

# Implementation Forum - 2019/#2

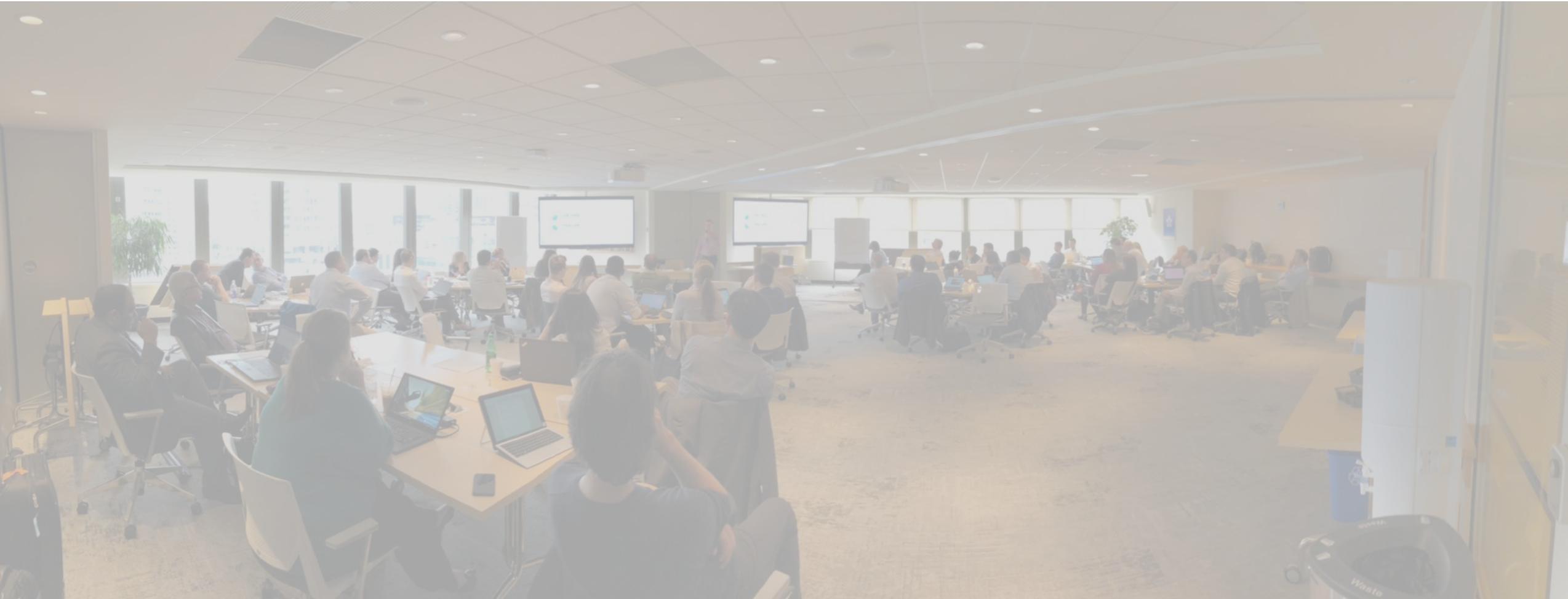
A Summary

~Montreal

20 - 22 May 2019



# Implementation Forum - 2019/#2 (YUL)



[Participant Feedback](#)  
[Meeting presentations](#)



# An overview

**Implementer presenters:** Duffel, Pribas, Expedia, Amadeus, Sabre, SAP, Interes, Farelogix, AC, BA, LHG, QF, SAS

**Participation:** 53 participants, table breakouts

**Key Topics Included:** Servicing scenarios, including split, OrderChangeNotif, @scale capabilities, Full vs. Partial Offers, Airline Profile, Agency delegation, Agent ID in shopping, 3DSecure2, ONE Order transition, 19.2 preview



# Themes

## 1. Shopping and Performance:

- \*Full vs. Partial Shopping responses . Performance . Rules

## 2. Servicing

- \*Split use cases . OrderChangeNotif . @Scale scenarios

## 3. Agency Delegation

- \*Book vs. ticket . permission to view, update

## 4. Leveraging future features

- e.g. 3DSecure

## 5. ONE Order Transition

\* Work item being raised to Standard Setting Groups



# Summary /takeaways

## Standard update:

- Imp Guide 19.1 is live, will contain release changes, the goto for deprecation plans
- **Some implementers priorities:** error codes (104); payment charges (136), standalone payment schema – implementers action to send use cases and examples

