItem>
254 <CancelRestrictions>
255 <AllowedModificationInd>true</AllowedModificationInd>
256 <DescText>Cancellations allowed.</DescText>
257 <Fee>
258 <Amount CurCode="EUR">50.00</Amount>
259 <DescText>Cancellation fee</DescText>
260 </Fee>
261 <JourneyStageCode>After Departure</JourneyStageCode>
262 <PaxRefID>PAX-01</PaxRefID>
263 </CancelRestrictions>
264 <ChangeRestrictions>
265 <AllowedModificationInd>true</AllowedModificationInd>
```


Mitigating Performance Constraints...

Through your implementation

- Filtering
 - Airline returning subset of available offers
 - Aggregator truncating large responses
 - Seller ignoring excess of offers returned



Mitigating Performance Constraints...

Through your architecture

- Message compression
- Load balancing
- Elastic server expansion
- Distributed network topology
- Serializing to other protocols
- Caching of offers
- API governance
 - Throttling
 - Queueing
 - Capping



Next Steps

How can we tackle performance challenges?

- Analyze and benchmark bottlenecks
- Isolate and prioritize persisting issues
- Explore future features in standards:
 - Improved manipulation of resultsets
 - Client-side offer storage
 - Asynchronous AirShopping?



Industry Conversations



Industry Conversations

Topic 1 - Performance

1. Other than filtering of offers, what other measures could you take to improve performance in the category of “Implementation” (excl. standards- or IT-related solutions)?
2. Wearing an API-consumer hat, what levels of control would you like to have over shopping responses? What degree of visibility over the “superset” of offers is important to you?

Topic 2 – NDC Schema migration

The following is a typical migration approach (*also applicable to any schema version*)

1. Establish feature parity with your current release (data & functionality)
2. Progressively expand to make use of new 21.3 features
3. Provide extensive range of 21.3 capabilities following industry best practices

Share your experience in planning or executing your migration plan.

What are good/best practices not to miss?

BREAK



A Merchandising Platform Implementation

Turkish Airlines

Merchandising Platform Implementation

Lessons From Our Ancillary Delivery in NDC



TURKISH AIRLINES

A STAR ALLIANCE MEMBER 

1

What is Merchandising?

- Features
- History

2

Offer Process Details

- Product/Catalog Model
- Process Flow
- Structure of Rules
- Parallel Processing
- Technical Challenges and Solutions

3

NDC & Merchandising

- TK NDC Journey
- Focus
- Offer&Order Service Integration

4

Benefits/Outcomes

- Increase in Ancillary Sales
- Ancillary Shopping, Upsell
- Agility and Ease in Launching a New Service
- Lessons Learned

5

Foreseeable Future

- Increase in Ancillaries
- More Personalized Offers
- Dynamic Price Alteration
- Refund and Reissue of Ancillary Orders
- Adding Tax



What is Merchandising?

Features

History

1



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Merchandising at TK

Merchandising, for all kinds of ancillary services sold or to be sold in the Turkish Airlines; It is positioned as a central application that enables an agile and simple management of ancillary pricing, offer generation, filing and after-sales processes.

Features

- Presents 9 different ancillary categories
- Developed with %100 Turkish Airlines internal resources.
- Inspired by and compatible with NDC data and process models
- Compatible with IATA Airline Taxonomy
- Multi-step AI assisted rule based offering process (in test)
- Has an extendible, generic, self descriptive product/catalog model based on mature and proven retail industry models like telecommunication industry.

Provided Ancillary Categories



Business Upgrade



Excess Baggage



Lounge



Overweight Baggage



Petc&Avih



Reservation Right



Seat



Sport Equipment



Weapon



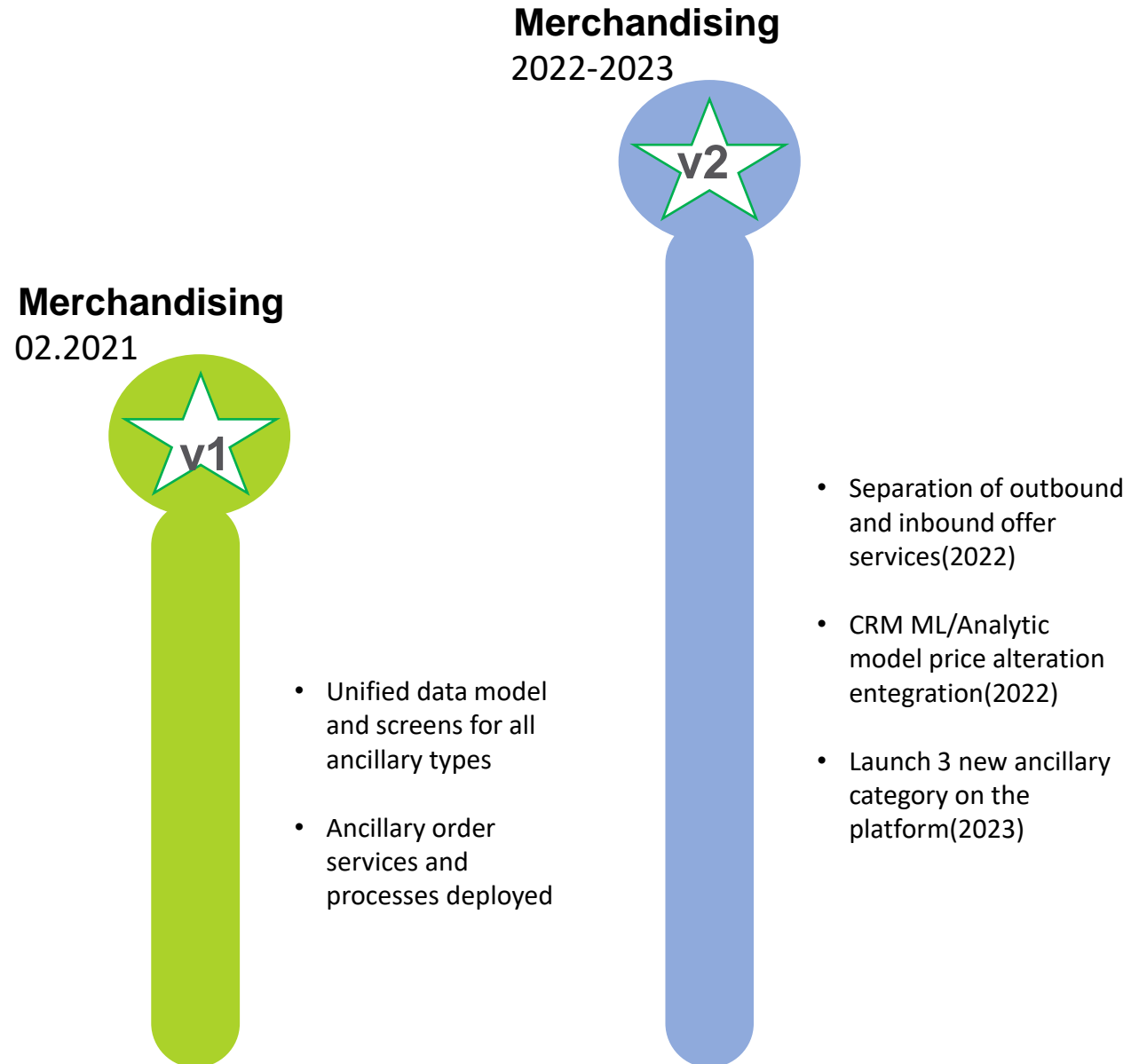
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Features

- Flexible Rule based offering engine
- Customization of offers from individual level to partner level
- Currency / Frequent Flyer Rewards offers availability
- Pricing and Price alteration alternatives
 - By piece
 - By a scalable parameter
