Sabre

The event starts soon!

- **Submit questions** by selecting the Q&A feature on the top right of your screen (the moderator will inform when the feature is open)
- Type your question in the compose box and hit "send"
- To submit anonymously, select "ask Anonymously"
- Not all questions may be published or answered
- Upvote questions you want asked

The Virtual Developer Bench

The Developer Experience Team
19 April 2021

Sabre®

VIRTUAL Developer Bench

2021

Comparison Shopping Made Easy with the New Airline Storefront

The Developer Experience Team

19 April 2021

Presenters

Natalia Paysse
Product Management

Yarek Tytar
Business Information
Analysis

The Virtual Developer Bench

The Virtual Developer Bench is the developer's opportunity to engage *directly* with the Sabre experts who know their product inside and out.

By the end of today's call, you will:

- Understand the value of the new airline storefront across the travel ecosystem

- View a technical deep dive and demo of the APIs

- Receive answers to your new airline storefront questions

![Sabre]

Mentimeter Survey

Please go to www.menti.com
and use the code: 73 82 07 20

60 seconds

Agenda

01   Value proposition

02   "Shelves" definition

03   Routehappy amenities content

04   API technical deep dive and demo

05   Q&A

VALUE PROPOSITION

Air shopping continues to become more complex

- Airlines are challenged to differentiate their offers in the indirect channel

- Travel buyers and sellers struggle to assess offer value and make a like-for-like comparison across airlines

First Class   Economy

THEN

NOW

8

Current workflow limits value assessment

Results in low to high order and one fare product per itinerary at time of shopping

Brand comparison per airline at time of pricing

✓
- No confusion about airline specific brands
- Easy comparison shopping at time of pricing

✗
- Only fare and scheduled-based comparison across airlines
- No upselling at time of shopping

Note: Scenario applies to both API and workspace

Current workflow limits value assessment

Multiple Brands - Return all brands applicable per itinerary

How to compare UA's, DL's and B6's offers?

United Airlines
UA751
6h. 23min.
26 Feb. 16:00 — 26 Feb. 19:23
EWR — LAX
UA1478
5h. 29min.
12 Mar. 15:15 — 12 Mar. 23:44
LAX — EWR
Details

BASIC ECONOMY	ECONOMY	ECONOMY FLEXIBLE	FIRST OR BUSINESS
$246.59	$306.60	$1,614.59	$3,016.61
☐ Keep outbound	☐ Keep outbound	☐ Keep outbound	☐ Keep outbound
Checkout	Checkout	Checkout	Checkout

UA: 4 applicable brands

Delta Air Lines
DL1710
6h. 19min.
26 Feb. 7:00 — 26 Feb. 10:19
JFK — LAX
DL1922
5h. 18min.
12 Mar. 21:35 — 13 Mar. 5:53
LAX — JFK
Details

BASIC ECONOMY	MAIN CABIN
$246.60	$306.60
☐ Keep outbound	☐ Keep outbound
Checkout	Checkout

DL: 2 applicable brands

JetBlue Airways
B623
6h. 18min.
26 Feb. 5:49 — 26 Feb. 9:07
JFK — LAX
B61124
5h. 21min.
12 Mar. 16:01 — 13 Mar. 0:22
LAX — JFK

$246.60
☐ Keep outbound
Checkout

B6: No brand

✓
- Get all upsell options for a given itinerary
- Get all brand descriptions

✗
- No guidance for brand comparison across airlines
- Difficult to compare what products and services are included in the fare.

Multiple Fares – Attribute-based fare categories; return one fare per category per itinerary

Additional customer-defined fare categories

| Itinerary	Lowest Fare	Fare Category 1	Fare Category 2	Fare Category 3
Flt100–Flt101	$250 *Basic Economy*	$350 *Main Economy*	$400 *Enhanced Economy*	$1,200 *Premium Economy*
Flt250–Flt340	$240 *Basic Economy*	$270 *Enhanced Economy*	$290 *Economy Plus*	
Flt100–Flt240	$170	$400		
Flt230–Flt340	$380	$400	$400	$1,500

✓
- Based on user-defined key product attributes
- Easy comparison shopping across airlines
- Contains all brand data

✗
- Limited set of fare attributes
- Currently does not account for seat comfort

Comparison shopping made easy with the new storefront

- Modernize the retailing experience to shop based on total offer value, not just the lowest fare