## Shopping and Performance

- **Full vs. Partial Shopping responses:** a look at the complexity for an aggregator; action to raise a work item / change request (CR) to look at a standard implementation to support both
- **Performance:** insights from IT Provider; an airline may want all requests; Implementation Guidance needed re push or pull; (internal airline) governance of the data; consistent level of granularity; Airline Profile not priority implementation yet; airline profile vs. dynamic offers; leveraging the standard features **and** software/hardware to address performance
- **Rules:** embedding rules in an offer; relevance of min/max; advance purchase; current agent mindset

# Summary /takeaways

## Servicing

- Leaderboard insights on implementing some @scale capabilities
- Why OrderChangeNotif isn't yet implemented: security concerns; standard gaps; other priorities; no other airline; guidance on level of details to be sent; compliance to GDPR; Dependence on queues
- Split – a means to an end; Reflect on why agents request it explicitly today; be customer centric; look at use cases E2E – see further slides.

# Summary /takeaways

**Canadian TMC example:** of millennials demanding a better experience, leading to leveraging NDC + AI, machine learning; 50% reduction in implementation timelines

**Use of TIDS:** Solving identification of non-IATA agents; Platform to improve onboarding experience underway; Conversion of existing (agent) numbers → TIDS; triggered discussion about offers based on agent ID.

**Agency Delegation:** Airline OMS to manage. Airline to communicate instruction for accessibility, viewership, permission to update – to be discussed

**3DSecure:** 'watch this space'; see ATZ and Implementation Guide for updates

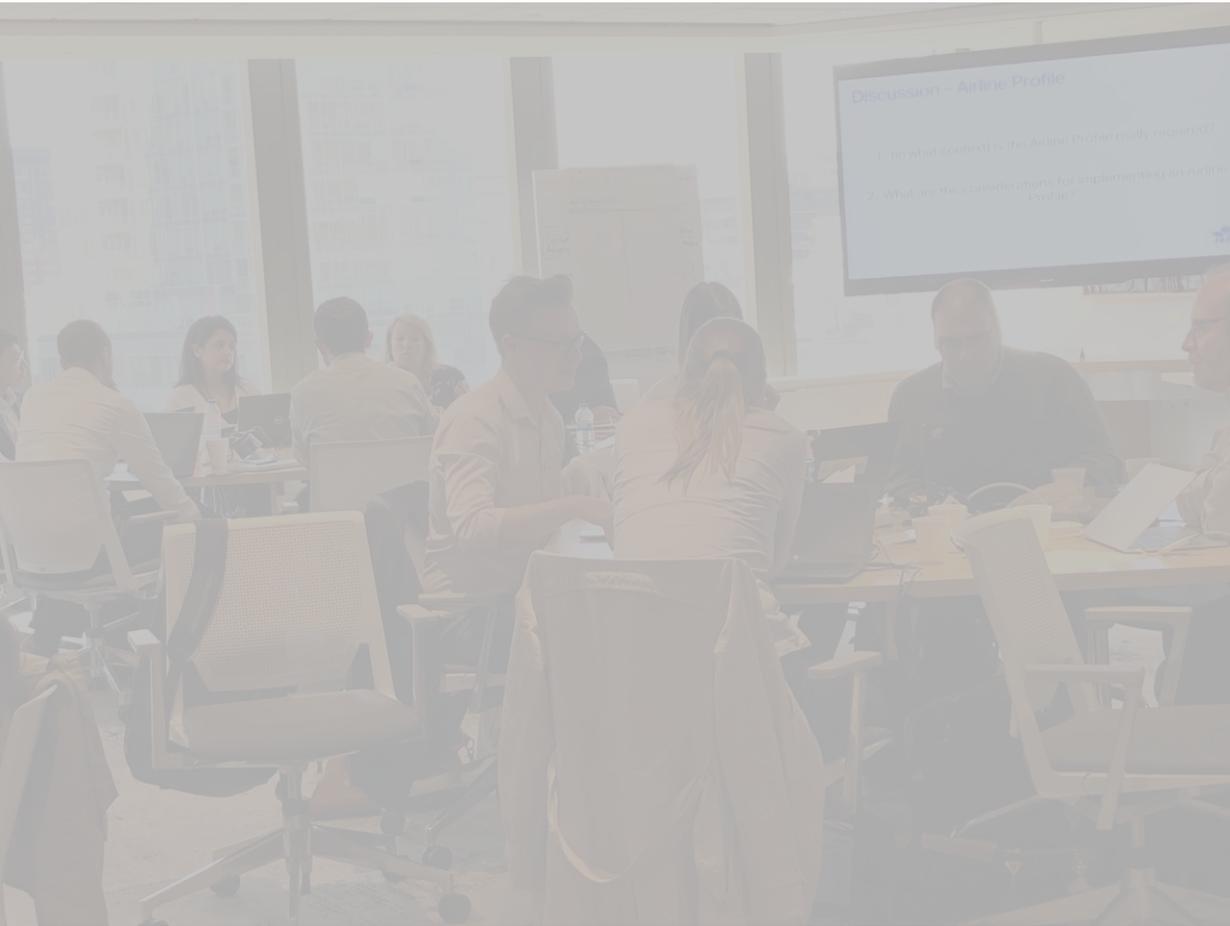
**Leveraging future features:** regulatory or critical features; approach under review; 3DS2 a priority