 - Take previously purchased amounts into consideration (New)
- Extensible offering mode functionality
 - Preview: browsing only, do not create persistent long term records (%95 of the requests)
 - Pricing: creates purchasable offer records.
 - Catalog: cheapest prices for each category
- Ancillary service bundling, quota and campaign functionality
 - By Passenger
 - By Segment
 - By Service etc.
 - Limited number of offers (sale quotas)
 - Bundle request restrictions
 - Limiting package contents and filtering unwanted combinations
- An order system for ancillary services (for after sales processes)

HISTORY





Offer Process Details

Process Flow

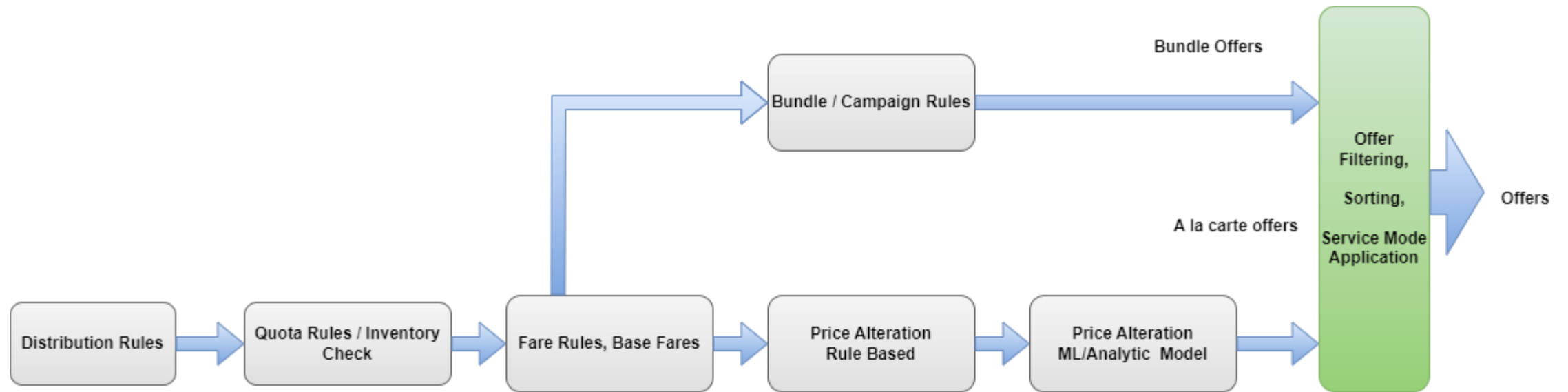
Structure of Rules

Parallel Processing

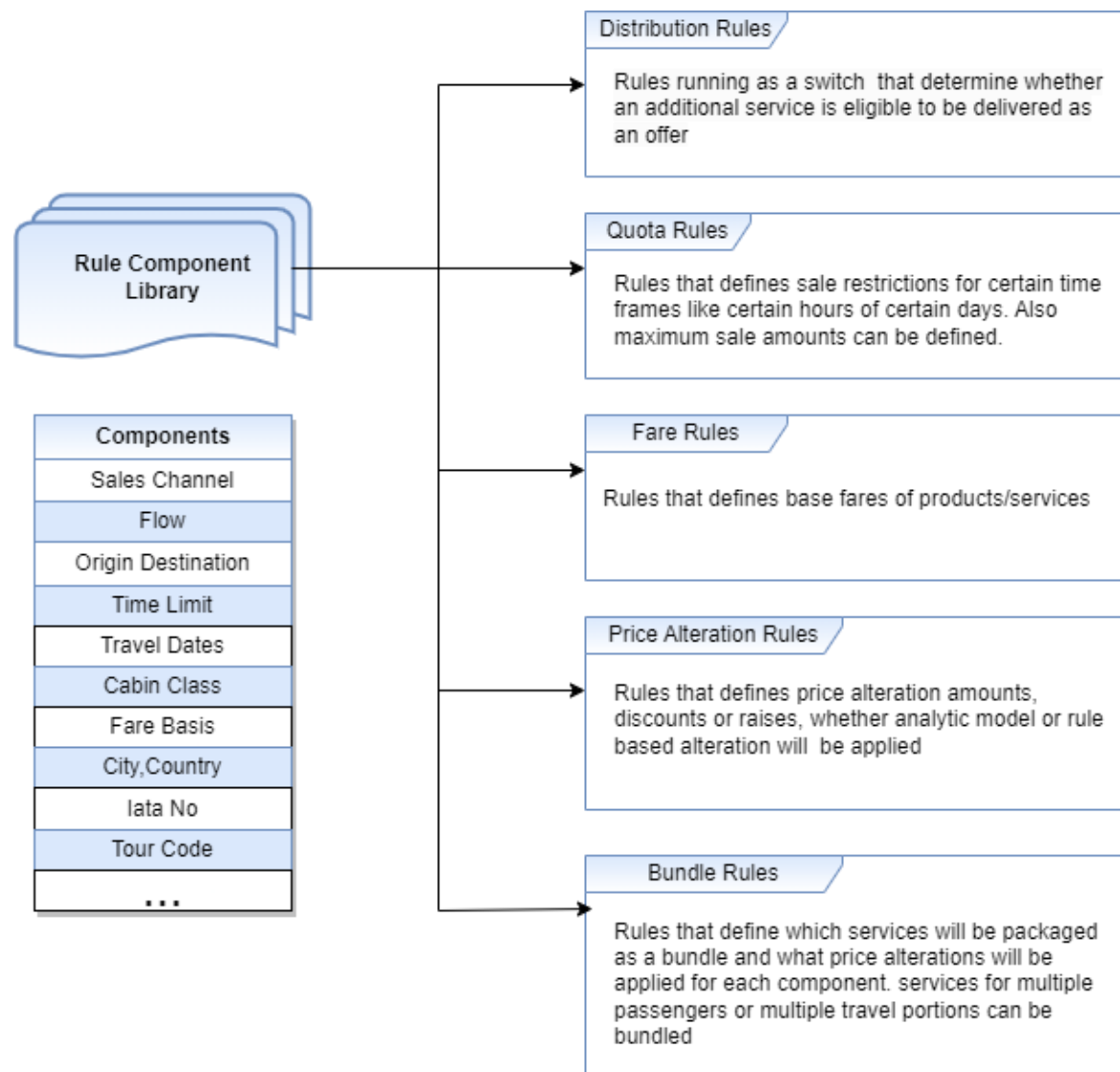
Technical Challenges and
Solutions

2

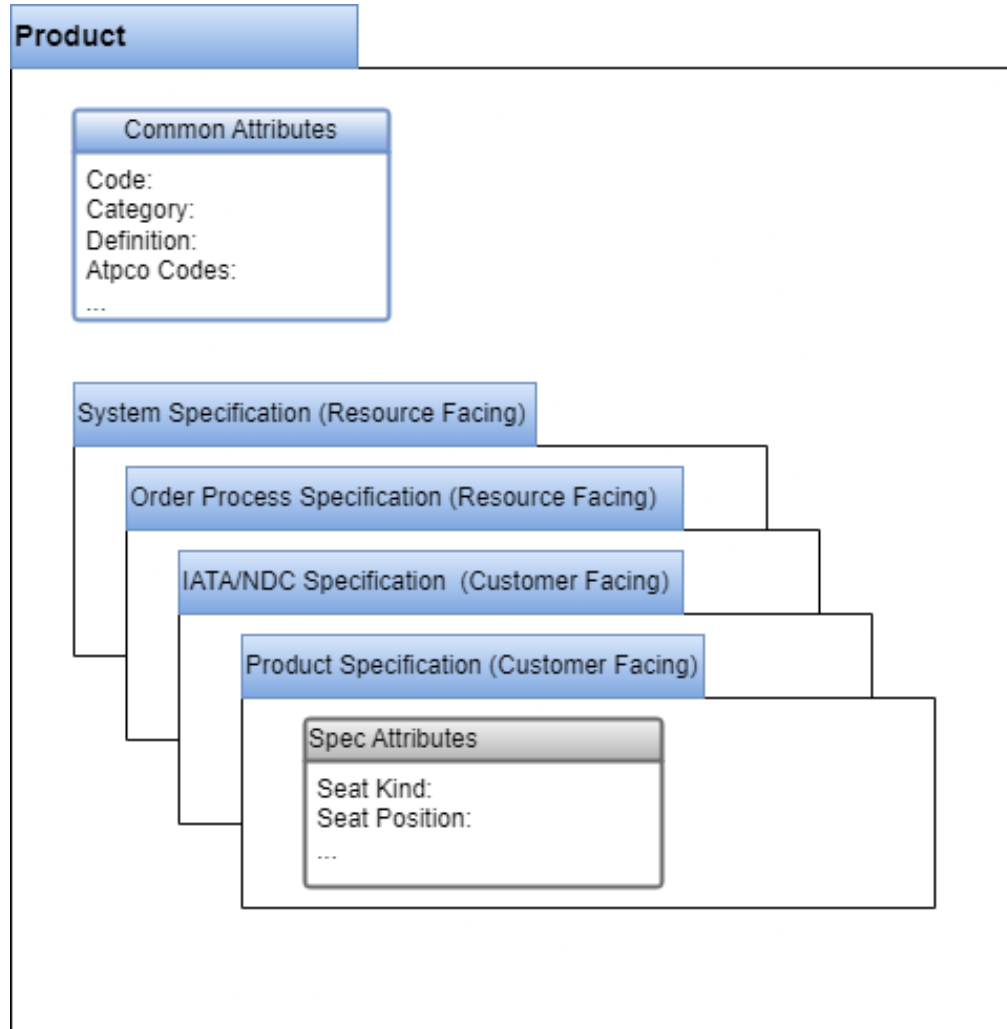
Offering Process Flow



Offer Rule Library



Structure of Products

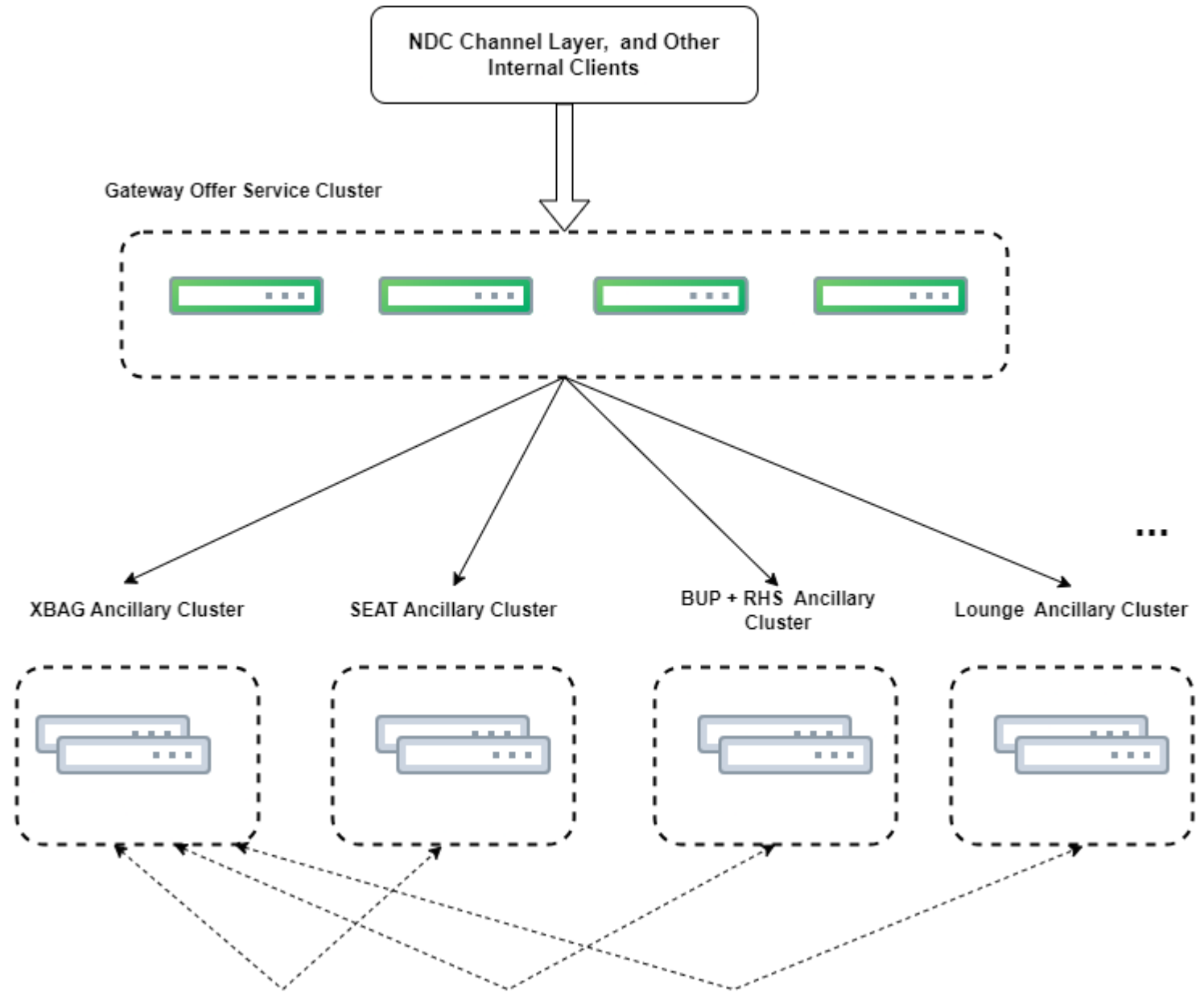


```
{
  "identifier": {
    "recordType": "PRODUCT",
    "id": "PRODUCT-SEAT_EXIT_AISLE",
    "code": "PRODUCT-SEAT_EXIT_AISLE",
    "mode": "ON",
    "kind": "MANUAL"
  },
  "category": "PRODUCT_CATEGORY-SEAT",
  "productKind": {
    "code": "SEAT_EXIT_AISLE",
    "category": "SEAT",
    "rfic": "D",
    "rfisc": "07E",
    "group": "TS",
    "subGroup": "BO"
  },
  "specification": [
    {
      "parameter": [
        {
          "value": ["EXIT"],
          "definedValues": [],
          "name": "SeatKind",
          "valueType": "STRING",
          "type": "SIMPLE",
          "usageType": "PREDEFINED"
        },
        {
          "value": ["AISLE"],
          "definedValues": [],
          "name": "SeatPosition",
          "valueType": "STRING",
          "type": "SIMPLE",
          "usageType": "PREDEFINED"
        }
      ],
      "specificationKind": "CUSTOMER_FACING_SERVICE",
      "code": "CFS"
    }
  ],
  "description": "Seat Exit Aisle",
}
```

- Shared single source of truth for both offer and order processes.
- Offer and Order related product specific attribute sets.
- Easy to modify, extend or discard definitions (ex: legacy system definitions)

Technical Challenges and Solutions

- Parallel processing
- Rule partitioning by category
- In memory processing
- Isolation of category processing to different clusters
- Multiple category request within a single transaction, for efficiency
- Service discovery
- Fault tolerance
- Resilient
- Scalability
- Microservice architecture
- Bundle product combinations





NDC & Merchandising

TK NDC Journey

Focus

Offer & Order Service
Integration

3



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In-house Initiative & POC Start



01

NDC Schema / Message Development



02

Partner Integrations



03

Go-live



04

TK NDC JOURNEY

NDC AIRSHOPPING

SEAT AVAILABILITY

ORDER RESHOP

OFFER PRICE

AIRLINE PROFILE

SERVICE LIST

ORDER CREATE

ORDER CHANGE NOTIF

ORDER QUOTE

ORDER VIEW

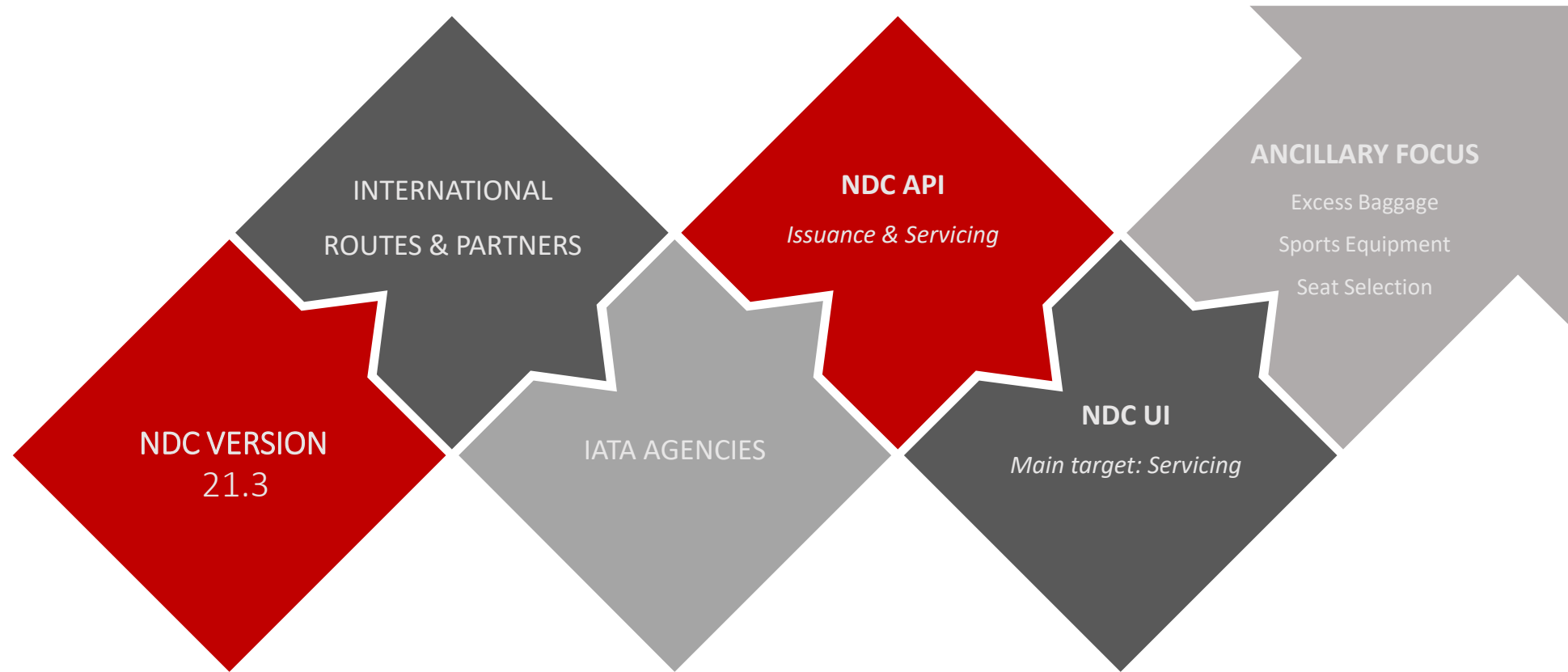
ORDER CHANGE PAYMENT

ORDER LIST

ORDER CHANGE NO PAYMENT

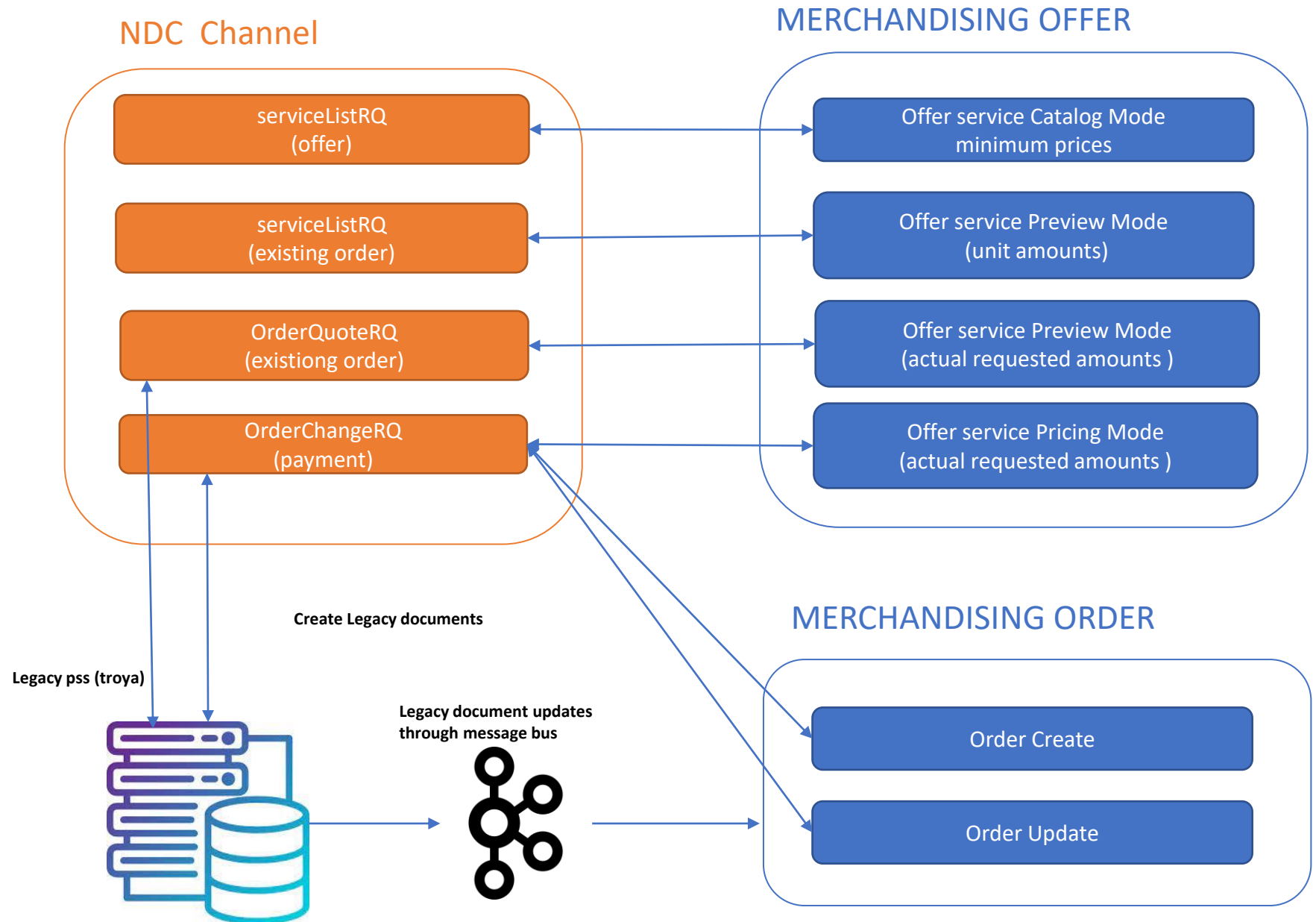
ORDER RETRIEVE

FOCUS



NDC– Merchandising Integration

- Offer Service integration
 - A la carte service offers are available through NDC Channel
 - Bundle or limited Campaign Offers will be soon
- Order Service integration
 - Both direct calls for order creation and updates
 - Also Async Order updates for legacy document status changes





Benefits/Outcomes

Increase in Ancillary Sales

Ancillary Shopping, Upsell

Agility and Ease in Launching
a New Service

Lessons Learned

4

Ancillaries in 2022 - More Value to Customers&TK



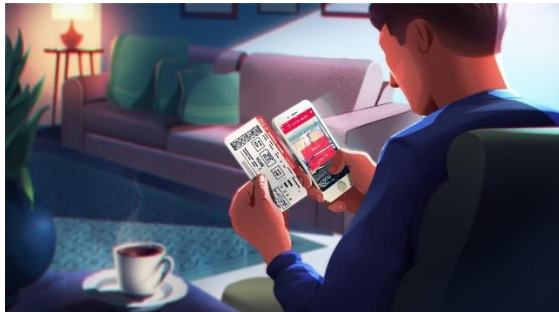
Seat Selection



Excess Baggage



Business Upgrade



Hold the Price



Sports Equipment

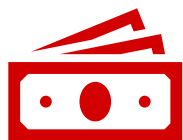


Lounge

Ancillary Shopping - Upsell (Catalog and Preview)



Catalog



Preview



Select Flight



Passenger Details



Additional Services



Payment



Additional Services

Seat selection



Other additional
services

Skip additional services >



Extra Baggage

Istanbul - Ankara :15 kg

Add



Sports Equipment

Here, you can purchase a
transportation allowance for your
sports equipment.