- Easily compare offer attributes across different content sources

- Increase booking conversion and upsell to higher brands through relevant offers
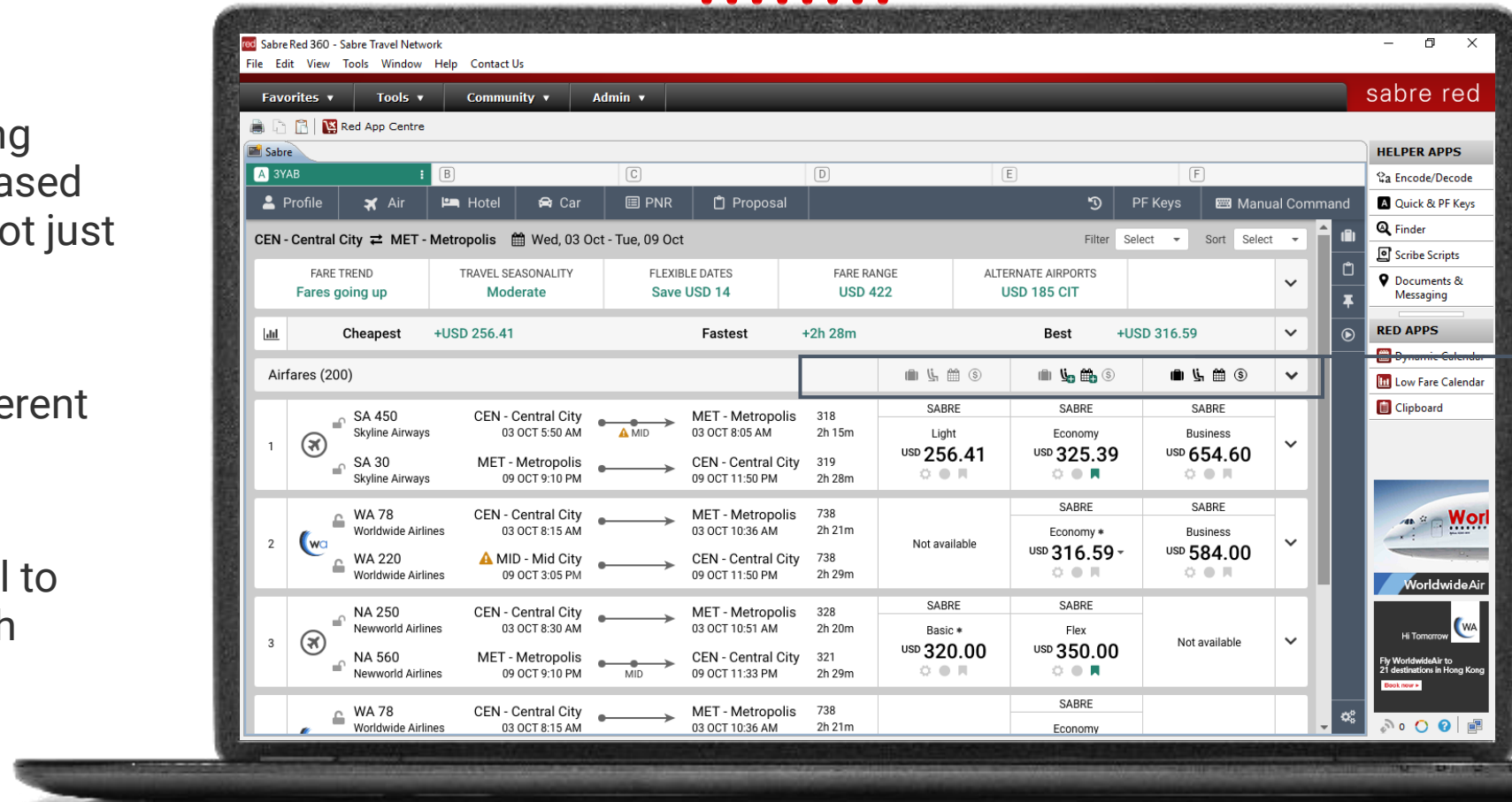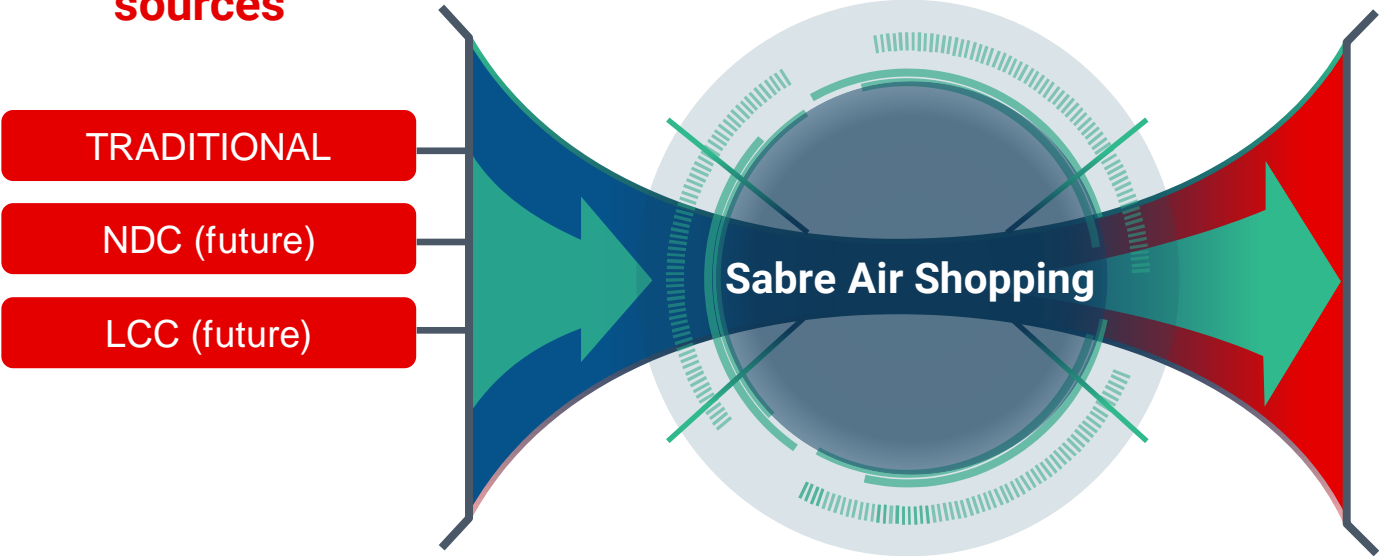