**Specific airline updates:** TMC, Handling CC fees as a service, Handling Baggage, LB examples implementing servicing scenarios

**Interline:** provide update on the work underway in 2019 to ATZ



## Table Breakouts



# Full/Partial ShoppingRS – views from implementers

Presentation: Multiple workflows, large HTTP responses, impact on response times, business rules with the airline etc. vs. integrators need to understand which offers can be combined and the impact of combining offers together.

Airlines have different reasons for returning full vs. partial offers

Challenge is with the integrators to handle the complexity of the requirement for both full and partial offers.

**Next step:** Raise work item to review how the standard could increase the quality of the requests and responses.

```
<Match>  
  <Application>Journey</Application>  
  <MatchResult>Full</MatchResult>  
</Match>  
  
<Match>  
  <Application>Journey</Application>  
  <MatchResult>Partial</MatchResult>  
</Match>
```

Standard includes a flag to specify full or partial

\* AIRLINES SHOULD SUPPORT BOTH OPTIONS  
(FULL + PARTIAL, BY SELLER OR BY REQUEST)  
+ SLICE

\* COMBINABILITY SHOULD BE STANDARDIZED  
(PARTIAL, BUT ALSO FLIGHT + ANCILLARIES...)

\* PAGINATION IS VERY IMPORTANT FOR FULL OFFERS

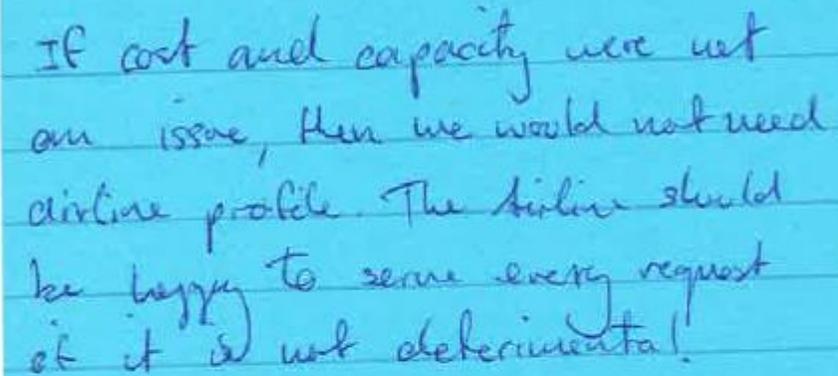
# Airline Profile – views from implementers

Presentation: demonstrated how the Airline Profile (AP) helps to improve the relevance of the NDC requests to the airline.

Discussion on reasons the AP isn't widely implemented:

- airlines focusing on other functionality;
- some airlines want to receive all requests,
- maintaining the profile is a challenge – dependent on OAG type scheduling
- internal airline governance on the AP data (routes)
- need implementation guidance on pull vs. push and agreed level of granularity

Airline profile being considered by some Alliances



IF cost and capacity were not an issue, then we would not need airline profile. The airline should be happy to serve every request if it is not detrimental!

# Rules – views from implementers

- An Airline presentation: demonstrated how Offer and Order Rules (e.g. min/max, adv. purchase) are communicated as part of the offer. Rebooking, refunds etc. are part of the offer like a service.
- Noted that rules like advance purchase, min/max are important to agents today.
- Mindset shift of agents to understand that the NDC offer is with the airline.
- Noted the standard setting work to make the rules machine readable as of 19.2 (CR145a, 147m).

