

2018 DYNAMIC PRICING

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LEGAL DISCLAIMER

The purpose of this meeting is to discuss the coding and processing of airfare-related data by the airline industry, in order to make the distribution and interpretation of airfare-related data more efficient. It is important that participants conduct themselves in a manner consistent with this conference's industry-wide, pro-competitive mission. Because some, if not all, participants represent companies that compete with one another, we must be careful not to engage in conduct that could be deemed a violation of the antitrust laws.

Accordingly, 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 engaged in the sale of passenger air transportation. This meeting also has no authority to discuss or reach agreement on the allocation of markets, the division or sharing of traffic or revenues, or the number of flights or capacity to be offered in any market. Participants 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.

Discussing or reaching any agreement related to these topics could expose meeting participants to liability under the U.S. antitrust laws as well as liability under the competition laws of other jurisdictions around the world.

BACKGROUND

The airline industry is recognized as an innovator in dynamic pricing of their product.
This was achieved by

Advanced inventory management to open and close inventory buckets that are set by price point ranges

Regular and automated price point changes

Use of optional services, customized bundles, branded fares, and personalization

2015: WE STARTED WITH A WHITEPAPER



Dynamic Offering of
Fare Levels



Create Services and
Brands

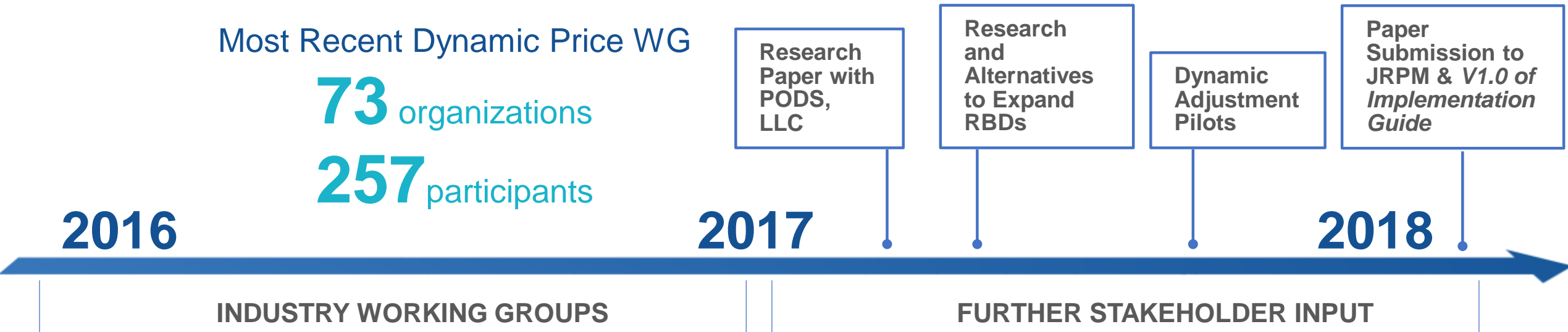


Personalization



Dynamic Fare Adjustment
Generations

DRIVING THE INDUSTRY FORWARD



THREE PILLARS OF REVENUE MANAGEMENT

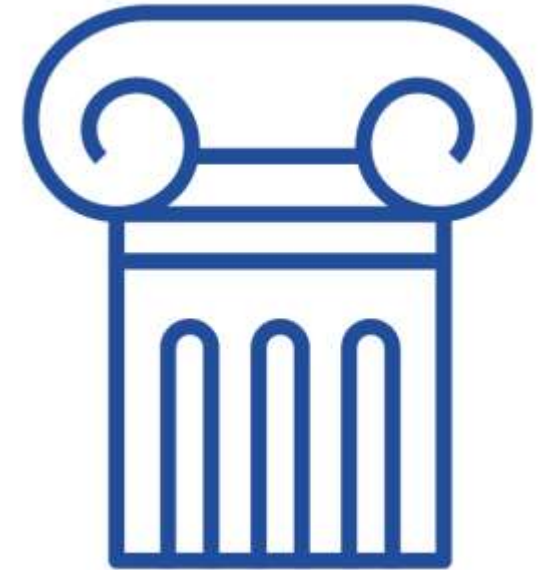
Network
Planning



Pricing



Inventory
Management



DYNAMIC PRICING APPROACH

Need to implement a solution that is sustainable

- Regulatory
- Interoperability across distribution model and types of fares
- Supports airline need to manage the disciplines (3 Pillars)
- **And most importantly, provides value!**