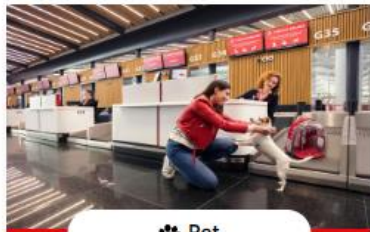
Add



Lounge

You can spend a pleasant and
comfortable time in our passenger
lounges while waiting for your
flight.

Add



Pet

Enjoy a safe and comfortable trip
with your pets.

Add



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Lessons Learned

- Complexity of Bundle&Campaign rule creation and how it reflects in the sales channels
- Shared ownership of ancillary services across different teams
- Obstacles in the use of the Merchandising system in the sales office and operational field – the continuation of old habits
 - Manuel pricing
 - Usage of the main frame system
- Usage of two pricing systems for Ancillaries – ATPCO & Merchandising
- Performance issues, response time constraints
- High volume for offer requests especially for shopping





Foreseeable Future

Increase in Ancillaries

More Personalized Offers

Dynamic Price Alteration.

Refund And Reissue of Ancillary Orders

Adding Tax

5

Foreseeable Future

- Increase Number of Ancillaries on the platform.
- More personalized offers and dynamic price alteration
- Refund And Reissue of Ancillary Orders
- Ancillary tax processing
- Unified External Inventory Management



THANK YOU



TURKISH AIRLINES

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Industry Conversations

Delivering Servicing despite
legacy constraints – what are
the opportunities?



Delivering Servicing despite legacy constraints – what are the opportunities? 10min



Legacy retrofit

The PNR construct does not support multiple passengers with different itineraries on 1 PNR...

The complex legacy fare conditions linked to filed fares...

PNR history limited to current services/formats...

Standard opportunities

... vs. the Order that supports non-homogeneity (multi-passenger, multi-itineraries).

... vs. newer and more relevant Offer and Order restrictions.

... vs Order versioning capabilities to track changes into its Order history.



Implementation Forum Agenda

9:00 Welcome, Competition Law Compliance

Industry NDC adoption reality check and implementing with the end in view

Participant introductions

Implementation Guidance Highlights

10:40 – 11:00 Break

Servicing in NDC – Part 1

Migrating to 21.3 (IBS, Verteil, presentations, fireside chat)

12:10 – 13:30pm Lunch

Performance in NDC

Industry conversations (Performance, 21.3)

15:00 – 15:20pm Break

A Merchandising Platform Implementation (Turkish Airlines)

Industry conversations: Delivering Servicing despite legacy constraints – what are the opportunities?

Reviewing “the Parking lot”

Open Q&A

17:00pm Close day 1

17:30 Airline session in Bale

9:00 Welcome Back

Variations in Industry Implementations

Workflows & Data Elements in 21.3

Industry conversations (Achieving consistency)

10:30-10:55 Break

Servicing in NDC – Part 2

Self-service voluntary changes (LHG, Travix)

12:30-13:50pm Lunch

Interlining in NDC

Airline – partner setup best practice (LATAM, Finnair, AFKL)

Industry conversations (Setup impacts to implementation)

15:00 – 15:20 Break

Setup conversations impacting payment and settlement

Your Implementation Takeaways and next Steps

Resources, next events

17:00 Close day 2

What topics are in the Parking Lot?

+ Open Q&A



End of day 1

Welcome back!

Airline Retailing
Implementation Forum
Day 2!



Competition law compliance

(simplified slide for display, please see full description on the meeting page)

This meeting is being conducted in compliance with the Provisions for the Conduct of the IATA Traffic Conferences. Pursuant thereto, this meeting will not discuss or take action to develop fares or charges, nor will it discuss or take action on remuneration levels of any intermediaries. This meeting also has no authority to discuss or reach agreement on the allocation of markets, the division of sharing of traffic or revenues, or the number of flights or capacity to be offered in any market. Delegates are cautioned that any discussion regarding such matters, or concerning any other competitively sensitive topics outside the scope of the agenda, either on the floor or off is strictly prohibited.

The foregoing **applies equally** to email discussions, instant messaging and social media discussions whether directed to announced participants or other parties not present in the meeting. Participants are reminded that live streaming of this meeting to parties not present in person is not permitted except as indicated by and with the express permission and knowledge of the Chairperson and IATA and only in the event that specific participation on a given item from a party not present in person is required. Unauthorized recording of the meeting is prohibited.

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Post-it

What are your top 3 takeaways from day 1?

Something you don't want to forget?

Was there a different or new perspective on a topic?

A parking lot item?

Day 1 Highlights

Post-It Reflections



Variations in Industry Implementations

Vanni Sanvincenti

Lead Architect, Distribution



3 Categories of Variations

- Duplication
 - Functionality
 - Data elements
- Optionality
 - Flexibility in usage of elements
 - Flexibility in message flows
- Interpretation
 - Misuse of elements
 - Creative use of undocumented elements



Examples of Variations

- Offers
 - Flights constructed per O&D vs full return itinerary
 - OfferItem construction – per pax / multi-pax, per segment, etc.
- Ancillaries
 - Service disclosure
 - Price class
 - Various description elements
 - Service instantiation
 - 5 messages return ancillaries
 - Baggage (disclosed, but materialized in Orders)



Examples of Variations

- Details (AirShoppingRS vs OfferPriceRS)
 - Tax breakdown
 - Fare details
 - Payment catalogue
- Integration with accountable docs
 - PNRs/Tickets/EMDs
 - Fare details
 - SSR, RFIC/RFISC
- Duplication of fare details / cabin classes
- Coded elements
 - PTCs
 - Seat characteristics



Solutions to Variations

- Implementation guidance
- Conditionality
- Updating CodeSets regularly
- API specifications + consumer feedback
- Acceptance of flexibility
- Stronger ARM index validation
- Further de-duplication of data and functions
- Observing trends / common practice
- Better visibility on known issues

Questions?



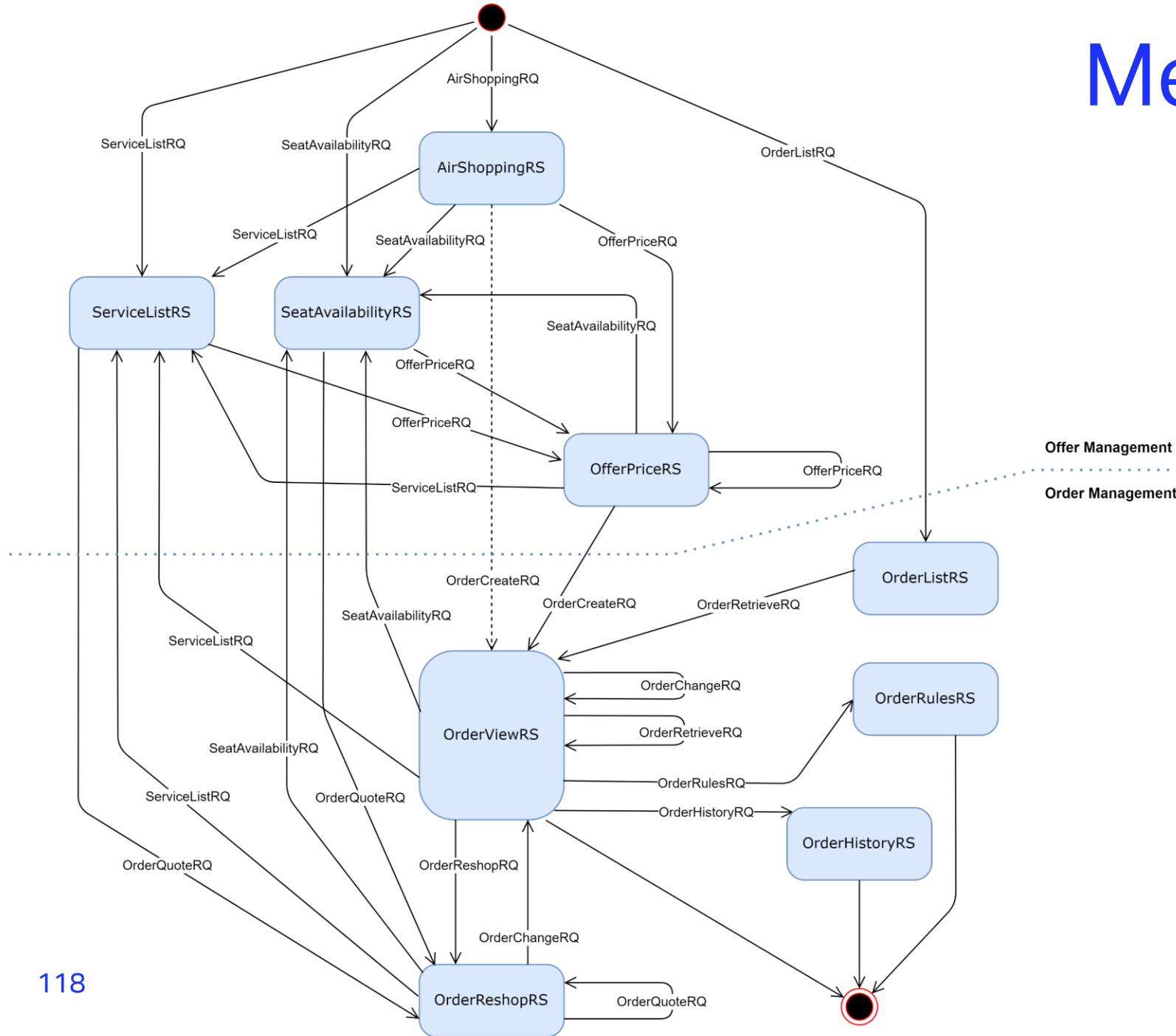
Workflows & Data Elements in 21.3

Vanni Sanvincenti

Lead Architect, Distribution



Message Flows



- Best practice of re-pricing Offers through OfferPriceRQ/RS prior to Order creation.
 - Often, details are added at this step (fares comp., tax breakdown...)
 - Seller can express their Payment preference in RQ, so airline can return precise surcharge amounts in RS
 - Upsell
- ID persistence
- Variations

Data Best Practices

- Mandatory delivery status at Service-level – "DeliveryStatusCode"
- Mandatory indicators in OfferItems – "MandatoryInd"
- Mandatory currency codes with any amounts – "CurCode"
- Decimal values for all currencies that require them (reso 024d)
- Baggage weight allowance – always include "TotalMaximumWeightMeasure"
- Servicing – Handling multiple changes
 - Netting indicators – [TBC end of Sep.]
 - Penalties persist against [?] OrderItems – [TBC]
 - Payment allocation – [TBC end of Sep.]





Data Best Practices

- Omit "TotalPrice" at Offer-level
- Directionality of "PaxRefID", to reference parent from infant Pax instance
- IncludeInd in shopping criteria deprecated – use PrefLevel instead
- Reference to OfferItems for payment prefs driving precise surcharges
- Reference OrderItems of anything that is paid
- Consistent use of DistributionChain (Party structure)
- PrefLevel redundant in Payment Functions' criteria structure

Other considerations / limitations

- "Symmetrical" reshopping (replacing 1 OrderItem for another)
- Per-pax pricing can only be implemented with fare details
- No price differential available when re-pricing an Order
- PriceClass references only available from FareComponent
- Omit O&D from OrderView responses
- Missing "future" delivery status in OrderReshopRS deleted items
- OCN mandatory elements still present + some elements missing
- Seat ColumnIDs of inconsistent types
- Recap of surcharges in payment confirmation missing

Thank you



Industry Conversations



Industry Conversations - Achieving consistency

Topic 1 - Variations

1. List the top 5 admittedly irregular uses of data elements or custom message flows of NDC messages in your implementation.
2. Do you make use of augmentation points? If so, what for? Have these custom elements been introduced in later versions of the schemas? Have you attempted to have these custom elements introduced in the standards? Why or why not?

Topic 2 – Following the Implementation Guidance

Review the Implementation Guidance on [Airline Taxonomy](#) (Shop concept)

- What is the value of implementing the taxonomy?
- Are there any challenges in following the guidance provided?