Identifies unique attributes across each offer for value comparison

Shelf concept encourages upsell in a way that is cabin and brand agnostic

Making the complex simple

Multiple content sources

New airline storefront

TRADITIONAL

NDC (future)

LCC (future)

Sabre Air Shopping

NORMALIZE
Content across
multiple sources

CATEGORIZE
Easily compare like
for like offers

STANDARDIZE
Defined default
shelf modes

Value across the travel ecosystem

Agencies

Provide travelers relevant offers
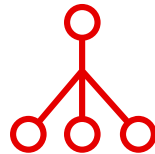
Boost consultant efficiency

Enable easy comparison

Increase upsell and conversion

Airlines

Promote omni-channel experience

Increase conversion and ancillary attach rates

Brand differentiation at initial shop

Corporations

Provide greater transparency around in-policy offers

Helping travelers choose the best offer

"SHELVES" DEFINITION
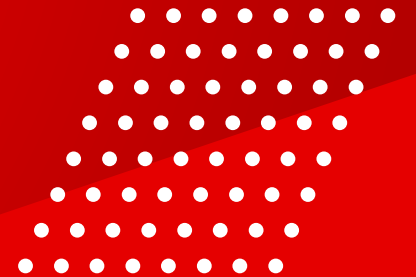
Enabling new storefront results

1Q 2021

New airline storefront

Considers expanded attributes for distinct fare categories:

- Exchanges
- Refunds
- Checked bag
- Pre-reserved seat
- Additional attributes like seat comfort and carry-on will be added

Applies to global markets

Monitors the market to adapt and evolve shelf definitions over time

Future

Customer defined

Customizable shelf definition based on specific business needs

Customer-defined criteria will be supported through an enhanced Bargain Finder Max's Multiple Fares Per Itinerary capability

Considers shop by attributes (i.e., shop by carry on, shop by seat comfort)

New airline storefront shelves definition

- Definitions come from data analysis and machine-learning models that can be recalibrated based on market changes

- Shelf definition by geographical level (e.g., country pair, IATA subzone), cabin and requested shelves

- Considers flexible set of attributes adapted for the global market: exchanges, refunds, baggage, seat selection

- Other attributes can be added like seat comfort, carry-on and priority boarding

		Shelf 1	Shelf 2	Shelf 3	Shelf 4	Shelf 5
Requested shelves	5					
Cabin	Premium Economy					
Country Pair	US, US					
Exchanges		No	Yes (Charge)	Yes (Charge)	Yes (Free)	Yes (Free)
Refunds		No	No	No	No	Yes (Free)
Checked Bag		0	0	0	1	1
Pre-reserved Seat		No	No	Yes (Free)	Yes (Free)	Yes (Free)

Attributes considered to define each shelf

· The grid is an example of the shelf placement algorithm (NAS) and qualification attributes for a US-US request.

