



Passenger Distribution and Sales





Welcome

Chuck Fischer

Managing Director, Carrier Services
ARC





Case Study: Leveraging Distribution Data through Intermediary Providers

Thomas Gregorson
VP Products & Solutions,
ATPCO



Case Study: Leveraging Distribution Data Through Intermediary Providers

Tom Gregorson
Vice President, Products & Solutions

atpco

Data makes the world go round

NO PLAYERS		POS.	1	2	3	4	5	6	7	8	9	10	11	AB	R	H	RBI		
2	Spaw	3	K		P4			B4		F7									
11	Kingston	5	F8		24			643		F									
34	Harper	7	?			63		F7			14								
6	Bertrand	5	F7			K			P4		B8								
4	Ross	6		14					F7		14								
23	Rivera	7		F8			K		4			K							
28	Dezma	6		4P				6		K		K							
3	Escobar	4		P3				B4			9								
41	Ross/Miller	1			43			F9											
23	Rivera/Wilson	1																	
53	Hill	1																	
TOTALS		R	H	0	1	0	0	0	0	0	0	0	0						
PITCHERS		IP	H	R	ER	BB	SO	RESERVES											
Ross		5	6	3	3	0	4	NO. PLAYER		NO. PLAYER									
Rivera		3	0	0	0	1	2												
Hill		1	1	1	1	1	2												

NATIONALS

Data makes the world go round

Big Data: From Buzzword to Business Benefits [Infographic]
by Laura Foster | May 18, 2017 | 1,712 views

We all know the term "Big Data," but is bigger always better? What benefits does Big Data actually bring to companies?

Card primer Colourful compiled data from a study by the Business Application Research Center into an infographic that illustrates the benefits of Big Data, including how it's being used, and some barriers to adoption.

The findings include the following:

- Some 40% of companies world-wide use Big Data analytics, citing benefits such as the ability to make better strategic decisions and improved control of operation processes.
- In 61% of companies where Big Data initiatives are a part of integrated business processes, senior management is the primary driver.

“Some 40% of companies worldwide use Big Data analytics, citing benefits such as the ability to make better strategic decisions and improved control of operation processes.” (May 2017)

tnooz

ARTICLES ABOUT ADVERTISE EVENTS

SEARCH

UPCOMING EVENTS

TRENDING ARTICLES

Airlines - time to catch that missed data connection
5/18/2017

The vast majority of retailers including airlines and airports agree: data is a necessary business enabler to master.

“The vast majority of retailers, including airlines and airports agree: data is a necessary business enabler to master. Thanks to data, airlines can dynamically tailor and perfect personalized digital experiences that increase customer satisfaction and yield, while simultaneously reducing integration and operational costs. But that data is only useful when it is complete, reliable and instantaneous.” (Sept. 2017)

Core Tenets

- Comprehensive coverage
(no major data gaps causing inaccurate analysis)
- Real-time content
- Various data sources that cover the customer's journey and usage
- Processing to normalize, align, and integrate the data appropriately
- Data cleansing and protection
(data ownership, legal, and commercial)