BREAK



Breakout recap



Servicing in NDC – where are you? Part 2

Shaunelle Harris Drake

Head Implementation
Distribution, IATA

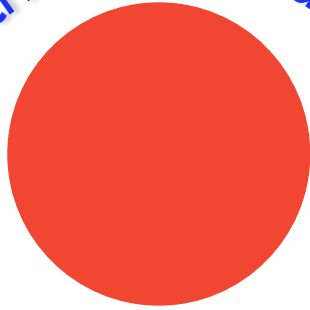


1. Servicing is first about the customer impacted

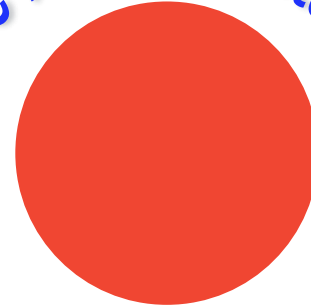


2. Solving servicing - 2 dimensions

the standard

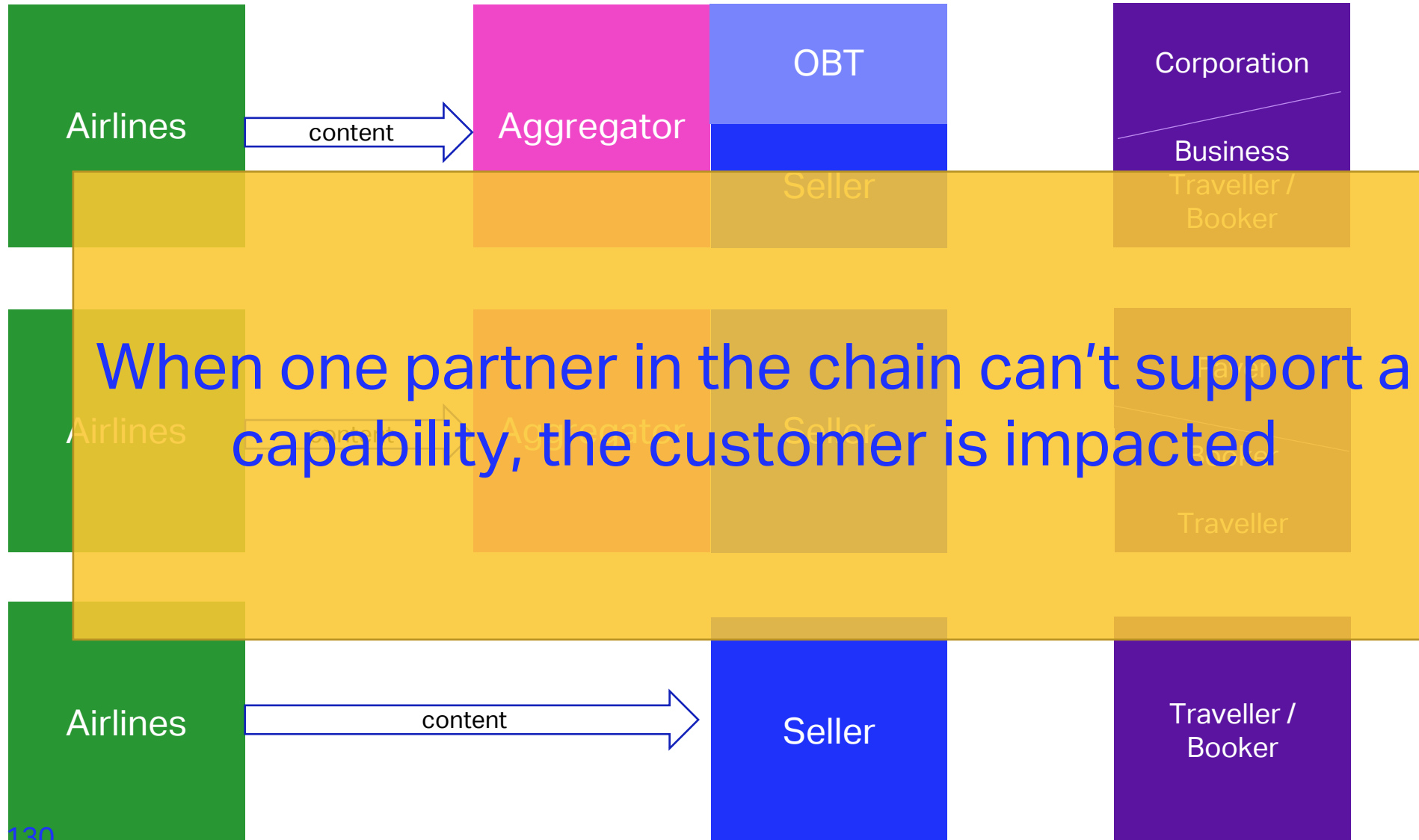


the implementation



Each organization plays a part in delivering servicing to the customer

[The diagrams below are integration examples. Other integrations are possible]



Include

- Duty of care/traveller security
- Reporting
- Payment

How do you deliver servicing despite legacy constraints?



Legacy retrofit

The PNR construct does not support multiple passengers with different itineraries on 1 PNR...

The complex legacy fare conditions linked to filed fares...

PNR history limited to current services/formats...

Standard opportunities

... vs. the Order that supports non-homogeneity (multi-passenger, multi-itineraries).

... vs. newer and more relevant Offer and Order restrictions.

... vs Order versioning capabilities to track changes into its Order history.

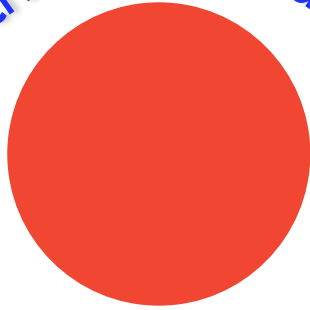


What does your implementation support?

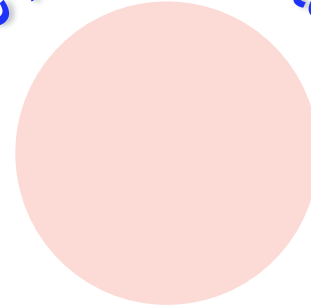
Some features with retail value	Who implements the change?		
	Sellers	Airlines	OBTs
1. Proactive notification to advise of anticipated disruptions, such as snowstorm, with rebooking alternatives (automate waiver policies – i.e. no dependency on manual waiver-code processing).	x	x	x
10. Ensure the customer has the most up to date information when you pass the correctly coded coupon and Order status values in the API.		x	
11. Leveraging the structured machine-readable data elements to bring automation and to support meaningful information to customers upstream.	x	x	x

What does the standard support?

the standard



the implementation



Transparency in the “change” T&C



Makes the conditions of the offer transparent so that **customers are clear** about the conditions for changing their flight.

[Leverage [inbuilt coded Offer conditions](#) feature].

Notify the seller



Support for the airline to **notify the seller of changes** to the order, whether they were initiated by the airline or triggered by the customer.

This is important so that sellers can stay synchronized with new changes.

Proactive notification, automate waivers



Proactive notification to advise of anticipated disruptions, such as snowstorm, with rebooking alternatives.

(Airline can automate waiving penalties, i.e. no dependency on manual waiver-code processing).

Communicate the reasons for a change



Support to inform the seller of **reasons for a schedule change** when it impacts the customer's order.

[standard list of reasons:
code set CHT or CHR]

Communicate the reasons for a change

CHR	Reason for change codes for Order change
100	Schedule Change
101	Equipment Change
102	Permanent withdrawal of service
103	Airline labor disputes
104	Payment time limit expiry
105	Price Guarantee time limit expiry
106	No reason given
107	Accounting document issuance
108	Airline staff on strike
109	Bad weather
110	Service Delivery
111	Natural disaster
112	Change requested by passenger
113	Passenger No show at the gate
114	Rebooked to Another flight
115	Security reasons
116	Other

Support to inform the seller
of **reasons for a schedule
change** when it impacts the
customer's order.

[standard list of reasons:
code set CHR]

Communicate the reasons for a change

CHT	Change Types for Order change
1	Flight number change
2	Flight retimed
3	Flight cancelled
4	Flight delayed
5	Flight added
6	Service status change
7	Payment Timelimit change
9	Passenger name change
10	Document issuance
11	Passenger contact details change
12	OrderItem payment committed
13	OrderItem cancelled
14	Document voided
15	Document refunded
16	Document exchanged
17	Emergency lock on Order
18	OrderItem added
19	Frequent flyer details updated in the Order
20	Identity document details updated in the Order
21	Other

Support to inform the seller
of **reasons for a schedule
change** when it impacts the
customer's order.

[standard list of reasons:
code set CHT]

Giving the customer options in a disruption



Provides the seller with instructions for any follow up **action** e.g., if the customer must explicitly accept, re-shop, or cancel, **along with the consequences of inaction** (e.g., auto-acceptance, auto cancellation)

And options to deal with credit



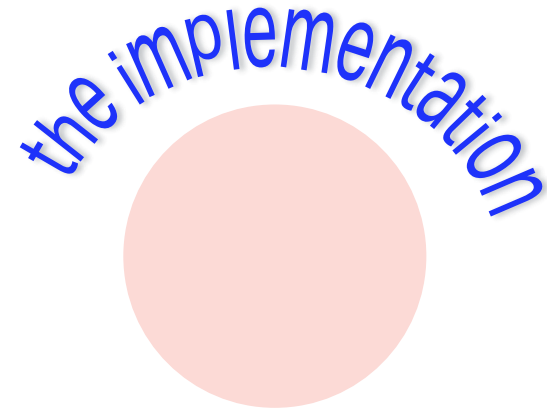
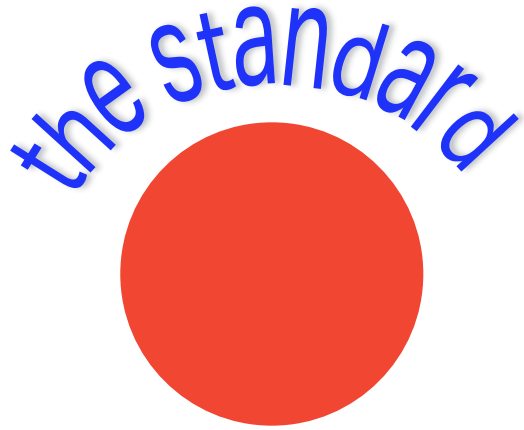
The customer can cancel an order and ask for a refund or ask to 'leave' the refund amount with the airline for future use as a residual **balance** (also known as residual value, value store, credit container, etc.)

Communicate better about penalties or refunds



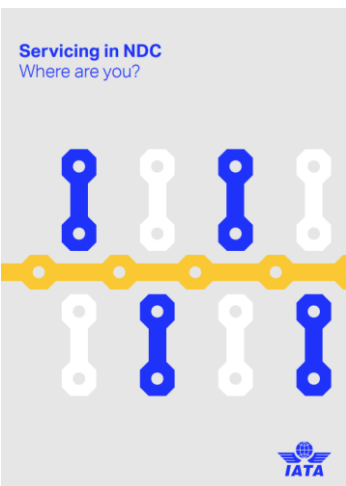
When a customer is re-shopping their order, **the airline can inform about the price differential**, as well as net any penalty fees into final amounts due e.g. if there is an additional collection (AdCol), refund, residual value etc.

The standard supports servicing scenarios to deliver a better experience



Checklist for your Implementation Team

Personal	Partners	My Action
[This column is applicable to any part of the value chain]	[Align with your partners or stakeholders that will be part of the transaction]	[Actions from your own team's reflection]
<p>Assess your end-to-end implementation for points of friction from the customer's perspective.</p> <p>Review and maximize the servicing capabilities in the schema version you have implemented.</p> <p>Plan your deployment of minimum schema v21.3 so you enhance your servicing delivery via the API.</p> <p>Increase any knowledge gaps so you understand what the NDC schema supports while conducting your root-cause-analysis (RCA) on gaps, perceived or experienced.</p> <p>Plan your implementation based on the "Industry Implementation Guide."</p>	<p>Agree on the servicing implementation dimensions, (including use cases) during NDC project setup.</p> <p>Be open with your partners about your servicing roadmap vs. current NDC API capabilities.</p> <p>Align with your partners on the challenges and make a delivery plan to address them.</p> <p>Update your ARM index Partnership Deployment – give the feedback to your partners (airlines and sellers).</p> <p>Participate in the industry value-chain conversations around servicing.</p>	<p>Be open to enhancements potentially required, that might have been overlooked when the roadmap was first put together.</p>



Checklist for your Implementation Team

Each organization plays a part in delivering servicing capability

Personal	Partners	My Action
[This column is applicable to any part of the value chain]	[Align with your partners or stakeholders that will be part of the transaction]	[Actions from your own team's reflection]
Assess your end-to-end implementation for points of friction from the customer's perspective.	Agree on the servicing implementation dimensions, (including use cases) during NDC project setup.	Be open to enhancements potentially required, that might have been overlooked when the roadmap was first put together.
Review and maximize the servicing capabilities in the schema version you have implemented.	Be open with your partners about your servicing roadmap vs. current NDC API capabilities.	
Plan your deployment of minimum schema v21.3 so you enhance your servicing delivery via the API.	Align with your partners on the challenges and make a delivery plan to address them.	
Increase any knowledge gaps so you understand what the NDC schema supports while conducting your root-cause-analysis (RCA) on gaps, perceived or experienced.	Update your ARM index Partnership Deployment – give the feedback to your partners (airlines and sellers).	
Plan your implementation based on the "Industry Implementation Guide.	Participate in the industry value-chain conversations around servicing.	

Discussion

What conversations have you had?

What other conversations are necessary for servicing in the context of legacy?

What are the opportunities to deliver Servicing despite legacy constraints?



Thank you



Self-Service Voluntary Changes

Lufthansa Group and Travix

Self Service Voluntary Changes with Lufthansa Group & Travix

IATA Retailing Implementation Forum

Geneva , September 6th 2023

About Travix

35

countries

43

websites

5.0+

million passengers

85+

planes filled every day

450+

employees



2 NDC Aggregators & Tech Providers
amadeus **travelfusion**



18 carriers on NDC

About Lufthansa Group

NDC @ Lufthansa Group

One of the first airline groups to receive IATA

“ Airline Retailing Maturity

All six LHG airlines are leaders in terms of certified capabilities

Index certification:

Level 4

Full Offer and Order Management

- Extensive use of Offer and Order Management API
- Use of Servicing Message required

Lufthansa Group airlines received the IATA Level 4 certification on March 17 2019

Version 31.2

NDC@Scale

As of 31/03/2019

Against all Level 4 requirements plus 6 criteria as defined:

1. Ability to run NDC API on SaaS with performance requirements
2. Full support to connect new partners
3. Full operational support management in place
4. Monitoring use cases in compliance with the IATA standard implementation
5. Minimum coverage of Shop features in live environment
6. Minimum coverage of Order/Service/Pre features in live environment

Lufthansa Group airlines received the IATA NDC@Scale certification on September 30 2019

Version 31.2

ARM

As of 31/03/2019

IATA Airline Maturity Program (ARM)

1. The ARM program provides airlines and their partners with better visibility of their existing maturity and is evaluated across three pillars: Capability, Deployment, Value Capture
2. Currently, the LHG is leading in most categories and above average in the others

LHG obtained the IATA ARM certification in 2021 with 100% on all 10 and in 2022 with 100% on all 10

Version 31.2



~**25'000** NDC
Passengers / day



Green Fares
exclusively available
at NDC & .com



**100% Offer & Order
by 2030**
IATA ONE Order...