REGULATORY

To facilitate compliance with applicable competition laws, ATPCO will adhere to the following principles and best practices with respect to dynamic fare adjustment capabilities:

- In the initial phase this will be “private” data for downline processing only; in later phases this may change but only insofar as the fares are live, commercial fares available for sale. That is, all dynamically adjusted fares must be available for sale in at least one distribution channel before the fares can be observed by competitors
- All business logic used to determine the direction and magnitude of a dynamic fare adjustment shall remain confidential to each airline and determined independently by each airline. The system should publish the end amounts and not how they were calculated.
- Any values in the Dynamic Adjustment Ranges must remain proprietary to the airline and not shared outside the airline’s control
- Every pricing decision by an airline continues to be made unilaterally
- In addition, it is recommended that the dynamic pricing focus on generating “discounts”.
- The use of dynamic fare adjustment markups could introduce some complications, including: U.S. DOT-required customer service plans require airlines to disclose to customers that lower fares may be available through another channel

BACKGROUND

- Passenger Origin-Destination (PODS) Research
- Dual Reservation Booking Designator (RBD) Validation
- Dynamic Pricing Engine (DPE) Pilots
- Dynamic Pricing Working Group
- ATPCO products that can support dynamic pricing

PODS RESEARCH

atpco



Advances in Airline Pricing, Revenue Management, and Distribution

Discussion Paper **Advances in Airline Pricing, Revenue Management, and Distribution**

Implications for the Airline Industry



Prepared for ATPCO by PODS Research LLC
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October 2017

Advances in Airline Pricing, Revenue Management, and Distribution

Evolution of airline pricing, revenue
management, and distribution

Price selection
mechanisms

Assortment Optimization

Dynamic Price Adjustment

Continuous Pricing

Next generation mechanisms

- More frequent updating of fare structures
- Dynamic availability of fare
- Additional RBD capabilities
- Dynamic price adjustments (increments or discounts)
- Continuous pricing
- Dynamic offer generation

DYNAMIC PRICING DEFINITIONS

Assortment Optimization: With assortment optimization, firms select one or more prices from a finite menu of possible price points. Each price point may be associated with various rules or restrictions that determine how or when that price can be selected. The menu of price points may be updated periodically, but there is only a limited and discrete set of possible prices that can be selected at any given time. The selection of a price from the menu could be made infrequently or, at the limit, on a transaction-by-transaction basis (transactional assortment optimization).

Dynamic Price Adjustment: With dynamic price adjustment, firms start by selecting a price from a pre-defined menu of possible price points, as in assortment optimization. Then, for certain customers or in certain situations, this price is adjusted through either a discount or an increment. All adjustments are made in reference to a price from the fixed menu, and some customers are shown an unadjusted price.

Continuous Pricing: With continuous pricing, firms select a price from a continuous range of possible values. There is no underlying finite menu of possible price points, although there may be business rules that determine the range of allowable prices at any moment. At the limit, dynamic prices could be generated individually for each transaction (transactional dynamic pricing). However, prices do not necessarily need to differ from transaction to transaction.

DUAL RBD VALIDATION

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DUAL RBD VALIDATION: IMPLEMENTATION

Dual Validation
Exists Today

- Instant upgrade fares
- Limited use within cabin for fare brands

DUAL RBD VALIDATION: DEFINING THE FARE LEVELS

7 RBDs Available

- A, B, C, D, X, Y, Z

Divide into Primary and secondary

- Primary: A, B, C, D
- Secondary: X, Y, Z

Resulting in 16 fare levels

- A, AX, AY, AZ
- B, BX, BY, BZ
- C, CX, CY, CZ
- D, DX, DY, DZ

DUAL RBD VALIDATION: IMPLEMENTATION

Distribution of Fares and Rule Data

- Fare Class Application (Record 1)
Prime booking code
- Booking Code Exception (Table 999) - Prime permitted when secondary is available