Can stopover rules be specified in the RQ?  
(Travelpt, Nond)

Can you say 'NO' to UCC's (VIRTUAL CREDIT CARDS) ... NEW CR? :)

## Rules

- Conditions
  - Communicating to the end consumer to meet regulatory requirements
  - Will 'Refundable' as a service be dealt with in the same way as a service... eg with 2 status etc.
- machine readable rules
- Rules in Airshop vs ReShop

## Rules

- more info will slow down performance.
- heard from sellers they use all.

Offer Rules and Conditions as Service within the Offer

All Offer Rules are communicated during AirShoppingRS and OfferPriceRS. No separate messages needed.

All Order Rules are communicated during OrderViewRS. No separate message needed.

- Rebooking: This is part of the offer. Like a service.
- Refund: This is part of the offer. Like a service.
- Advance Purchase: Not relevant
- Min/Max Stay: Not relevant

Economy Light	Our recommendation Economy Classic	Economy Flex
<ul style="list-style-type: none"> <li>1 carry-on bag up to 8kg/18lbs</li> <li>Snack &amp; beverages</li> <li>Rebooking not possible</li> <li>Refund not possible</li> </ul> <p>408,44 EUR</p>	<ul style="list-style-type: none"> <li>Seat reservation</li> <li>1 checked bag up to 23kg/50lbs</li> <li>1 carry-on bag up to 8kg/18lbs</li> <li>Snack &amp; beverages</li> <li>Rebooking: 70 EUR plus fare difference</li> <li>Refund not possible</li> </ul> <p>428,44 EUR</p>	<ul style="list-style-type: none"> <li>Earlier flight on day of travel (where available)</li> <li>Priority Lane (where available)</li> <li>Priority boarding (where available)</li> <li>Seat reservation</li> <li>1 checked bag up to 23kg/50lbs</li> <li>1 carry-on bag up to 8kg/18lbs</li> <li>Snack &amp; beverages</li> <li>Rebooking possible plus difference</li> <li>Refundable except 70 EUR difference</li> </ul> <p>478,44 EUR</p>

Lufthansa Group NDC Implementation Update



# Servicing through 2 lenses

## 1) The Standard

Schema  
Capabilities

Implementation  
Guidance

Use of OrderReshop, OrderChange, OrderRetrieve, OrderChangeNotif, OrderCancel and OrderHistory

## 2) The Implementation

Airline  
Implementation

Agent  
Implementation

Align their internal / downstream systems and processes to be able to do NDC servicing.

# @Scale, servicing capabilities – an extract

- 1.Order - Basic order creation
- 2.Order - creation of airline bundle
- 3.Service - Order changes initiated by the customer – e.g. itinerary, contact details, upgrade, adding an ancillary
- 4.Service - Order changes initiated by the customer - multi-passenger scenarios
- 5.Service - Order changes initiated by the customer - name correction (and name change)
- 6.Service - Order changes initiated by the customer - seat selection
- 7.Service - Order changes initiated by the airlines with notifications – e.g. flight schedule, flight cancellation, passenger upgrade or downgrade
- 8.Service - Order changes resulting in an Order Cancellation without refund
- 9.Service - Order changes resulting in an Order Cancellation with refund
10. Service – Retrieve an Order
- 11.Service – Implementation of Order History



# About 'Split' – views from implementers

★ Examples of Use Cases where implementing a 'split order' IS recommended

## BUSINESS

### REQUIREMENT TO SPLIT

SPLIT SHOULD BE THE CONSEQUENCE OF BUSINESS FUNCTIONALITY WITH NDC/OD, NOT TECH CONSTRAINT

- ★ / DIVIDE ORDER (PAX WANTS PRIVACY...) (1)
- / SPLIT TO DIFFERENT COST CENTERS

### ORDER SHOULD BE SERVICED W/O SPLIT, WHEN:

- ★ / REDUCE NUMBER IN PARTY
- ★ / ONLY ONE PAX IN A MULTI PAX ORDER IS CHANGING HIS JOURNEY

(1) INTEREST OF FUNCTIONALITY "LINK ORDER TOGETHER" (IN CASE OF DISRUPTION, SEATING ...)