Comprehensive: Fares

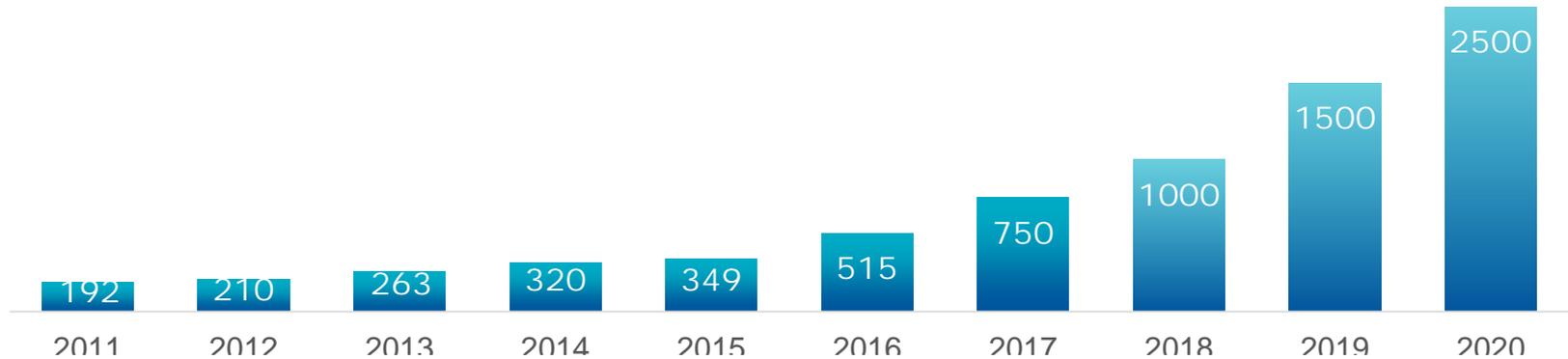
87% of all prices – Over 40% growth in last 5 Years



Timely Data

Growth triples the volume within the next 3 years

Hourly updates – 3.9M updates per day



Average (in millions) weekday subs recorded

Various Data Sources

	2006	2009	2015	2017
Carrier-Imposed Fees (2005)	282	336	328	348
Ticketing Fees (2007)	N/A	24	92	121
Optional Services (2008)	N/A	14	137	201
Branded Fares (2009)	N/A	1	18	94
Baggage Allowance and Charges (2011)	N/A	N/A	397	418

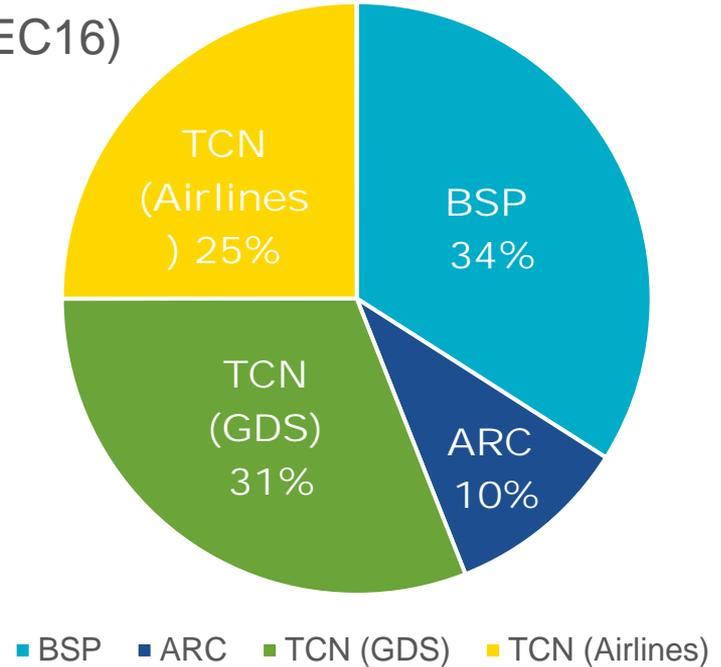
Various Data Sources: Industry Sales Record (ISR)

1.3 billion ticket sales (from 01JAN16 to 31DEC16)