DUAL RBD VALIDATION: IMPLEMENTATION

Pricing / Ticketing

- PNR Segment booked in prime RBD
- Prices and tickets the lowest fare from the prime that also has secondary availability or availability in a lower prime

DUAL RBD VALIDATION: IMPLEMENTATION

Revenue Accounting and Audit

- Ticket reflects the prime RBD
- Fare amount and Fare Basis are the lowest available
- Same process as current “upgrade” fares that are booked in a single premium RBD based on economy class availability

26+↑



PILOTS

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DUAL RBD VALIDATION: IMPLEMENTATION

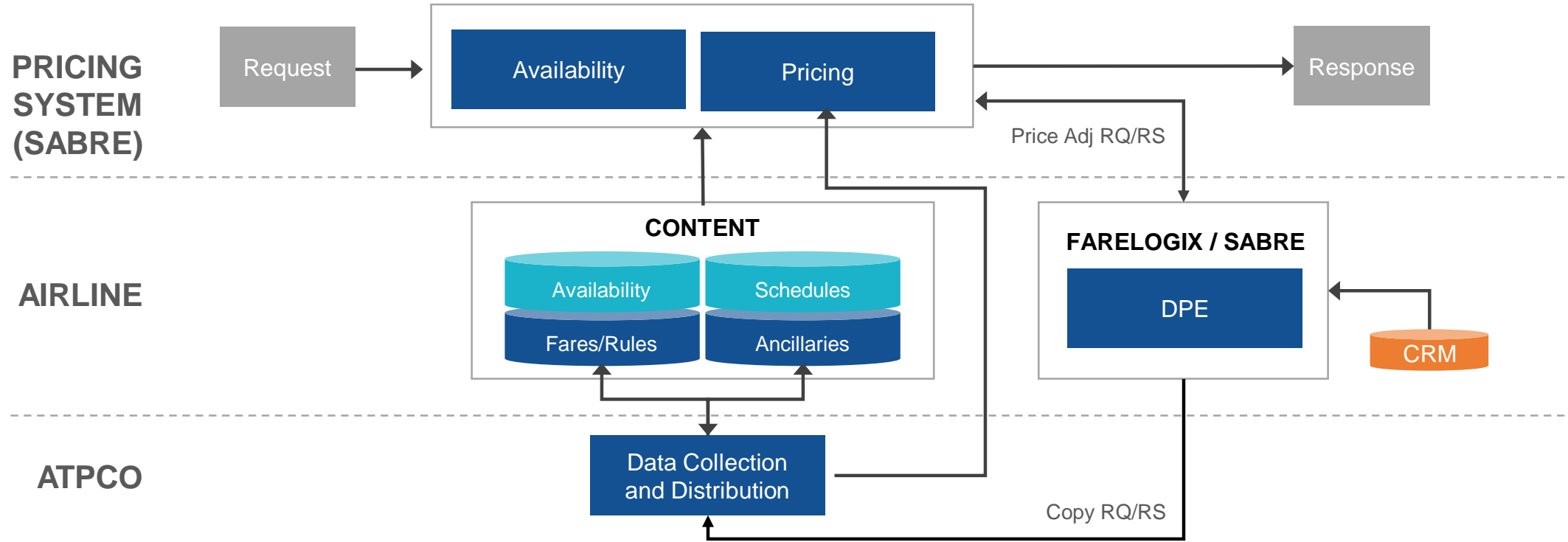
DPE Pilots

- Sabre – Farelogix – ATPCO
- PROS – ATPCO

DPE WITH DYNAMIC FARE ADJUSTMENT



PILOT APPROACH A – SABRE-FARELOGIX-ATPCO



New ATPCO
Fare Product

FARE AND RULE DISTRIBUTION

- ATPCO distributes fares as today
- DPE-eligible fares will be identified by the Airline Profile and may be
 - Public or private
 - Published (specified)
 - Constructed
 - Fare by Rule
- Out of scope for DPE
 - Negotiated Fares with Display Category T (net) or C (net with update)
 - Interline