- ★ Data privacy [split order]
- 2 - cancellation for 1 pax ★
- 3 - change for 1 pax (voluntary) ★
- 4 - change for 1 pax (involuntary) ★  
e.g. #irops)
- 5 - cancellation for 1 pax (invol e.g. irops) ★
- 6 - Groups with feeder flights

← Examples where a 'split order' is NOT needed

# 'Split' – views from implementers

The constraint is not with the order - the Order allows passengers to have different flight and other services.

The complexity lies with the need to synchronize with PNRs and tickets in the implementation.

Note the shift in mindset needed – split is a consequence of a business function with NDC/ONE Order, not a technical constraint.

Implementers to think about an implementation of servicing that takes into account the next step, ONE Order. Implementers voiced that the standard shouldn't be compromised for the sake of adoption.

End game → be customer-centric

## Next steps:

- Understand agent use cases (non-homogenous vs. split)
- Review where the standard should have the agent ask for a split in the request. Take into account E2E cases, e.g. multiple subsequent changes, including schedule change impacting 1 of n passengers.

- Cancel one → Keep order
- Modify one of two ⇒ split?  
(because an order with very different routings will be complex)
- Privacy (like divorce) ⇒ split.

Mindset of Seller

Problem: PNRs in background  
(sync between Order/PNR)

Use cases: for splitting Order

- Non-homogeneous of all sort.  
higher priority
- Splitting Order of less importance.  
↳ other ways of controlling security/privacy.

Experience

# ORDER CHANGE NOTIF BARRIERS

Need to know  
What level of details  
are ~~no~~ allowed to  
be sent.  
→ Need to comply  
w/ GDPR.  
e.g. Not allowed to  
send HALAL meal.

Currently: dependent of  
queues - partly  
because not everyone  
is on a schema that  
supports Order & Notif

No replacement for queues  
bc Times + OTAs are  
very dependant on automation

## INDUSTRY CONSIDERATIONS

- No Standard transmission mech.
- Security Concerns
- GDS queue based Robotics  
↳ Big changes to existing sys.
- Different sys. using ~~it~~ it.
- ~~Info~~ Info. sent back in  
Order Change Notif.

Servicing: TA needs to call  
AGENT SUPPORT / CALL CENTER.

Order Change Notif: 12.1

- other priorities
- no automated schedule changes
- no other airline ~~leads~~ providing the message 3 agg. <sup>providing</sup> ~~with~~ <sup>obtaining</sup>
- no acknowledgement. ??
- no IT Provider

Need to know  
What level of details  
are allowed to  
be sent.  
→ Need to comply  
w/ GDPR.

Consistent way to  
send the notification.  
Role of aggregators to  
help the adoption of  
notification.

Consistent way to  
send the notification.  
Role of aggregators to  
help the adoption of  
notification.

Practice today  
→ 1 order - then split  
book

SAM

- Cancel pay.
- Differ

campaigns

# Servicing (invol) challenges – views from implementers

## 1) The Standard

Looking for standard and guidance of transmission mechanism for OrderChangeNotif

Guidance around level of details to be sent to comply with GDPR – e.g. of not being allowed to send HALAL meals

Some data elements in OrderChangeNotif are mandatory but not being used

If waiver codes are used – approach needs to be streamlined; e.g. some uses of waiver break 'NDC flow'

## 2) The Implementation

Role of aggregator to help adoption of notification

Automation driven from existing queues (TMC OTA impact)

No automated schedule changes

Other priorities

# Breakouts

## 1) Technical Deep Dive

Review of servicing use cases to demonstrate 19.2 changes

Walkthrough of 3DS flow

Constraints of JSON for NDC

Use of existing elements such as statuses help to transition to 19.2 features (and ONE Order).

Keep order centricity in servicing

Best practice recommendations for 1) airline to use ID of the pax and 2) airline OMS audit to support OrderHistory API

## 2) ONE Order

Shared first insights from the ONE Transition Study

Amadeus, InteRES, Sabre, SAP presented their views and approach on their role to support airlines transitioning to ONE Order

LHG presented their ONE Order Pilot



# Agency delegation - views from implementers

Context: consolidator setup, back-office/front office; The permission to book vs. ticket managed by the agent; Quality Control roles also handled by agents (/robotics)

In NDC: challenge controlling the viewership and permissions of order elements

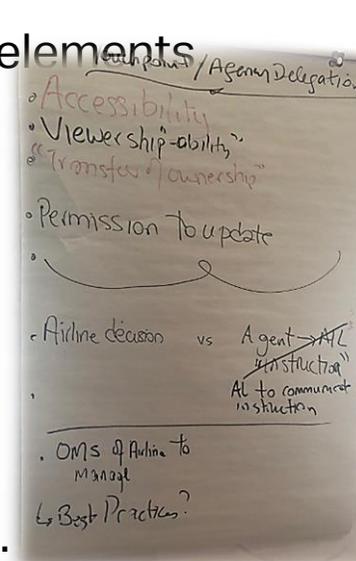
Note, change in mindset needed since airline handles ticketing in NDC.