SOLUTION INTEGRATION

Integration across multiple touchpoints

1Q 2021

2Q 2021

Future

Agency-owned channels
Customize air shopping results to business needs with flexible APIs

Sabre Red 360
Increase agent efficiency, encourage upsell and provide relevant offers

GetThere
Give corporate travel managers transparency around in-policy offers

New airline storefront
Comparison shopping across multiple airlines through attribute-based "shelf" definitions

1Q 2021

atpco routehappy   Including Routehappy content

APIs to enable storefront capabilities

Available in REST/ SOAP

Bargain Finder Max and Revalidate Itinerary API

Request

New optional parameters in the request schema to enable new storefront response

<ShelvesIndicators Mode="NAS" **Limit**="2"/>

OTA_AirLowFareSearchRQ/TravelerInfoSummary/PriceRequest Information/TPA_Extensions/ShelvesIndicators/@Mode

OTA_AirLowFareSearchRQ/TravelerInfoSummary/PriceRequest Information/TPA_Extensions/ShelvesIndicators/@Limit

Response

New elements in the response schema to support storefront displays

```
<ShelvesDefinitions Mode="NAS">
   <Shelf Id="1"/>
   <Shelf Id="2" Exchanges="charge"/>
   <Shelf Id="3" Exchanges="charge"
SeatSelection="free"/>
   <Shelf Id="4" Exchanges="charge" Refunds="charge"
SeatSelection="free"/>
   <Shelf Id="5" Exchanges="allowed" Refunds="charge"
FreeBaggagePieces="1" SeatSelection="free"/>
 </ShelvesDefinitions>

<AirItineraryPricingInfo ShelfId="1" PricingSource=""
PricingSubSource="
```

Shelves with Routehappy capabilities

- **Distribute ATPCO Routehappy content via Bargain Finder Max and Revalidate Itinerary APIs**

- **Provide targeted information, messaging, pictures and URLs about airline fares, products and services**

RICH CONTENT TYPES

Amenities (1Q 2021)

- Seat 'comfort' type (width, pitch)
- Aircraft (*)
- Layout
- Wi-Fi
- Entertainment
- Power
- Food
- Beverages

Comprehensive flight amenities data about the onboard experience

Universal Ticketing Attributes (UTA) (future)

- Change/cancellation rules
- Checked bag allowance
- Carry on allowance
- Seat selection
- Upgrade eligibility
- Check priority
- Boarding priority
- Lounge access

Standardized, easy to integrate fare benefits and restrictions

Universal Product Attributes (UPA) (future)

- Media (photos, videos, 360 tours)
- Graphics
- Description text
- Captions
- Sanitization (reassurance UPA)

Rich content that showcases airline products and services

Enabling Routehappy amenities to be returned

Bargain Finder Max and Revalidate Itinerary APIs

Request

Allow distribution of the Routehappy content through our BFM and RevalidateItinRQ APIs

`<RichContent FlightAmenities ="true" />`

Response

New elements in the response schema to support flight amenities information (Seat Comfort Food, Beverage, WiFi, Power, Entertainment, Seat Layout)

```
<OTA_AirLowFareSearchRS>
 <FlightAmenities>
  <Seat Ref="0" Pitch="31" Type="standard legroom"/>
  <Seat Ref="1" Pitch="38" Type="cradle recliner"/>
  <Seat Ref="2" Pitch="77" Type="full flat pod"/>
  <Food Ref="0" Exists="true" Cost="paid" Type="snack"/>
  <Food Ref="1" Exists="true" Cost="free" Type="light meal"/>
  <Food Ref="2" Exists="true" Cost="free" Type="premium
meal"/>
  <Food Ref="3" Exists="false"/>
 </FlightAmenities>

 <FareInfo>
  <TPA_Extensions>
   <Cabin Cabin="Y"/>
   <FlightAmenities Subsegment="1" SeatRef="0" FoodRef="0"/>
  </TPA_Extensions>
 </FareInfo>
 <FareInfo>
  <TPA_Extensions>
   <Cabin Cabin="Y"/>
   <FlightAmenities Subsegment="1" SeatRef="0" FoodRef="3"/>
   <!-- more flight Amenities if there are hiddeen stops -->
  </TPA_Extensions>
 </FareInfo>
```