PRICING

- Create pricing solution (e.g. RT/OJ)
- Request adjustment from DPE
- DPE adjusts the base fare amount and assigns unique identifier
 - Example
 - Base Fare: Y 1000.00
 - DPE adjusts: Y 800.00 with Identifier ABC23
- Calculate taxes/fees/charges (taking into account the adjusted fare)
- DPE sends a copy of the RQ/RS to ATPCO for DPE fare distribution

TICKETING

- Ticket reflects: Y 800.00
 - Fare Basis Code (of the Base Fare)
 - Adjusted amountExample: Y 800.00
- Future Phase: Ticket Systems sends ATPCO Ticket Number linked to Unique Identifier

ATPCO DPE FARE DISTRIBUTION (NEW PRODUCT)

- Intended to support revenue accounting and audit processes
- Distributed at time of booking/ticketing
- Provides Base Fare Class Code with Adjusted Amount
 - Example: Y 800.00
 - All conditions of the Base Fare (e.g. rules, routings, footnotes) apply to the adjusted fare
- Not available for sale

ATPCO DPE FARE DISTRIBUTION (NEW PRODUCT)

- Private fares
- Uses existing fare record layouts
- Obsolete fields become filler
- Fare Amount = Adjusted Amount
- Source Code = DPE
- New fields *
 - Unique Identifier (to tie to DPE response)
 - Point of sale and passenger data (based on original request to DPE)
 - Original fare amount

* To be determined if needed for phase 1

DPE FARE DISTRIBUTION – INTERNATIONAL FARES RECORD

[illegible]

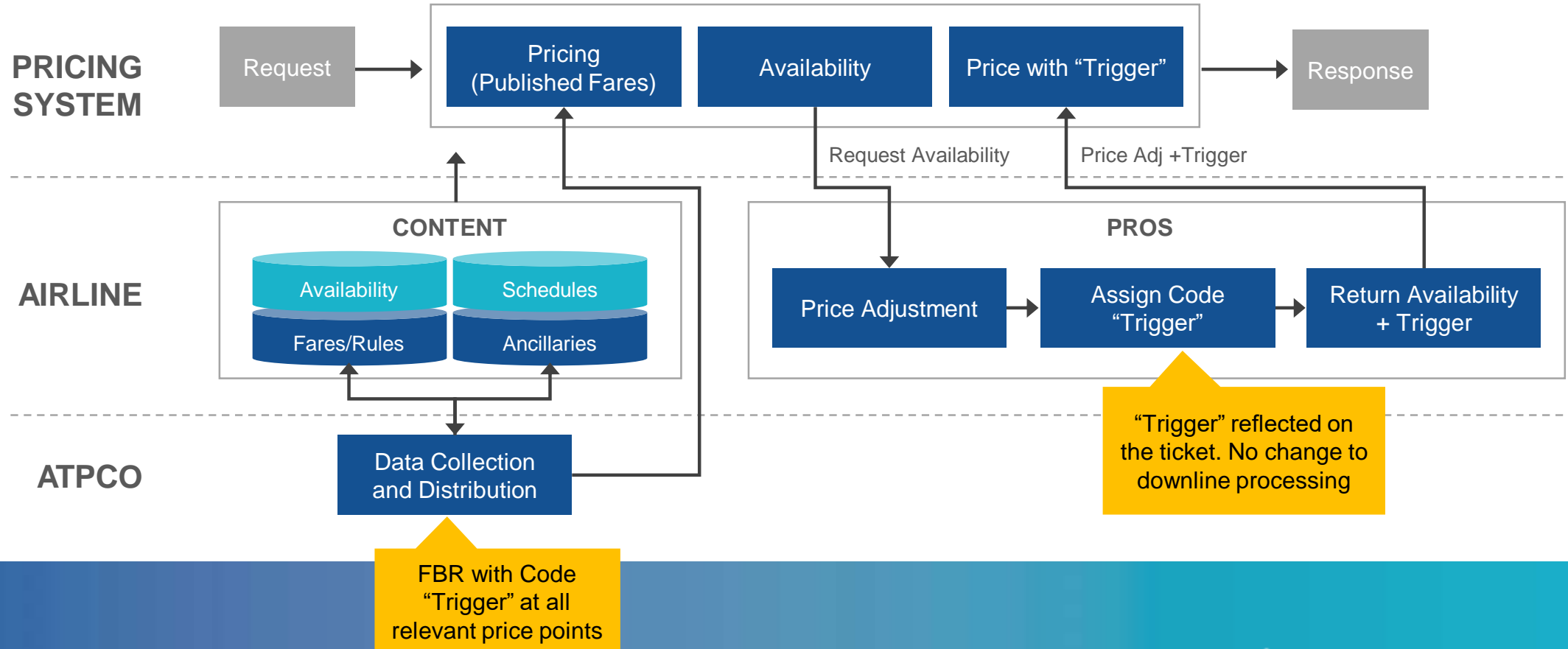
DPE FARE DISTRIBUTION – DOMESTIC (US/CA) FARES RECORD