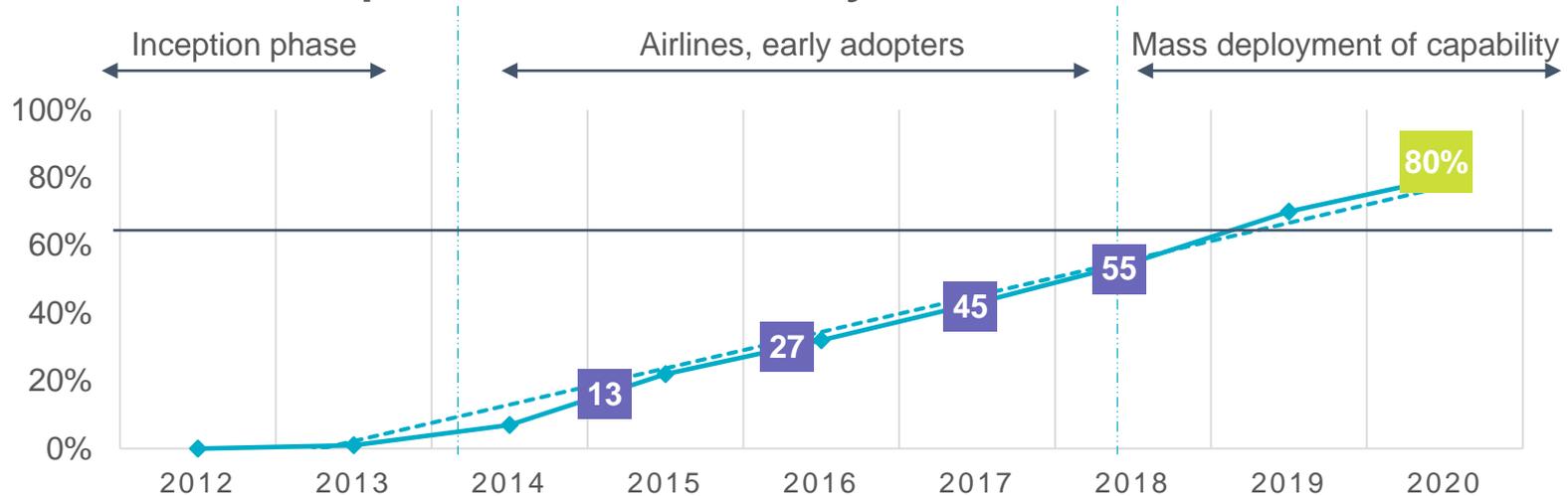
122 customers

77 providers

Over 1.7 million EMDs a month



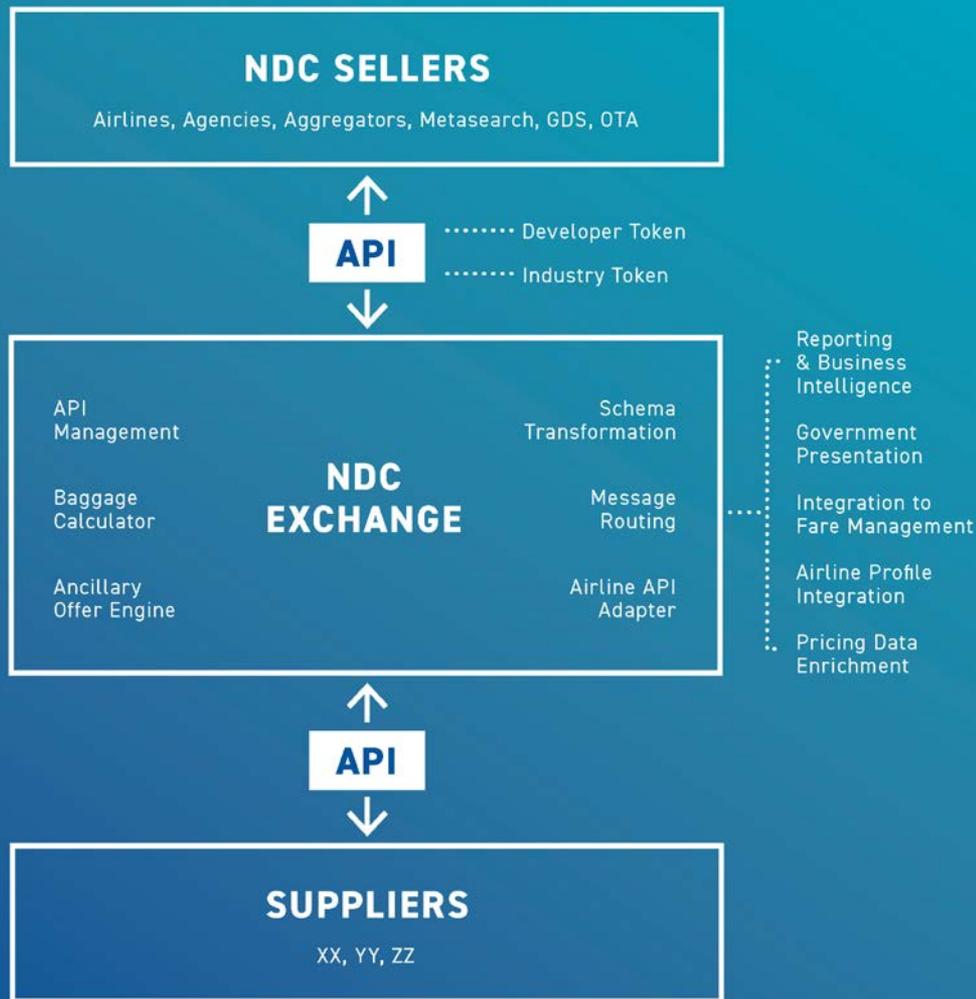
Various Data Sources: NDC: 45 capable airlines by 2017