APIs versions enabling **storefront capabilities 1Q21**

	API	High Level Functionality	Technology	Method/Endpoint	Target Release (CERT)	Target Release (PROD)
1	Bargain Finder Max	• **REST/JSON GIR** • **GIR** Response	REST/JSON	v3/offer/Shop	1Q2021	1Q2021
2	Bargain Finder Max	• **OTA** Response • **GIR** Response	SOAP/XML	V6.3.0	1Q2021	1Q2021
3	Revalidate Itinerary	• **REST/JSON GIR** • **GIR** Response	REST/JSON	V3/shop/flights/revalidate	1Q2021	1Q2021
4	Revalidate Itinerary	• **OTA** Response • **GIR** Response	SOAP/XML	V6.3.0	1Q2021	1Q2021

Learn more at Sabre Dev Studio

TECHNICAL DEEP DIVE

Shelves definition tables

OCEAN deep dive and demo
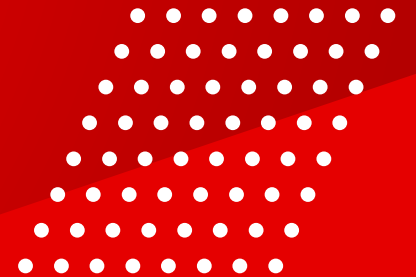
New airline storefront

New airline storefront is based on Shelves definitions

- Shelf Definition – set of minimum requirements which offer should satisfy to be placed on the specific shelf

- Higher shelves must have at least one attribute better and cannot have any attribute worse

Free seat selection

\-\-

Chargeable exchange
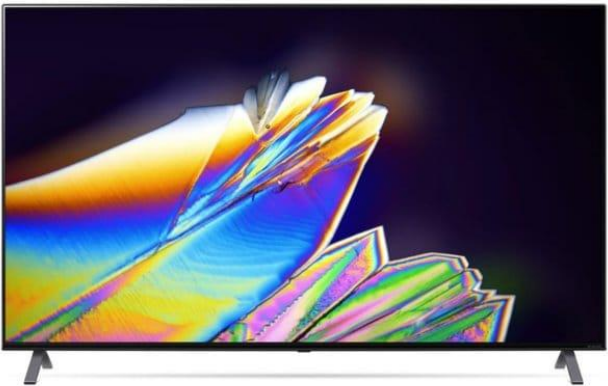
Partial refund

Free seat selection

1 checked bag

Chargeable exchange

Partial refund

Monotonicity test

	Shelf 1	Shelf 2	Shelf 3
Screen size	65"	75"	??
Resolution	1920x1080	1920x1080	??

Could I place this TV on Shelf 3?

Resolution ⓘ · 4K (2160p)

Screen Size Class ⓘ · · · · · · · · · · · · · · 65 inches

New airline storefront definitions

Shelves should bring relevant content – relevant to the **present** and not to the past