Requirement in a nutshell - airlines (OMS) needs to know the following:

- Which agent can access (view) various order elements
- Which agent can service (update) various order elements

**Next step:** Formalize the requirement and submit work item for review.

(standard vs. best practices)



**Story 1:** As a seller agent I need the ability to ask the airline OMS to transfer full ownership of an to another seller agent (OrderChange?)  
e.g. Booking agent making an order change to transfer ownership to the consolidator or ticketing agent. Booking agent has no control over the rrdre anymore

**Story 2:** As a seller agent I need the ability to ask the airline OMS to grant full ownership to another seller agent whilst still maintaining ownership (co-ownership) (OrderChange?)  
e.g. Booking agent making an order change to transfer ownership to the consolidator or ticketing agent whilst still retaining control over the order

**Story 3:** As a seller agent I need the ability to ask the airline OMS to transfer part ownership (order item) to another seller agent (OrderChange?)  
e.g. Booking agent making an order change to transfer ownership to the consolidator or ticketing agent for only one order item (segment or service)  
e.g. Agents books flight and tickets. Agent adds a service, but wants the airline to process the EMD (Other payment method) for the service

**Story 4:** As a seller agent I need the airline OMS to ensure I am notified of any order that has been transferred to me (Order Change Nofif?)  
e.g. Booking agent making an order change to transfer ownership to the consolidator. Consolidator gets an Order Change Nofif to let them know of ownership

**Story 5:** As a seller agent I need the airline OMS to ensure I am notified of any order that has been transferred away from me (Order Change Nofif?)  
e.g. Booking agent making an order change to transfer ownership to the consolidator. Booking agent gets an Order Change Nofif to let them know of ownership has been relinquished. Might be good protection against accidental transfer / fraudulent transfer

Use cases shared →

# Additional Observations

- Implementing existing legacy processes alongside their NDC processes, such as handling PNR constraints for non-homogeneous scenarios, handling SSRs etc.
- Priorities are on implementing servicing scenarios, especially involuntary e.g. notifications of Order changes using XML processes instead of email.
- Airlines to focus more on standardized implementations
- Opportunity to use new standard features coming in 19.2 e.g. rules, .
- Some agents started updating their customer facing interfaces (desktop, apps) to allow more complex and self-serve change requests.
- Agents APIs servicing roadmaps based on their airline partner servicing roadmaps

# Observations

You participated and had additional observations?

Send them via email to [ndc@iata.org](mailto:ndc@iata.org)



# Next Imp Forums

Agent, TMC focus

No parallel sessions!

Consistent implementations

Order Management

Schedule change E2E

...

optional parameter in AirShoppingRQ in a specific standard (OD1, OD2, ...)			
9.	Switching return formats	For instance in AirShopping we sometimes get one offer for outbound and return trips, and sometimes two offers - one for outbound and one for return. Also sometimes some values are disappearing (i.e. ClassType)	Huge
10.	Huge differences in requests structure	Generally there are great differences of the request that we must generate for the same call in each of the providers, meaning we would need to create a separate method for creating calls per provider, instead of creating one IATA compliant call and use it in every provider	Huge
TMC feedback 2/3			
2.	OrderCreate	They require Email and Phone in TravelAgencySender. This is not required by the standard, but we need to add it, making it custom for this provider.	Medium
1.	PassengerId	Different providers require us to create a specific for them Id generation standard: 1. T1, T2, T3, T4, T3.1, T4.1 (infants) 2. PAX1, PAX2, PAX3, ... etc  The schema doesn't specify that a specific format is required, we could use a general id (Guid) for every passenger and have it consistent across the whole system. Instead we need to create a different id generation method for each of the providers.	Huge
6.	ORARRecipient	requires us to send the Party/Recipient/Recipient node in AirShoppingRQ	Medium
TMC feedback 3/3			
8.	Different queries for different airlines	requires us to send 2 calls instead of one if we want to get and flights (times every corporate code we want to use)	Huge