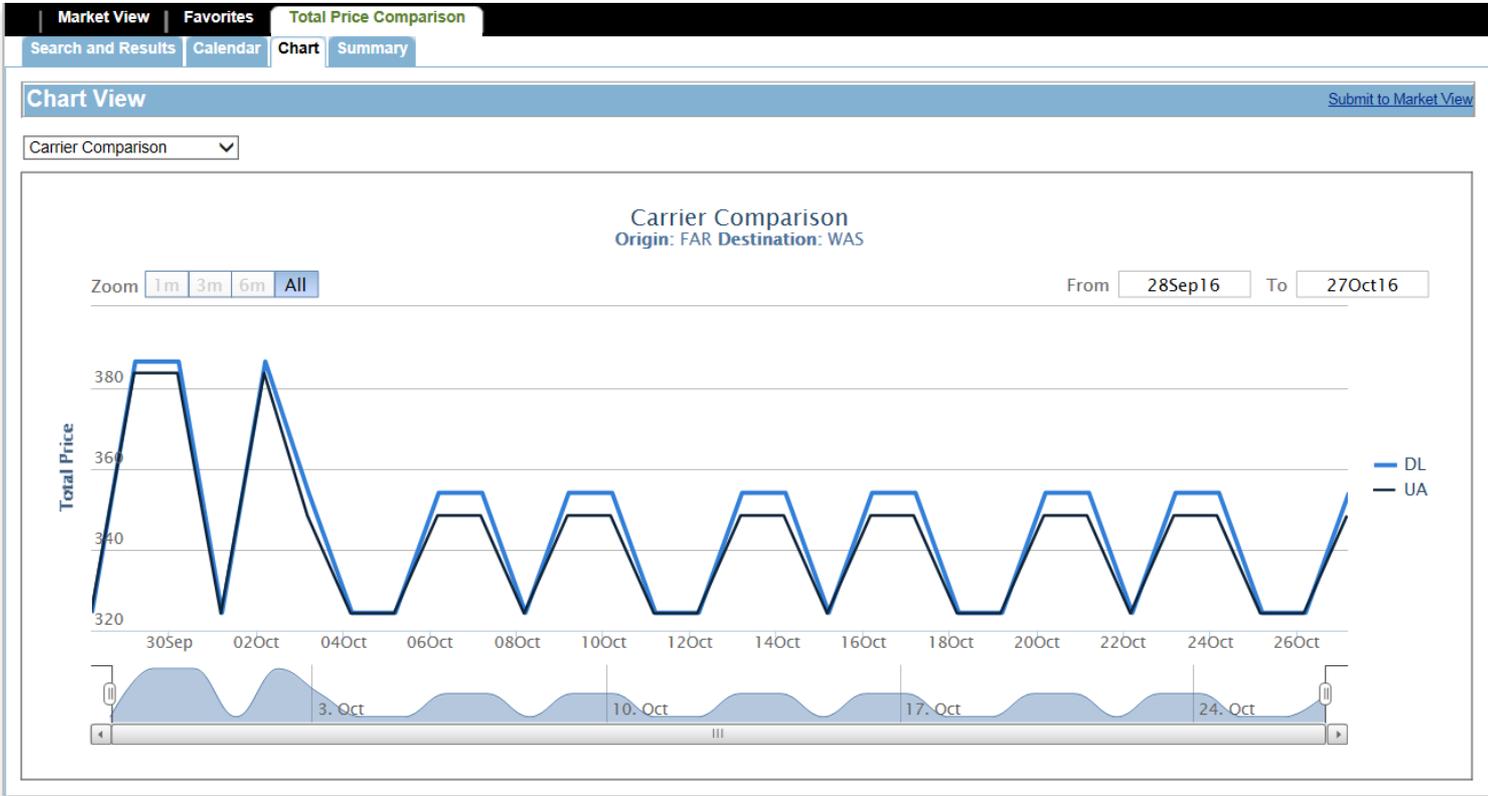
- Airline share of total passenger boarded
- - - Linear (Airline share of total passenger boarded)
- Total Number of NDC capable airlines
- Weight of IATA NDC capable airlines in % of passengers carried Total