... LHG founding Member of
Modern Airline Retailing Consortium

5'500+

connected NDC partners



NDC-launch with selected
customers for AMA, SAB and
TVP in progress

amadeus **Sabre** **Travelport**
Redefining travel commerce

**NDC Aggregators
&
Travel Tech
Providers**

LHG airlines' digital
channel share* reaches

70%

(+25% vs. 2019)

*CPNs sold via NDC & .com



For European destinations

**Continuous
Pricing live...**



... & within this month, continuous pricing
for intercontinental destinations will be
introduced

Austrian

brussels
AIRLINES

Eurowings



Lufthansa

SWISS

LUFTHANSA GROUP

Current set up and adoption in Travix and Lufthansa NDC connection

Travix & Lufthansa Group Partnership Timeline



May 2018

Travix and Lufthansa Group airlines announce their NDC partnership



October 2019

Lufthansa Group launches their NDC 17.2 API incl. OrderCancel & Schedule-Led Reshop



October 2020

Lufthansa Group deploys NDC True Reshop functionality



November 2021

Travix migrates to the Lufthansa Group NDC 17.2 API via their TTP



January 2022

Travix agrees with LHG to implement NDC 17.2 Cancellation & Reshopping functionalities

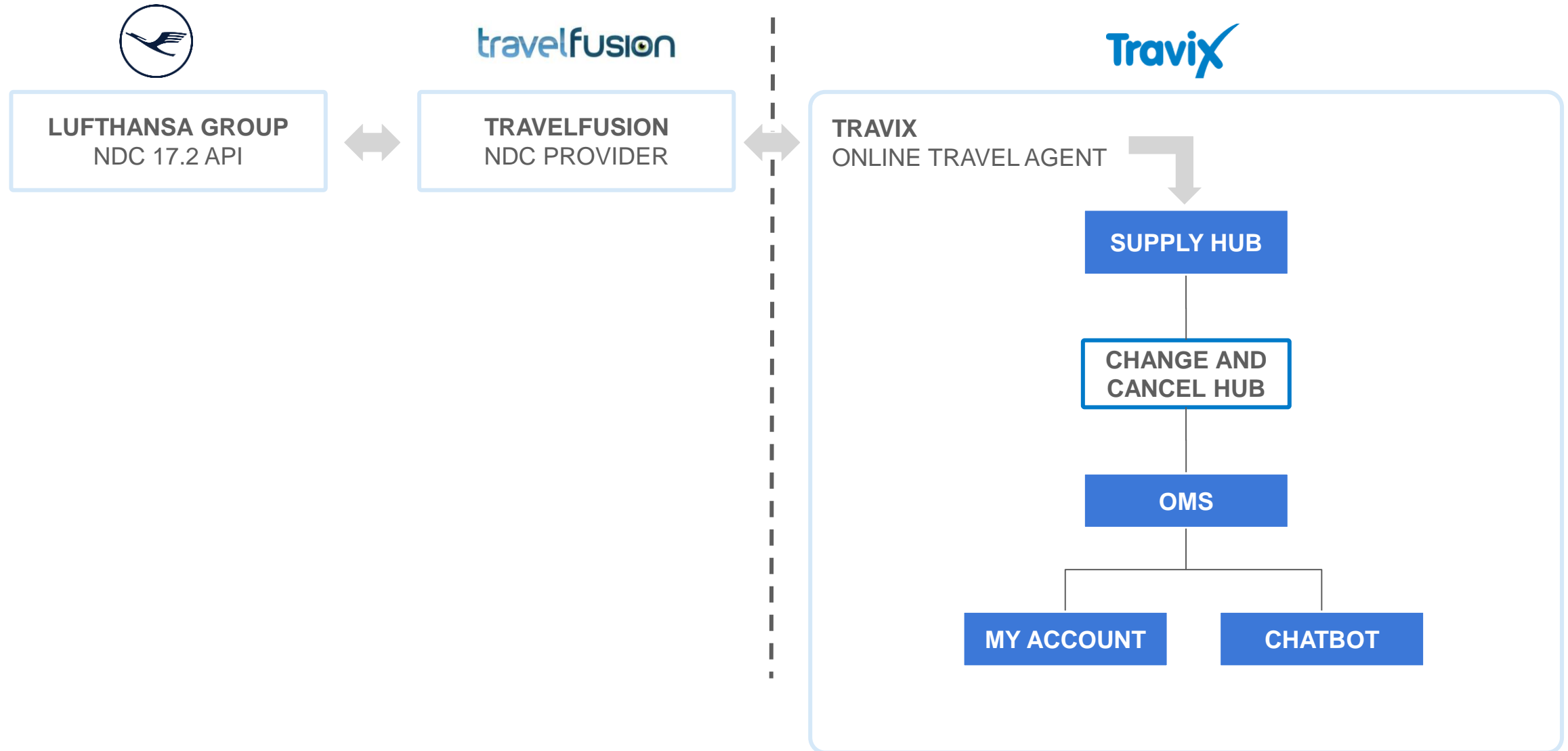


July 2022

Travix implements LHG Order Cancellation & Reshop (via their TTP) into their Self-servicing solution

2018-2023
review

High level architecture



Scope summary Order Change

Travix

Providers

- ✓ Amadeus
- ✓ Amadeus NDC
- ✓ Travelfusion NDC

Scenarios In scope

- ✓ Partial change (residual legs)
- ✓ Mor
- ✓ VCN
- ✓ BSP
- ✓ ARC

Features In scope

- ✓ Eligibility check
- ✓ Flight selection
- ✓ Exchange result page
- ✓ Change costs summary
- ✓ Payment
- ✓ Automated change fulfillment



Scenario out of scope

- ✗ Non-Mor
- ✗ Combined one ways
- ✗ Refundable ancillaries
- ✗ Flight under schedule change
- ✗ Partial change (non homogeneous changes)
- ✗ Open jaw

Features out of scope

- ✗ Pricing rules
- ✗ Change departure airport

Lufthansa Group Airlines

Channel

- ✓ NDC 17.2 API by Accelya

Features In scope

- ✓ Date/Time Change
- ✓ Change Departure and/or Arrival Airport
- ✓ Change trip type
- ✓ Change to unflown itinerary
- ✓ Change to partially flown itinerary
- ✓ Change to higher cabin
- ✓ Change from/to ATPCO and Continuous Pricing Fares
- ✓ Payment of additional collection via various payment methods
- ✓ Residual value for refund
- ✓ Automated change fulfillment (document issuance upon FOP)



Features out of scope

- ✗ Change Orders including ancillaries
- ✗ Change Orders affected by schedule change
- ✗ Change resulting in non-homogeneous orders
- ✗ Change unpaid Orders

Scope summary Order Cancellation

Travix

Providers

- ✓ Amadeus
- ✓ Amadeus NDC
- ✓ Travelfusion NDC

Scenarios In scope

- ✓ Partial cancellation (residual legs)
- ✓ Mor and non-Mor
- ✓ Before ticketing
- ✓ 24 hour free cancellations
- ✓ BSP
- ✓ ARC

Features In scope

- ✓ Eligibility check
- ✓ Automated refund quotation
- ✓ Automated PNR cancellation
- ✓ Refund request to the airline



Scenario out of scope

- ✗ Combined one ways
- ✗ Refundable ancillaries
- ✗ Flight under schedule change
- ✗ Partial cancellation (non homogeneous changes)
- ✗ Open jaw

Features out of scope

- ✗ Automated payback

Lufthansa Group airlines

Channel

- ✓ NDC 17.2 API by Accelya

Features In scope

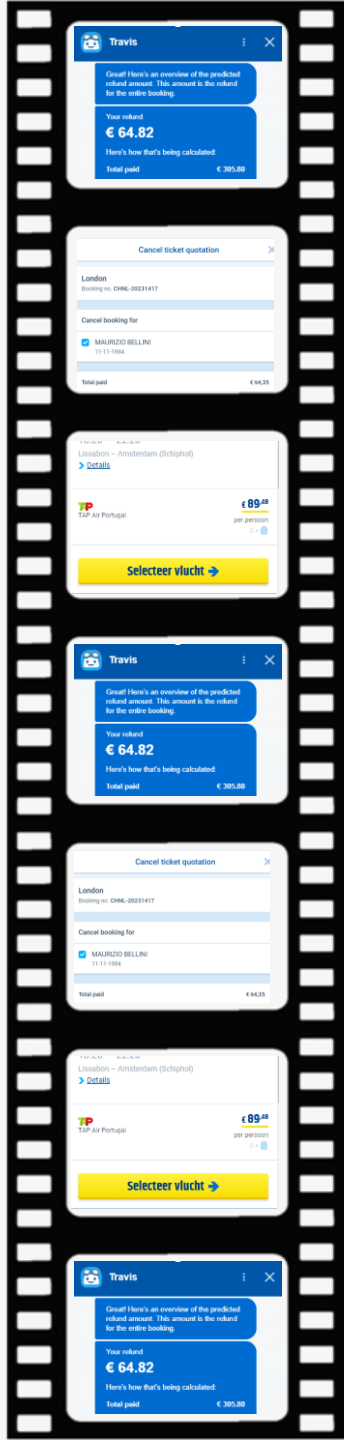
- ✓ Automated refund quotation via OrderReshop
- ✓ Cooling off period cancellations
- ✓ All trip types
- ✓ Ticketed orders
- ✓ Unticketed orders
- ✓ Exchanged orders
- ✓ Orders including ancillaries
- ✓ Refunds on partially flown itinerary
- ✓ Automated order cancellation according to fare rules
- ✓ Automated refund towards applied payment method



Features out of scope

- ✗ Non-homogeneous orders (not cancelling all PAX in order)
- ✗ Cancellation of order affected by schedule change

Demo and functional aspects



DEMO TIME



Order management system

Dashboard

BUK-25110390

Booker - BUK-25110390

Gender	Male
Company	
First Name	Maurizio
Middle Name	
Last Name	Bellini
Date of Birth	11 Nov 1984
E-mail	aduran@travix.com
Phone	+31 624921913
Mobile	
Street	Noordwal 46
State	
Zip Code	2513EB
City	Den Haag
Country	CE

Remarks

REMARK

system: 12 Dec 2022 / 16:25
"Automated change for PNR: PY3BCW."

Payments

Payments to Travix

Paid 12 Dec 2022 / 16:30

GBP 189.01

Paid 22 Nov 2022 / 13:20

GBP 63.00

NEW PAYMENT

Paylinks

No payment transaction found

Order Details: BUK-25110390

Primary backoffice: Travix / CentralCommand

Actions

Date: 22 Nov 2022 / 13:16

Status: Booked

Affiliate: Budgetair.co.uk (English)

test

Platform: Haddock

Assigned:

Assign to me

Assign to team

Financials

22 Nov 2022 / 13:16	Flight: LHR-MUC	GBP 197.01
22 Nov 2022 / 13:16	Initial sale	63.00
12 Dec 2022 / 16:25	Flight change (ADT)	134.01
		197.01
12 Dec 2022 / 16:25	Change Cost - Flight: LHR-MUC	GBP 55.00
22 Nov 2022 / 13:16	AppBoundProduct: Package: standard service package	GBP 0.00
Total		GBP 252.01
Paid		GBP 252.01
Balance		GBP 0.00

Customer

Actions

Gender	Male
Company	
First Name	Maurizio
Middle Name	
Last Name	Bellini
Date of Birth	11 Nov 1984
Phone	+31 624921913
State	
Zip Code	2513EB
City	Den Haag
Country	GB

Flight: BUK Purchased PNR: PY3BCW

Actions

Latest Itinerary

Changed on 12 Dec 2022 / 16:26

Passenger name	Date of Birth	Type	SSR
Miss Maurizio Bellini	11 Nov 1984	ADT	

Airline	From	To	Duration	Cls	Status
LH 2485	LHR	MUC	01:50:00	L / L40LGTX9	

Show Itinerary History

Booking Office: TravixUK Published

Checkin User: -

Booking Reference: D2SSV3ABP

Orders

+

BUK-25312845	6 Dec 2022 / 15:52	
BUK-25297349	5 Dec 2022 / 13:36	
BUK-25110390	22 Nov 2022 / 13:16	
BUK-21764541	24 May 2022 / 14:58	
BUK-21400371	10 May 2022 / 15:48	
BUK-21004304	26 Apr 2022 / 17:28	
BUK-20352419	25 Mar 2022 / 09:25	
BIT-3306478	30 Sep 2021 / 11:44	
BIT-3300332	21 Sep 2021 / 15:56	
BFR-11845708	18 Mar 2021 / 10:20	

Order management system

Remarks +

system: 12 Dec 2022 / 16:25
"Automated change for PNR: PY3BCW."