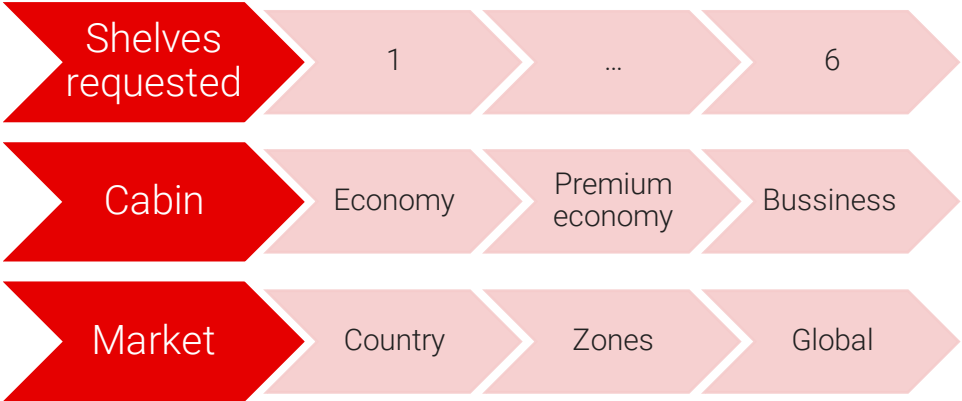Make a Recommendation

Create new definition

Definitions are static at certain moment of time, but dynamic over time

Validate

Monitor and collect feedback

Release to market
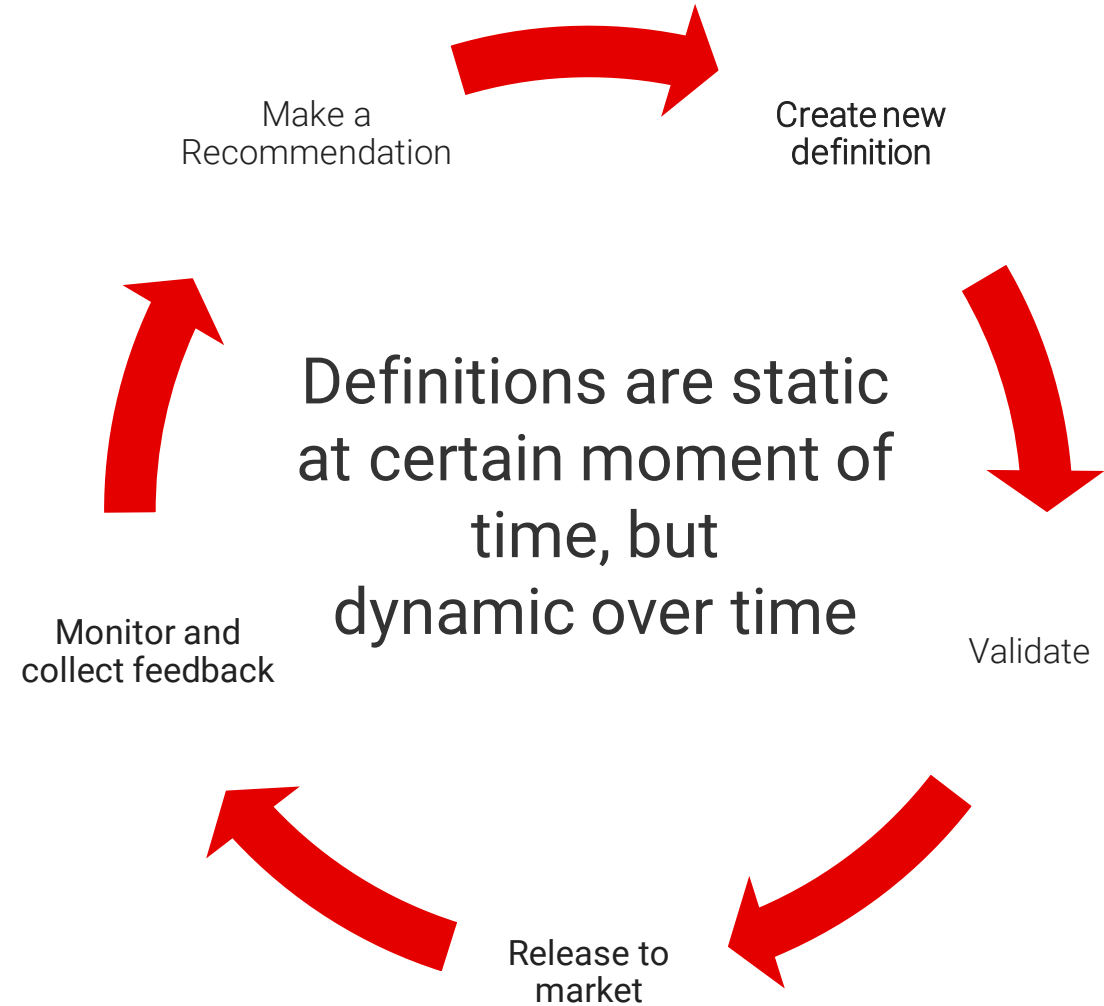
New airline storefront definitions: how we do it

Exchanges

Refunds

Checked bag

Pre-reserved Seat

Seat comfort

Other attributes

Recommended Definitions
(based on relative fare difference & density)

Shelves model trainer

Attributes permutation 1

Attributes permutation N

Data collection and evaluation

Shelf definitions

BFM

The New Airline Storefront defines a set of shelves by considering all possible combinations of supported attributes, while keeping a balance between the number of returned offers (i.e. shelf density) & fare differences across shelves.