[illegible]

REVENUE ACCOUNTING AND AUDIT: IMPACTS

- Ticketed amount
 - Does not equal original fare amount
 - Matches to new fare distribution product
- Nothing on the ticket indicates this is a DPE fare
- New fare distribution product can link adjusted fare to unique identifier and original POS/Psgr data sent to the DPE
- Will the new distribution product fulfill requirements?

PILOT APPROACH B – PROS-ATPCO



DPE WITH FBR TRIGGER



FARE AND RULE DISTRIBUTION

- Carriers pre-file Fare by Rule (Category 25) discounts with associated account codes
- Example
 - Account Code ABC05 = 5% discount
 - Account Code ABC10 = 10% discount
 - Account Code ABC15 = 15% discount
 - Etc

Airline provides DPE with the discounts and associated account codes

PRICING

- Send availability request to DPE
- DPE determines availability and identifies optimal price with associated Account Code
- DPE responds with availability and account code
- Pricing System uses the account code to price ATPCO data, **per current processing**
 - Resulting fare class is created based on Category 25 data applicable to the account code

TICKETING

- Per **current processing**
- Ticket reflects fare and amount create by FBR
- Some systems reflect the Account Code either on the ticket or PNR

REVENUE ACCOUNTING AND AUDIT

- Per **current processing**
- Are there any unforeseen impacts?

STATUS

SABRE-FARELOGIX-ATPCO

- Confirmed message elements in both JSON and XML
 - Pricing System – DPE
 - ATPCO fare distribution requirements
- Internal DPE testing in progress

PROS-ATPCO

- Modeled the process
- Two FBR options proposed
- Set-up complete for one

NDC & TRADITIONAL DISTRIBUTION WILL CO-EXIST

Impact

- All airlines will need to support both
- Systems will need to support both

Result

- Airlines will have to have all offers from traditional and NDC to feed their network planning, fare management, RM system
- Airlines will need to have NDC work with all required process
- Filed data will need to interact with NDC Schema

NEXT STEPS – ASSORTMENT OPTIMIZATION

More Frequent updating of fare structures

- Implement Instant Cancel
- Document “Quantum Pricing” process
- Depending on Survey results look at increased frequency (International?)

Dynamic availability of fare

- Document the current methods to target fares with availability in the implementation guide

Additional RBD capabilities/Dual RBD Validation:

- Work with 2 airlines and share learnings complete Implementation guide (June 2018)
- 3 Main Areas to explore:
 - Explore how to improve downline processing (auditing and services) – storing availability
 - Explore the impact on last seat availability and impact to inventory systems
 - Define how to implement for airlines that use this in upsell, brands, and more price

NEXT STEPS – DYNAMIC ADJUSTMENTS/CONTINUOUS/DYNAMIC OFFERS

Dynamic Pricing Adjustments - DPE – Approaches

- Work with Sabre/FLX/PROs /Expedia – Can we align the standards and solutions
- Review Implementation Guide
- Work streams:
 - Cat 31/33
 - Public Fares
 - Revenue Accounting

Continuous Pricing

- No Actions defined

Dynamic Offer Generation

- Continue work with Optional Services and Branded fares working groups
- Routehappy integration