Payments +

Payments to Travix

Paid

12 Dec 2022 / 16:30

GBP 189.01

Paid

22 Nov 2022 / 13:20

GBP 63.00

Paylinks

No payment transaction found

Documents & E-mail +

Sales Adjustment Handoff (5517D5B4F8)

12 Dec 2022 / 16:28

MailAttachment - Eticket

12 Dec 2022 / 16:26

MailAttachment - Eticket

12 Dec 2022 / 16:26

Email - Eticket

12 Dec 2022 / 16:26

MailAttachment - Eticket

22 Nov 2022 / 13:30

MailAttachment - Eticket

22 Nov 2022 / 13:30

Email - Eticket

22 Nov 2022 / 13:30

Flight Purchase Handoff (PY3BCW)

22 Nov 2022 / 13:30

Sales Handoff (B3F99A74EF)

22 Nov 2022 / 13:24

Email - BookingConfirmation

22 Nov 2022 / 13:21

HandoffFile

22 Nov 2022 / 13:20

Workflow ↺

Queue

Date

State

Processed Handoff Handoff

12 Dec 2022 / 16:28

Flight **NOV** **Purchased** **PNR: PY3BCW** ⬆️ ⬆️ ⬆️ **Actions**

Latest Itinerary ⓘ
Changed on 12 Dec 2022 / 16:26

Passenger name

Date of Birth

Type

SSR

Miss

Maurizio

Bellini

NEW FLIGHT INFO

Airline	From	To	Duration	Cls	Status
LH 2485	LHR	1 Feb 2023 / 06:35	MUC	1 Feb 2023 / 09:25	01:50:00 L / L40LGTX9

Itinerary at 22 Nov 2022 / 13:21

Passenger name

Date of Birth

Type

SSR

Mr

Maurizio

Bellini

11 Nov 1984

ADT

Airline	From	To	Duration	Cls	Status
LH 2485	LHR	31 Jan 2023 / 06:35	MUC	31 Jan 2023 / 09:25	01:50:00 K / K60LGTX9

Itinerary at 22 Nov 2022 / 13:21

NEW ETICKET AND EMAIL

Passenger name

Date of Birth

Type

SSR

Mr

Maurizio

Bellini

11 Nov 1984

ADT

Airline	From	To	Duration	Cls	Status
LH 2485	LHR	31 Jan 2023 / 06:35	MUC	31 Jan 2023 / 09:25	01:50:00 K / K60LGTX9

ORIGINAL FLIGHT INFO

Booking Office

TravixUK Published

Checkin User

-

Booking Reference

D2SSV3ABP

Provider

TF

Search button

Flight Confirmation

View details

Fare Upsell

Travix handle code

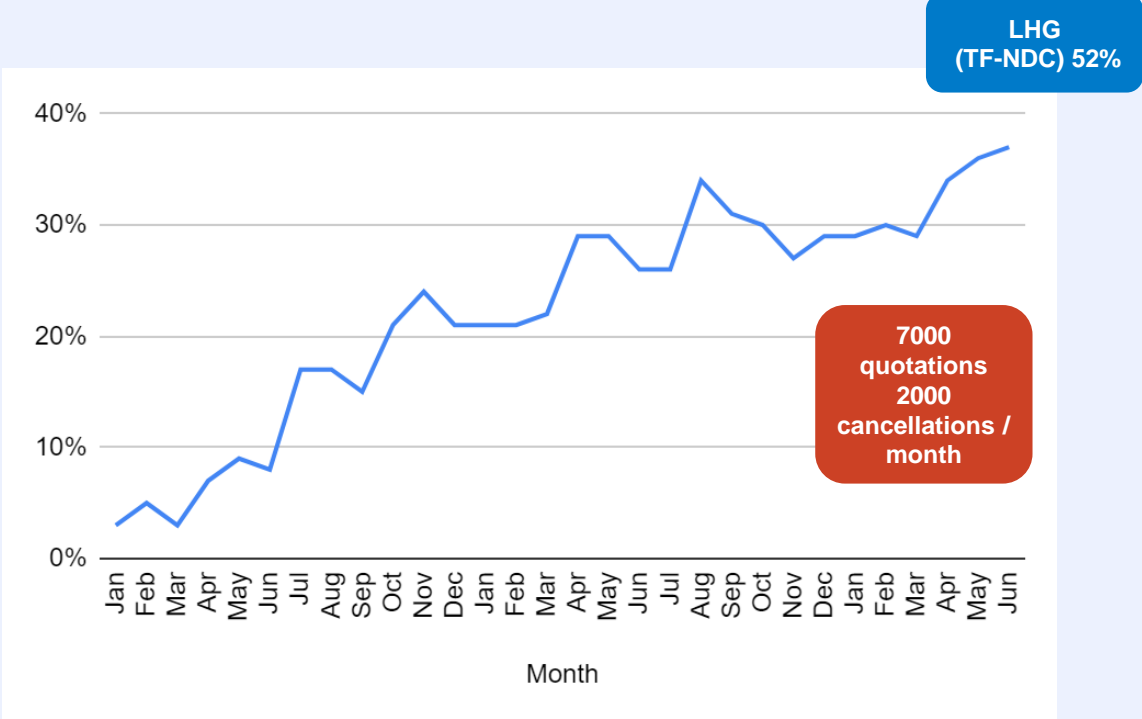
Standard Ticket

CT	BUA	FL	VW
Orders			
BUK-25312845	6 Dec 2022 / 15:52	✈️	📄
BUK-25297349	5 Dec 2022 / 13:38	✈️	📄
BUK-25110390	22 Nov 2022 / 13:16	✈️	📄
BUK-21764541	24 May 2022 / 14:58	✈️	📄
BUK-21400371	10 May 2022 / 15:48	✈️	📄
BUK-21004304	26 Apr 2022 / 17:28	✈️	📄
BUK-20352419	25 Mar 2022 / 09:25	✈️	📄
BIT-3306478	30 Sep 2021 / 11:44	✈️	📄
BIT-3300332	21 Sep 2021 / 15:56	✈️	📄
BFR-11845708	18 Mar 2021 / 10:20	✈️	📄

Results, reflections and next steps

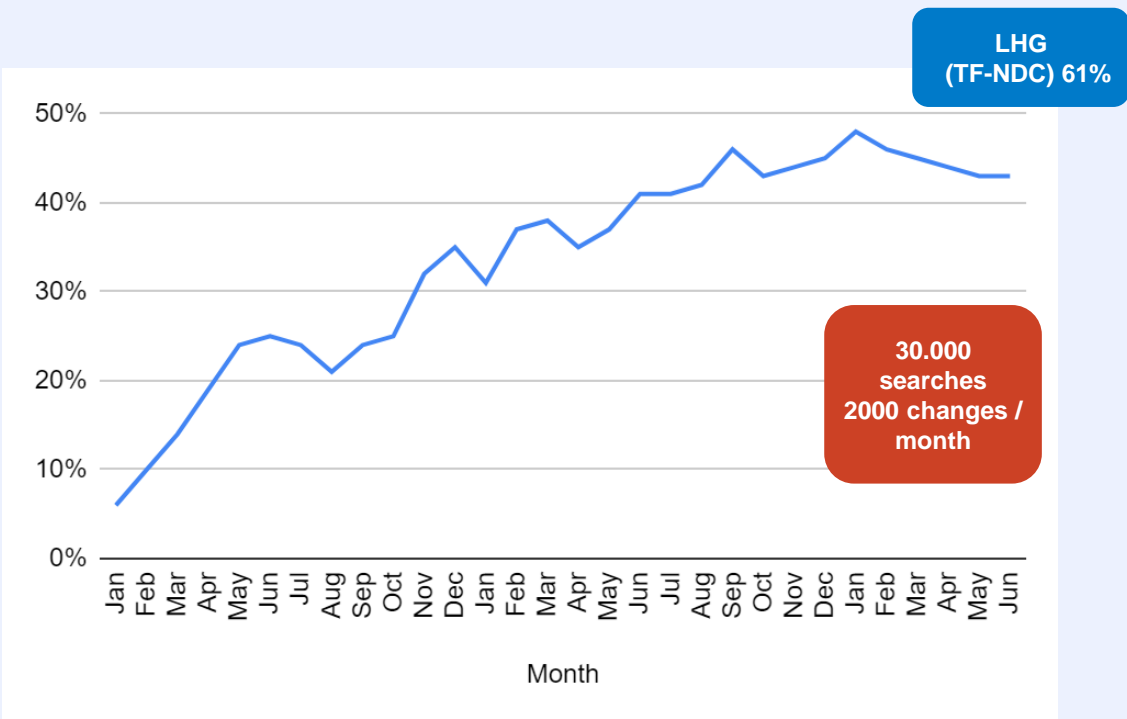
Performance all providers

Automated cancellation % 2021, 2022, 2023



Excluded LCC

Automated changes % 2021, 2022, 2023



Excluded LCC

Observed Benefits from Self Service



Agency Customer service

- General contact rate reduction by 25%
- Time saving
 - Quotations: 40.000 human hours / year
 - Fulfilment: 6.000 human hours / year



Customer

- First time resolution increased by 25%
- Average refund time decreased by 10% (2 days)



Airline

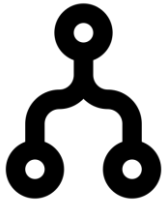
- Enable best-in-class user experience in agency front-ends through our NDC API
- Elevate B2B operational efficiency by reducing human errors
- Streamlined rebooking flow with True Reshop vs Schedule-Led Reshop
- Deliver the promise of NDC to enhance B2B servicing capabilities
- Foster mutually beneficial NDC partnerships

Lessons learned - Travix



Technical

- Strive for provider agnostic architectures
- Be clear on the MVP scope and scenario mapping
- Plan configurations from MVP



Operational

- Map carefully internal operational processes (ex: refundability policies, mark up/down, etc.)
- Plan fall back scenarios (ex failed fulfillments)



Mindset

- Treat it as a product not as a project
- Execute E2E if possible in cross discipline team if possible
- Build coverage from MVP with incremental iterations
- Strive to make servicing a priority (emphasis on scalability rather than monetization)

Next steps in 2023



Order Cancel Use Cases

Travix



- 24 hour free cancellation for Travelfusion
- Explore cancel under schedule change



True Reshop Use Cases

Travix



- Explore involuntary changes



Lufthansa Group

- Orders including Ancillaries

Thank you!

Questions?



Lunch



Interlining in NDC

How does interlining in NDC work
and what is possible now?

Oleg Kit, IATA

Traditional interline in the NDC channel

How does interlining work in NDC channel today?
What is the future of partnership?

Oleg Kit

Senior Manager Partnerships with Offers & Orders



Partnerships – What are we looking at?

Retailing of air and non-air transportation and related services involving 2+ transportation providers



Customer

Expects experience as that of online retailers



Could be sold by another Airline

Transportation



Operated by full-service carrier

Operated by

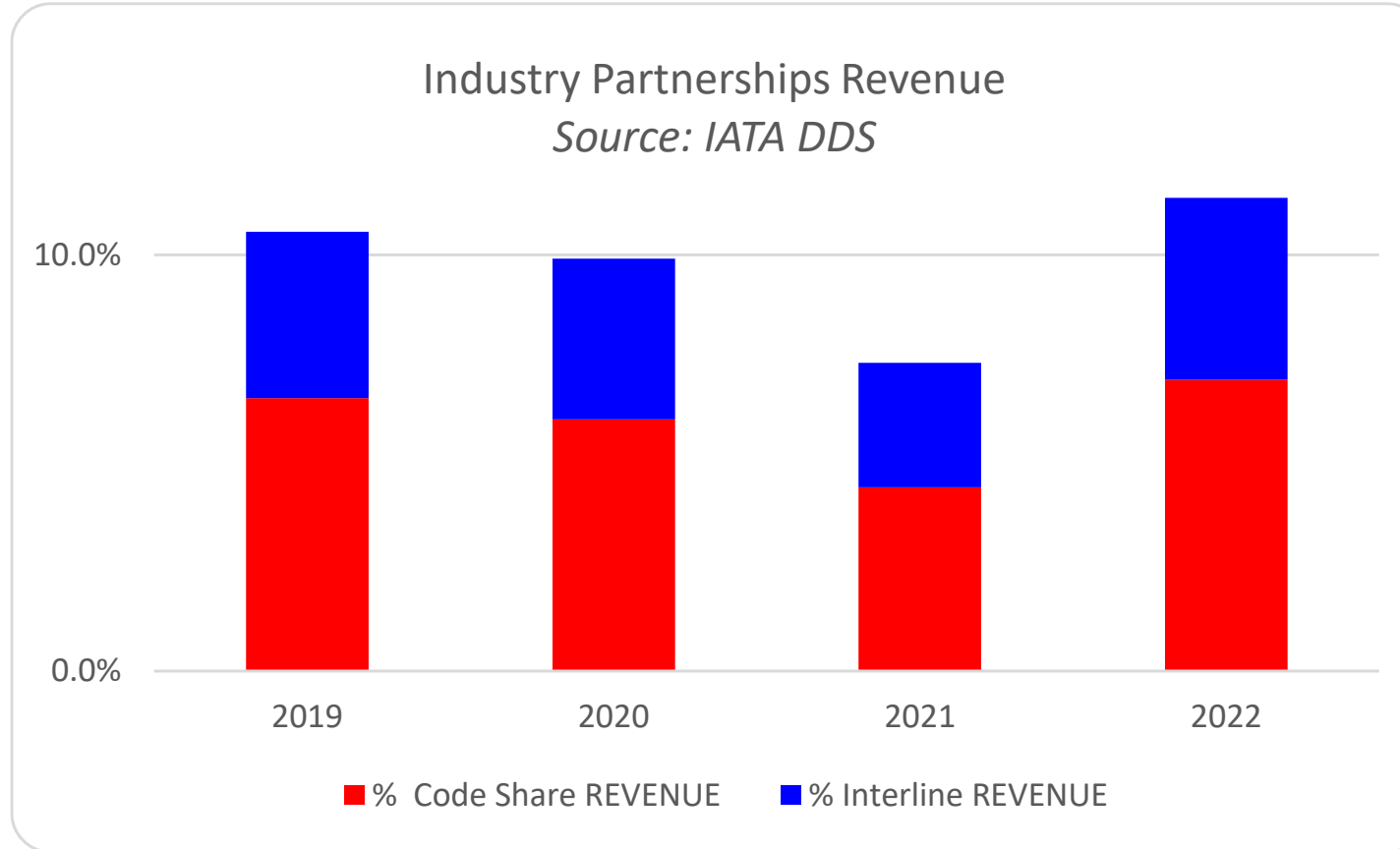
- Airline: low-cost or full-service carrier (Interlining)
- Other transport operator (Intermodal)

Extra services

- Any other content



Partnerships more than 10% of IATA members' revenues



Challenges Today – Opportunities Tomorrow

Value drivers of the Future of Partnerships based on 100% Offers & Orders



- Access new markets with Low-cost / Full-service carrier partnerships
- Access new markets with intermodal partners

- Cross-sell & upsell on partner connections
- Bring new products & bundles to the market
- Offer product choice (rather than price point)

- Fast reaction to changes with retail workflow
- Launch new partnership and products faster

- Meet customer promise with delivery and (disruption) servicing that actually work
- Offer consistent service

- Instant & post-sale settlement with upfront settlement value (vs proration)
- Revenue accounting simplification

Transition state brings interline in NDC channel

While the Interlining with Offers & Orders matures, we can leverage legacy interline practices in NDC channel already now, and thus extend NDC channel reach and coverage.