New airline storefront definitions

Definitions matching criteria

| Shelves requested | 1 | ... | 6 |

| Cabin | Economy | Premium economy | Bussiness |

| Market | Country | Zones | Global |

Note: Criteria is subject to change in order to improve definitions, conversion & upsell rates

New airline storefront

- Seat comfort
- Carry-on
- Priority boarding
- Other attributes
- Exchanges
- Seat selection
- Bags
- Refunds
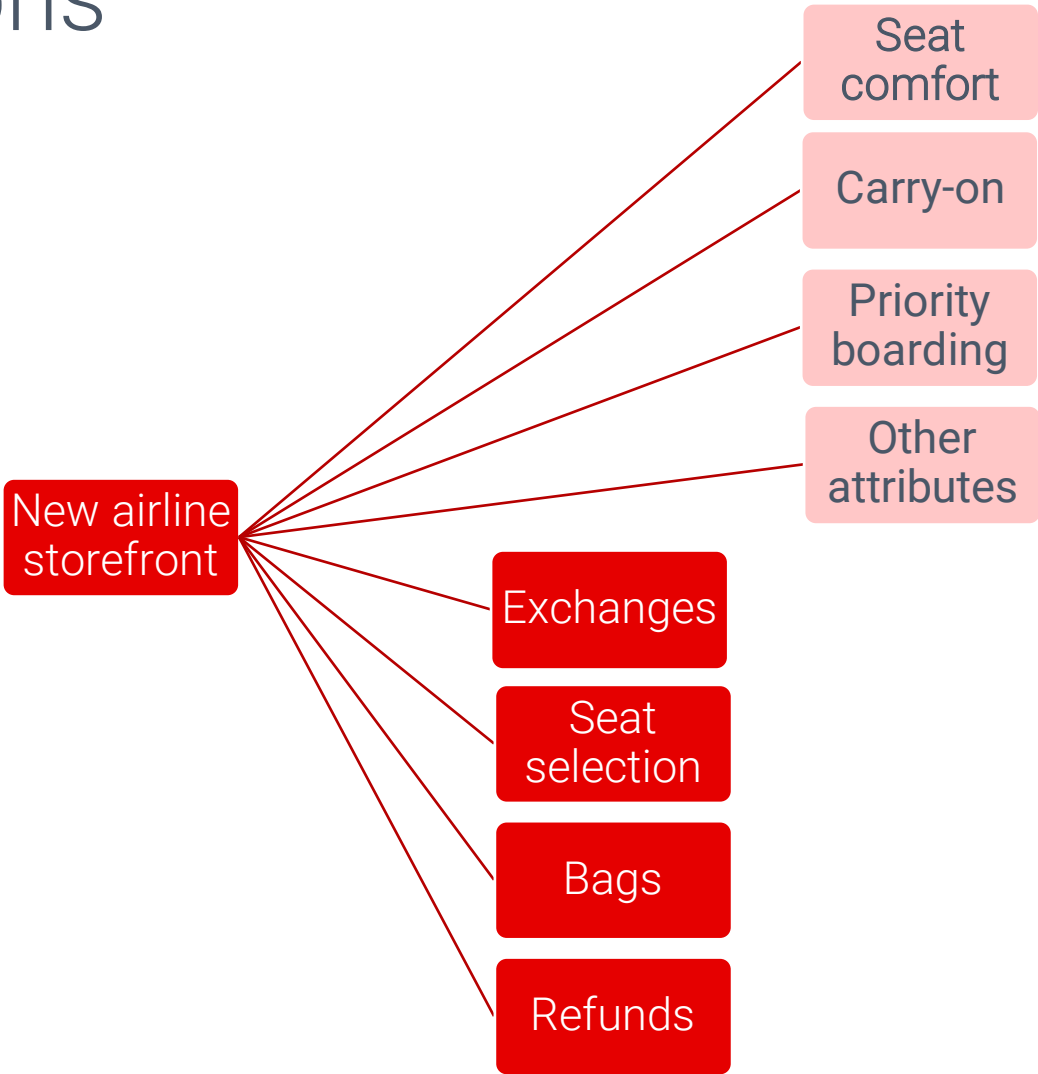
New airline storefront definitions testing

Ultimately, shelves' optimization aims at improving the user experience by allowing attribute-based comparisons across a diverse group of suppliers with the intention of increasing personalization, conversion & upsell rates.