Task Force Plan/Actual

Dynamic Pricing Work Group

Task Force Schedule

Title	Lead/Team	Week of 2/26	Week of 3/5	Week of 3/12	Week of 3/19	Week of 3/26	Week of 4/2	Week of 4/9	Week of 4/16	Week of 4/23	Week of 4/30	Week of 5/7	Week of 5/14	Week of 5/21	Week of 5/28	Week of 6/4	Week of 6/11	Week of 6/18	Week of 6/25
TASK FORCES																			
DUAL VALIDATION (including Reissue/Refunds)	Fred																		
Hold Kickoff							5-Apr												
Follow Up Meetings									19-Apr	working meetings	3-May								
Draft of Implementation Guide																			
ATPCO Review and Implementation Guide																			
Task Force Review and Updates																			
Final Updates and publish																			
REVENUE ACCOUNTING	Melanie																		
Hold Kickoff					19-Mar														
Follow Up Meetings								10-Apr	17-Apr	ACH	1-May								
Draft of Implementation Guide																			
ATPCO Review and Implementation Guide																			
Task Force Review and Updates																			
Final Updates and publish																			
IMPLEMENTATION GUIDE	Ellen																		
Hold Kickoff									19-Apr										
Follow Up Meetings										26-Apr	3-May								
Deliver format of Implementation Guide											4-May								
Review by Implementation Guide TF																			
Internal ATPCO and Publish																			
SINGLE SET OF STANDARDS FOR DPE	Melanie																		
REISSUES/REFUNDS for DPE	Melanie																		
Recruit and Schedule Kickoff Meeting																			
Hold Kickoff																			
Follow Up Meetings																			
Draft of Implementation Guide																			
Review by Implementation Guide TF																			
Internal ATPCO and Publish																			
PUBLIC TO PRIVATE (DPE) - 2H2018	Fred																		

Task Force Participation

	Dual RBD Validation	Revenue Accounting	Implementation Guide	Reissues/ Refunds	DPE Single Standard	DPE Public Fares
Original	<ul style="list-style-type: none"> • BA • KL 	<ul style="list-style-type: none"> • Airfacts • Miatech • ACH 	<ul style="list-style-type: none"> • Sabre • PROS • Farelogix • Oliver Ranson • BA • Hahn Air • SITA • Amadeus 	<ul style="list-style-type: none"> • Travelport • Google • Sabre • Farelogix 	<ul style="list-style-type: none"> • PROS • Sabre • FLX • Expedia • Amadeus 	<ul style="list-style-type: none"> • SITA • AA • Sabre
New	<ul style="list-style-type: none"> • IB • AA • Travelport • Sabre • El Al • Avianca • Hahn Air • Westjet • Google 	<ul style="list-style-type: none"> • Delta • Westjet • Avianca • Hahn Air 	<ul style="list-style-type: none"> • El Al • Westjet • Avianca 			

Task Force Activity

	Completed	Current Activity	Next Steps
Dual RBD Validation	<ul style="list-style-type: none"> Kickoff (5-APR) 	<ul style="list-style-type: none"> Reviewing to validate we have identified all impacted areas 	<ul style="list-style-type: none"> Revised draft of Implementation Guide
Revenue Accounting and Audit	<ul style="list-style-type: none"> Kickoff (19-MAR) 	<ul style="list-style-type: none"> Analyzing current outstanding issues (Unique ID tracking, airline ability to validate pricing) 	
Implementation Guide	<ul style="list-style-type: none"> Kickoff (19-MAR) Reviewed initial outline 	<ul style="list-style-type: none"> Define stakeholder roles to include in guide Revise outline for feedback 	<ul style="list-style-type: none"> Outline of Implementation Guide
Reissues and Refunds		<ul style="list-style-type: none"> Dual RBD validation being discussed in Dual RBD TF 	<ul style="list-style-type: none"> Set up discussions for DPE
DPE Single Standard			
DPE Public Fares			<ul style="list-style-type: none"> Kick off 2H18

IMPACT AREAS

Area	Dual RBD	DPE 1	DPE 2 (Trigger)
Financial Reporting/Sales Processing			
Audit			
Interline Settlement			
Agency Settlement			
Involuntary Changes			
Voluntary Changes			