LEGACY STATE

Distribution with GDS

Focus of this session

TRANSITION STATE

Traditional interline & codeshare
in the NDC channel

Interline in NDC

- Legacy based (e.g. AIRIMP)

FINAL STATE

Interlining with
Offers & Orders

Previously "NDC Interline"

- Channel agnostic, legacy free

Comparison of future and current states

LEGACY STATE

TRANSITION STATE

FINAL STATE

Traditional Interlining

- Based on multilateral MITA*
- Traditional Fare Filing and Ticketing standards
- Codeshare and (pure) interline
- Complex workflow with many 3rd parties

Future of Partnerships

- Based on revised commercial framework – bilateral SRSIA**
- Legacy free Offers and Orders standards - *inspired by NDC*
- Beyond air – also intermodal
- Retailer-Supplier workflow

Commercial agreements

Technical standards

Scope

Workflow

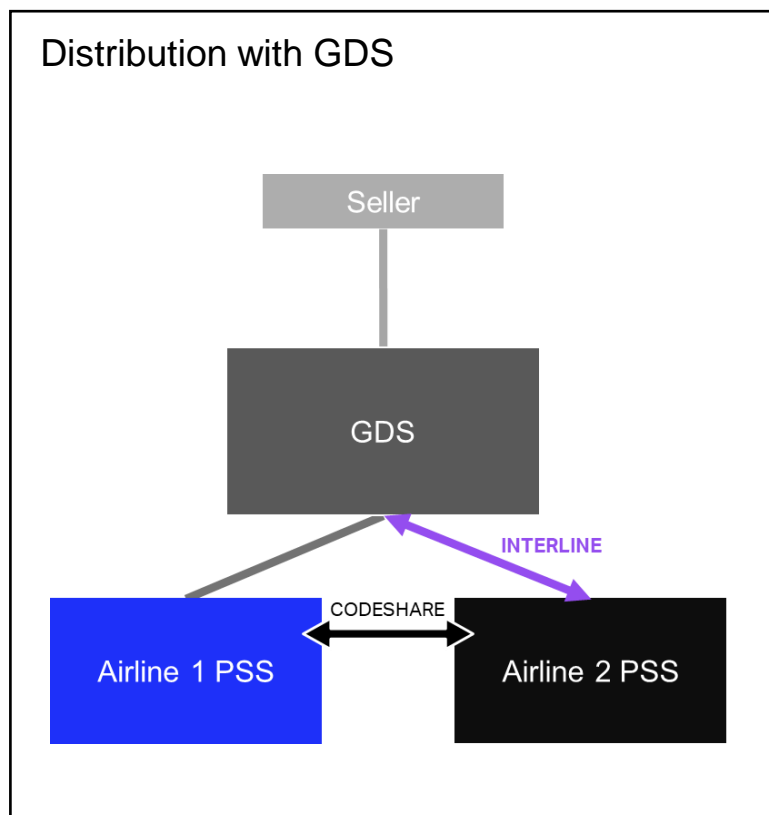
Clarification on **Interline** in the **NDC** channel

- Code-share works*
- Traditional interline is possible but some implementations are difficult
- No major difference to have interline/codeshare in direct vs NDC channel
- Relies on :
 - Integration between Shopping/Offer Management and PSS
 - EDIFACT / AIRIMP messages (NDC is a 'wrapper' on top of existing legacy)

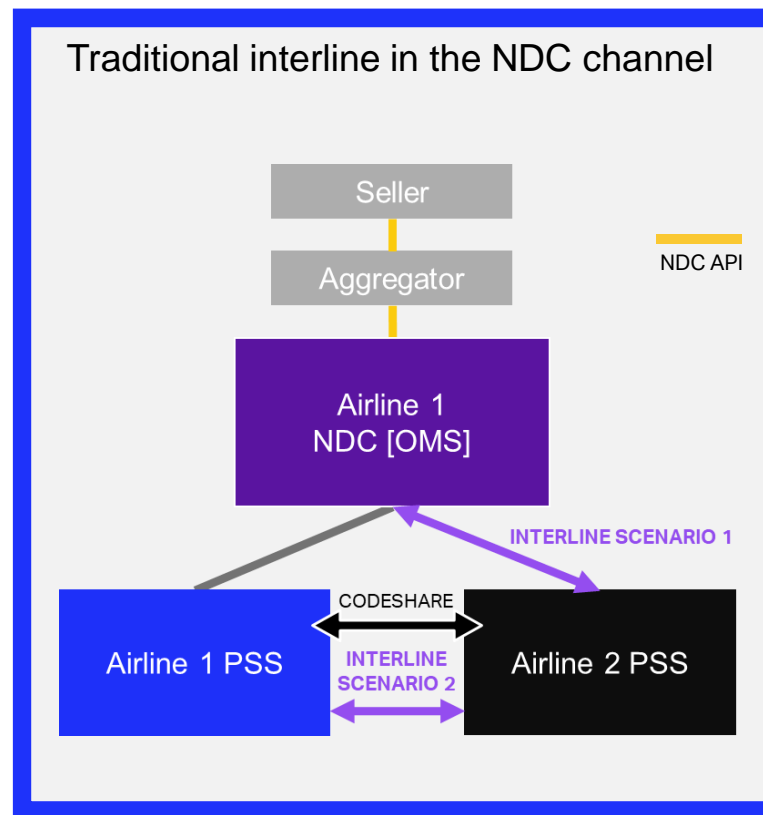
Transition state brings interline in NDC channel

While the Interlining with Offers & Orders matures, we can leverage legacy interline practices in NDC channel already now, and thus extend NDC channel reach and coverage.

Legacy State



Transition State

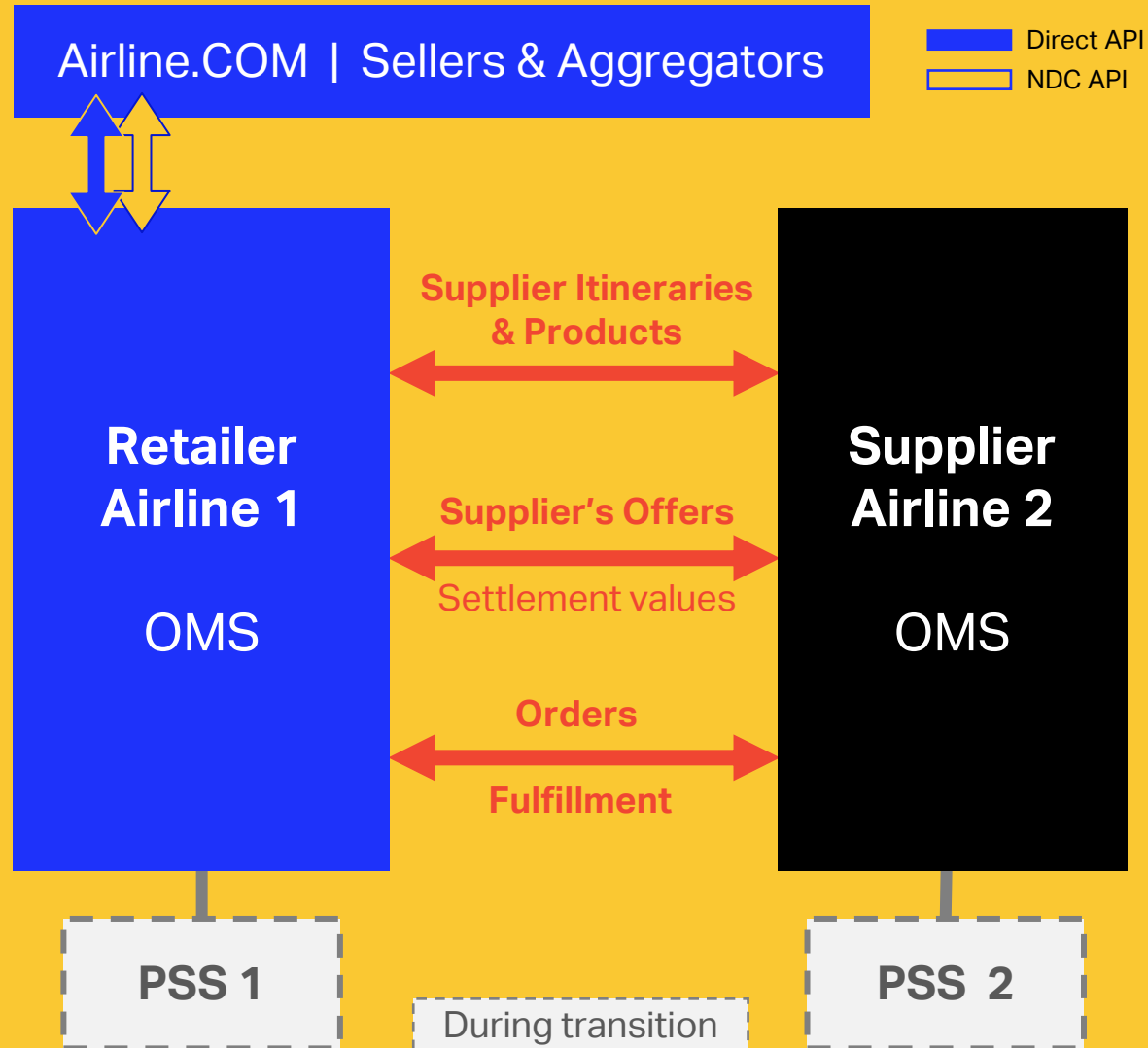


Final State



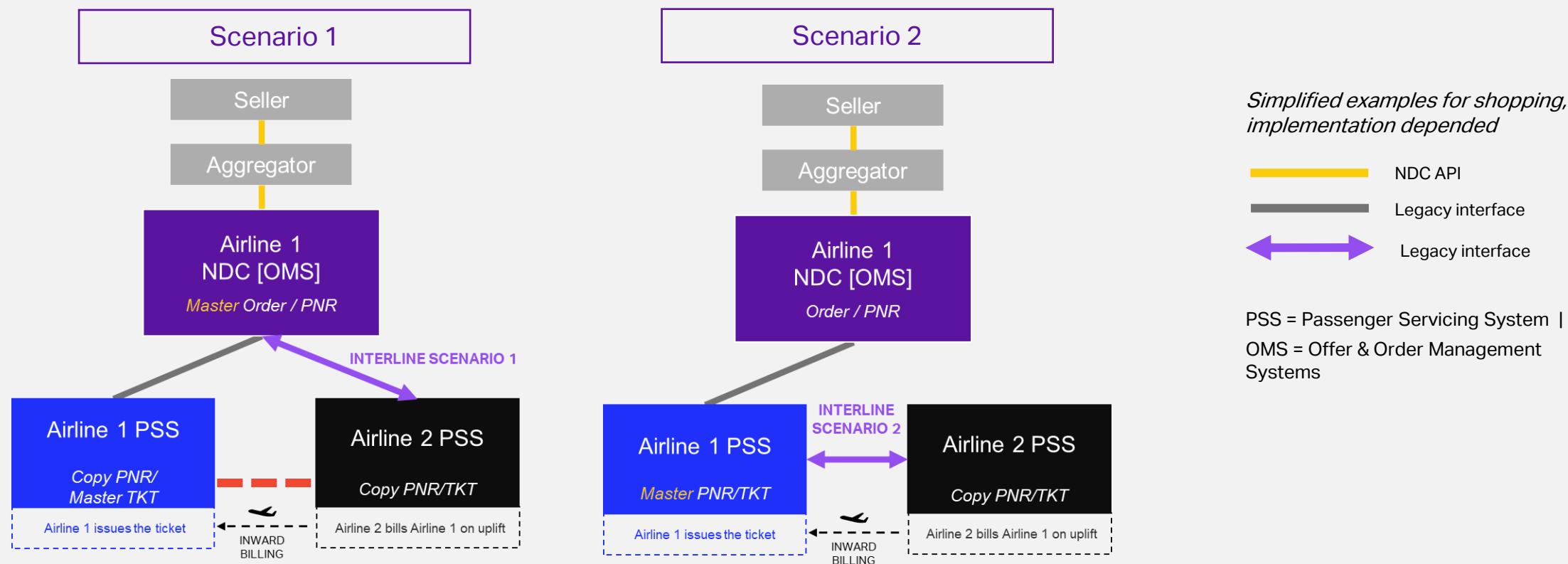
Future of Partnerships

Retailer-Supplier Model



Transition State: Sale of Traditional Interline in NDC channel

Combining NDC Distribution with traditional PNR, Ticketing, and pro-rated settlement



In principle, an airline could use both Scenario 1 and 2 depending on the partner, and switch to a different scenario over time.

Typical questions on Interline in NDC channel

How different is interlining in direct channel (eg .COM) vs in NDC?

In terms of core capabilities, there is no difference.
There may be a difference if airline setup (capabilities) in NDC channel is different to direct channel.

Which scenario to choose to implement interlining?

The choice depends on airline setup, there are differences.

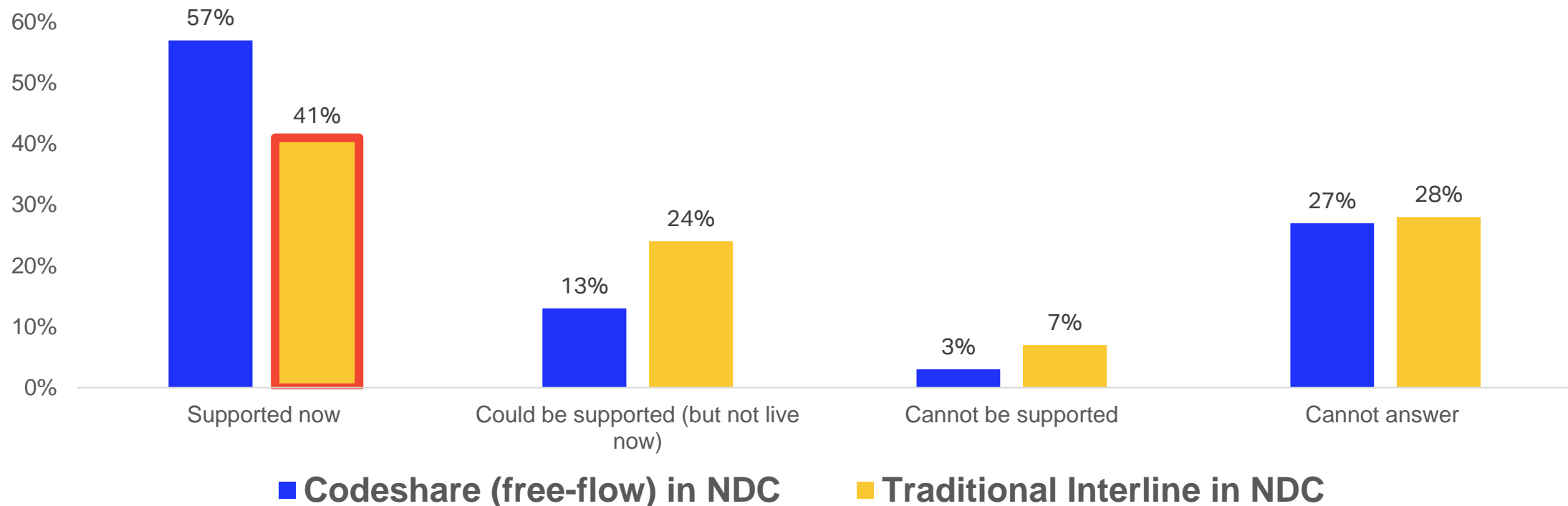
Implementation: Is setup of new interfaces required?

May be required, particularly for Scenario 1.
Note: existing interfaces need to be validated for interline support

Standards: do the industry-standard interfaces exist today?

Yes, for all of the interfaces.

Poll results: a large share of respondents already support traditional interline in NDC channel



What's happening now?

Industry Status on Interline in the NDC channel

Traditional Interline in NDC channel

- Supported by at least 10 airlines (minimum with one partner)
- Several airlines are implementing and few more are exploring

Which Interline Scenario is utilized?

- Both Scenarios 1 and 2
- Scenario 1
 - Typical used with a large airline group
 - In addition, it is being looked at by several airlines

→ Please share your experience

Call for Implementations

Traditional interline in the NDC channel (transition state)

- Any aspiring airlines?
- Any challenges?