Which metrics do we track

- Relative Fare Difference (RFD)*
- Shelves' Density*
- Brand Representation (capture report)
- Low Fare Efficacy (LFE)

* Current Model's Optimized Metrics

Which data do we look at

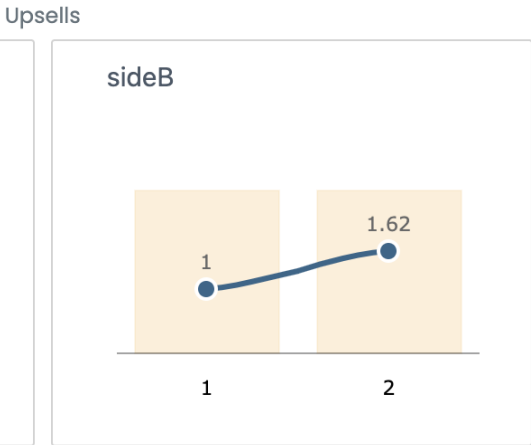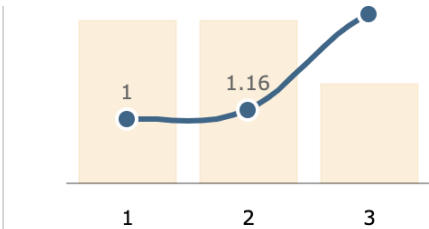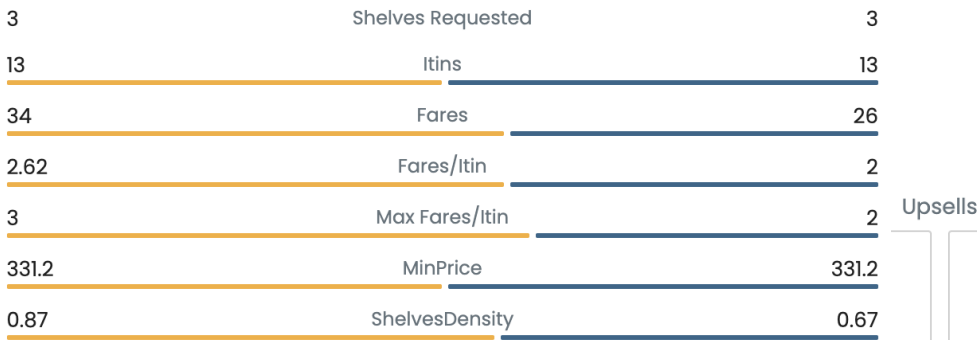Airlines' Offers by Market/Zones (i.e. supply)

- By Carrier
- By Brand
- By Cabin

Ancillaries

Note: Despite not being directly used in the model today, we use a lot of internal data to validate our hypotheses & fine tune the shelf modeling. In the near future, we intend to track conversion & upsell rates to better improve the model itself.

Brand representation report

Carrier	Brand	MultiBrand BFM	NAS
XX	What You Get Is What You See	89%	89%
	Simply The Best	97%	97%
	I Might Have Been Queen	70%	65%
	Paradise Is Here	60%	20%
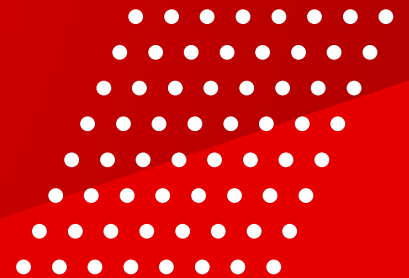
3	Shelves Requested	3
13	Itins	13
34	Fares	26
2.62	Fares/Itin	2
3	Max Fares/Itin	2
331.2	MinPrice	331.2
0.87	ShelvesDensity	0.67

Upsells

1   1.16

1   2   3

sideB

1.62

1

1   2

DEMO

Q&A

FEEDBACK
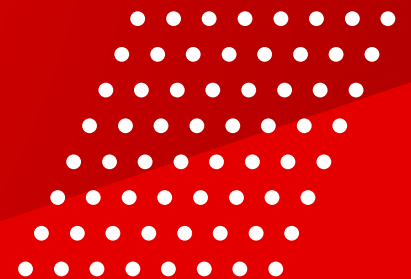
Have a suggestion for the next Virtual Developer Bench? Looking to provide feedback?

Contact us at VirtualDeveloperBench@sabre.com!