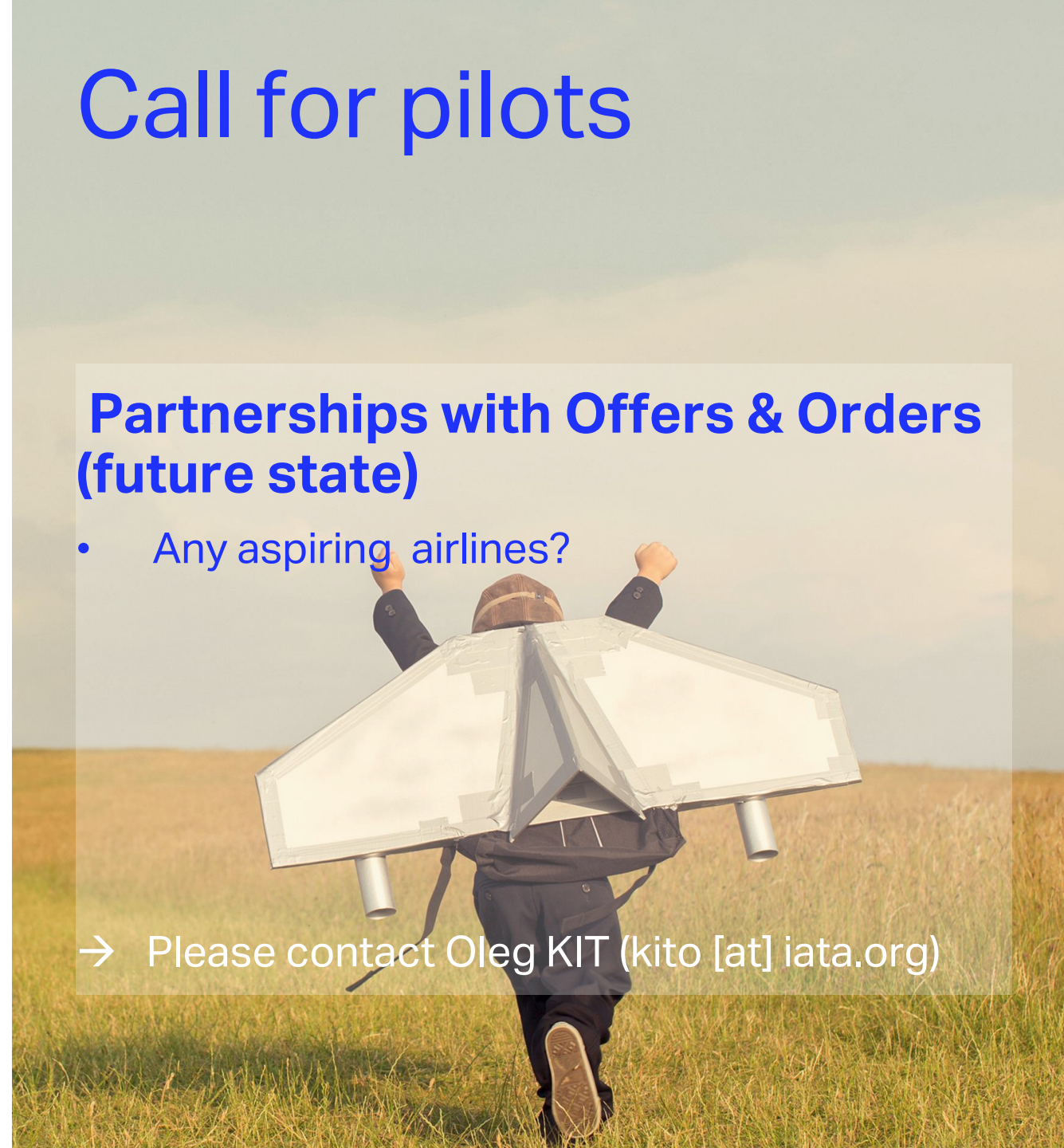
→ Please contact Oleg KIT (kito [at] iata.org)

Call for pilots

Partnerships with Offers & Orders (future state)

- Any aspiring airlines?

→ Please contact Oleg KIT (kito [at] iata.org)



Thank you!

Oleg Kit

kito@iata.org



Questions?



The 2023 Implementer pulse

Having a good alignment between airlines and value chain partners is key in delivering optimal servicing. How ready is your organization?

Schema convergence is having a critical mass of adopters, implementing a single release for all messages. When do you have plans to start migrating to the 21.3 schema?

Partner-setup processes and your implementation

Airline Panel

LATAM, Air France, Finnair

Airline Retailing Deployment: 3 dimensions

Change Thinking

- embracing the new paradigm
- customer first
- value chain conversation
- etc...

Mindset Shifts

Setup

Value chain alignment

- value creation priorities
- roadmaps
- roles and responsibilities
- schema versions
- establishing technical contracts
- etc...

Implementation

Involves

- airline and value chain partners
- technical, process and support aspects
- deploying what was agreed at setup
- strong feedback process
- etc...

There are many setup “conversations” that need to take place for a seamless implementation



* STPOBG, /STPOPM on ARM index for example

Partner-setup processes and your implementation

Fireside chat



LATAM Airlines Group S.A.: Gonzalo Guillen Navarro, Head of Digital Information

Air France: Maxime Boussard, NDC Program Lead

Finnair: Kalle Immonen, Product Owner, NDC


Partner-setup processes and your implementation

Industry Conversation (8-10min)

Industry Perspectives

Which 'conversation topics' during the setup phase have been the most helpful to deal with the complexity of your implementation?

What's missing?

- 
1. 'NDC' philosophy
 2. Value drivers
 3. How to give feedback when live
 4. Contractual dimensions
 5. Schema version
 6. Your baseline capability and roadmap (including 8 ARM index setup capabilities)
 7. Capabilities of intermediaries (OBT, TMC, Aggregator)
 8. Risk Management / IDM *
 9. UI and Display
 10. Duty of care integration
 11. Downstream processes, e.g., analytics/reporting

Setup conversations impacting payment and settlement dimension

Setup conversations impacting payment and settlement dimension

Conversation topic

- Partnership, on-Boarding
- Forms of payment
- Settlement framework

Impacts

- Commercials, Risk, KYP, KYC
- Money flow, Cost of sale
- Back-office, supporting processes (disputes etc.)

	Multilateral model (IATA Agency Program – BSP)	Bilateral model
Distribution contractual terms	Passenger Agency Sales Agreement	Bilateral agreement
On-Boarding & KYC, AML	Partly by Airline, <u>Partly</u> by IATA (Financial guarantees and accreditation)	Airline's responsibility
Supported Forms of Payment	BSP Cash IATA EasyPay Customer Cards, Seller Own Cards, Other (in progress)	Bilateral agreement
Risk management	Agency risk management, BSP card fraud monitoring, PCI DSS Financial guarantee as per local financial criteria (LFC)	Airline's responsibility
Disputes / Liability	Reso 890x protection ADMs for disputes & chargebacks	Bilateral contract no access to BSP ADMs
Visibility on cashflow	Real-time with SwO standard	Bilateral agreement
Cash flow speed	Cards as per acquirer's conditions IATA EasyPay 48 hours BSP Cash as per BSP rules & calendar	Bilateral agreement
Alternative Forms of Payment (Airline as the Merchant)	In progress	Bilateral agreement
Alternative Transfer Methods (ATMs) Policy	Airline control (TIP monitoring & consent)	Bilateral agreement
3DS	Supported by NDC standard	Supported by NDC standard
Reporting	Necessary in the BSP to get all services	Not in the BSP

Thank you



A reminder from the Servicing paper

"As the industry adopts the latest version of the standards, not only will there be more enhanced servicing capabilities, as of v21.3 there are technical fixes that help developers integrate better & code faster, including backwards compatibility. This version (or later) gives us an opportunity to reset the various augmentation points and extensions with an alignment to the same interpretation in the implementation guide, for servicing and other capabilities."

Page 8, [Servicing in NDC](#)

Parking lot items

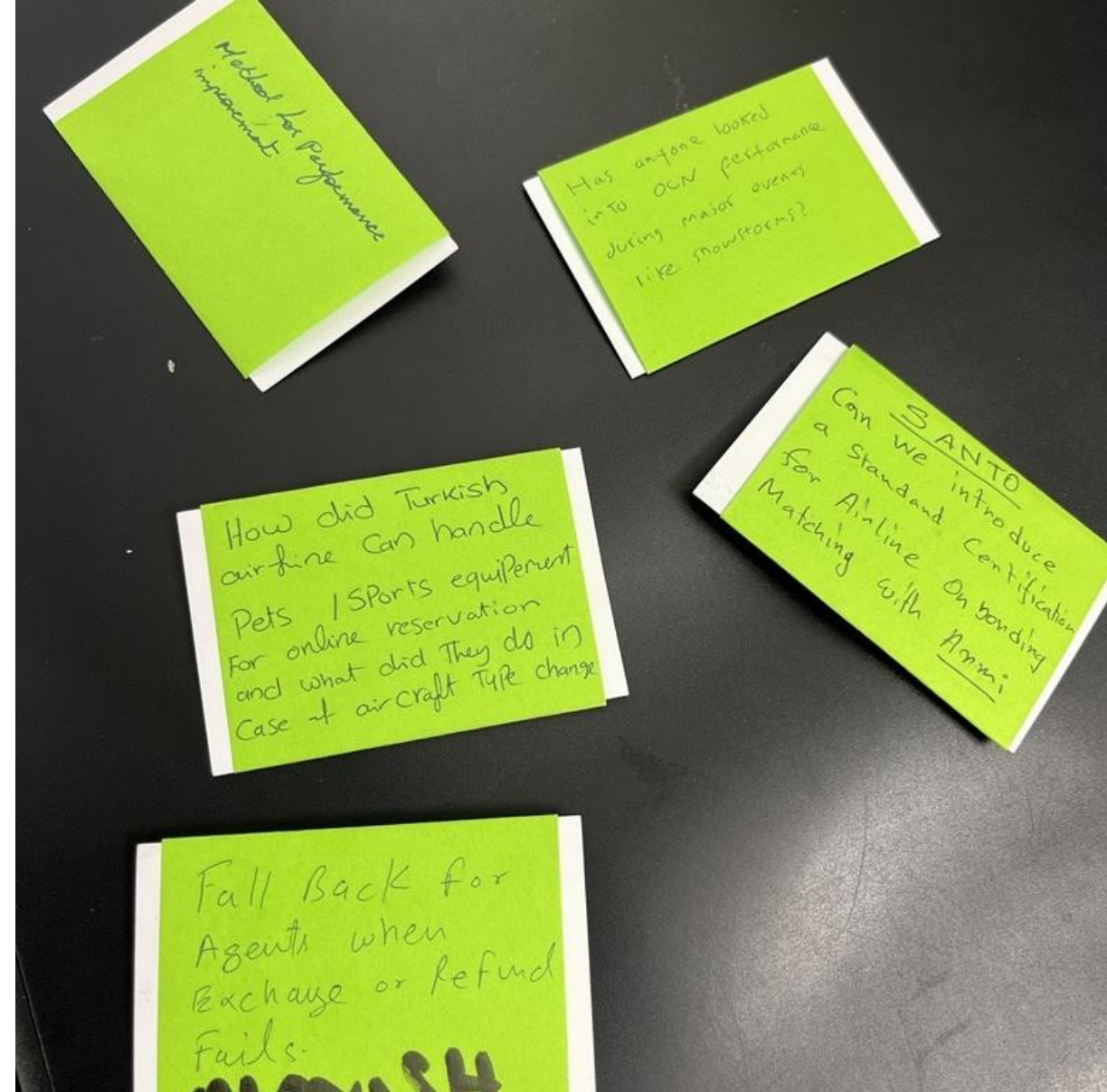
Unused tickets

- <https://www.youtube.com/watch?v=QDw4NIbKDOk&t=3055s>

Performance in AirShop

It was 2 days of exchanges among airlines, sellers, aggregators, mid-back office and other system providers

With many important questions put on the table



Takeaway themes

Implementation Guide

Performance

Json

Servicing

Standard vs. Implementation

Migration to 21.3

ARM Index

Communication

End vision

Customer centricity

Networking

Parking lot items

- Unused tickets

Implementation Forum Highlights

1. Implement NDC with 'the end' in mind
2. Over 40% of participants in the room say they plan to implement 21.3 in 2023, 80% by H2 2024
3. Servicing dimensions: the standard vs. the implementation, the value chain readiness, the legacy realities. Self-service.
4. Importance of referencing and following the Implementation Guide to achieve industry standardization
5. Showcase of Implementer experiences: 21.3 (Verteil, IBS), merchandising (Turkish Airlines) and value from automation and self-service (LHG, Travix)
6. Setup conversations and actions to ensure a more robust implementation (LATAM, Finnair, AFKL)
7. Don't forget the corporate scenarios - take both leisure and corporate into consideration
8. Parking lot items include: Unused tickets, JSON, adoption of new data, i.e. emissions, rich media, performance during shopping



Takeaways and Resources

Takeaways from Geneva
September 2023 Airline Retailing
Implementation Forum




<https://forms.office.com/e/WLPqjCTFYc>

Resources

Additional Resources

- [CR / Agenda Item Template](#)
- [Preparing for schema convergence](#)
- [Implementation Video Channel](#)
- [Certification Explained](#)
- [TMC Adoption Accelerators](#)
- [Implementation Variations in Distribution Standards](#)



Implementation Variations in Distribution Standards – Through a 21.3 Standards Lens

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Disclaimer – The information contained in this document is subject to regular review in the light of changing business needs of the industry, government requirements and regulations. The views expressed in this guide are based on the views and opinions of the IATA Distribution team, airlines, other stakeholders, and public information, including from sources that have not been independently verified. This document is designed as a thought piece and the information contained is provided for general information purposes only and does not purport to be commercial or legal advice. Nothing contained in this document constitutes a recommendation or endorsement by IATA. This guide should not be relied on without seeking the advice of a competent legal counsel. This information is not intended to substitute for or induce any business decision. Any strategy to transition to airline retailing will vary by airline, subject to each airline's individual commercial decision-making.

Upcoming Dates

IATA WEBINAR

MODERN AIRLINE RETAILING – THE TANGIBLES

With:

Episode 2:

**Servicing – dispelling the
myths and embracing the
opportunities**

7 SEPT 2023 | 15:00 CEST

ONLINE
EVENT



Anthony Rader
Director, Airline Retailing
Technology
American Airlines



Johnny Thorsen
Vice President,
Strategy & Partnerships
Spotnana



Shaunelle Harris Drake
Head, Implementation,
Distribution
IATA



Yanik Hoyles
Director
Distribution
IATA



Register at:

bit.ly/MAR-Servicing



Webinar about standard setting involvement

Earlier this year, the [Passenger Standards Conference](#) (PSC) has approved changes to its structure, governed by Resolution 009. These changes have directly led to the changes of the associated strategic partner area. They will not affect the current fees but will change the **Shop-Order** and **Pay-Account** area names and groups included in their respective product offerings as of 01 November 2023.

The PSC Management Boards are currently transitioning to and finalizing the structure of working groups under their responsibility. To this end, the Passenger Standards Team is hosting a 1-hour webinar on 26 September to explain the changes in detail to all current strategic partners and answer any questions you may have.

Given that the Customer Experience & Facilitation and the Common Use SP areas of involvement are part of the Travel Standards Board, you are invited to register for the webinar by clicking on the link below.

Marie Massery, Head Passenger Standards

[September 26 Webinar registration](#)

Thank you