Source: IATA

Various Data Sources: NDC Exchange

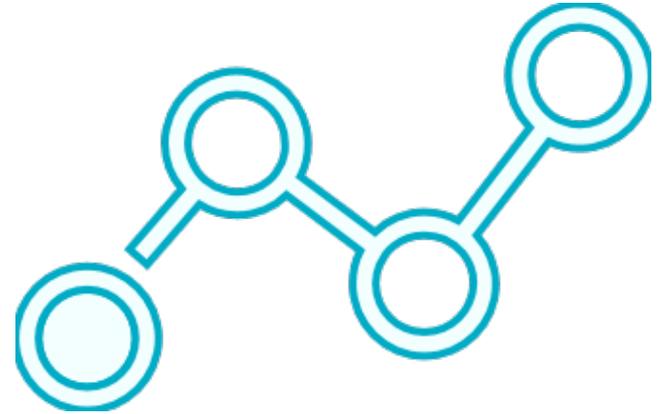


Data Processing



01 / Case Studies

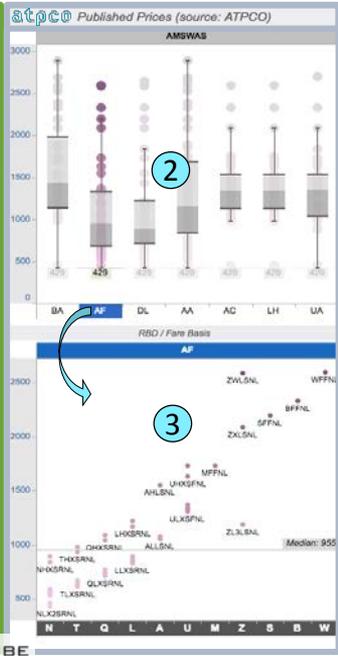
- Moving from historical pricing to current and onto future pricing – for estimation on market demand, performance, or what needs to be the dynamically generated price
- Marrying published price with available price to determine what is actually on the “shelf” and what is in the “warehouse”
- Merging different data sources: sales data with fares data



02 / Case Study

INFARE Available prices (source: INFARE)

	BA	AF	DL	KL	LH	SK	UA
13/11/2017	1,809	1,058	960	967	960		960
14/11/2017	1,059	993	945	955	945		945
15/11/2017	1,509	993	945	952	945		
16/11/2017	1,221	1,077	975	985	975		
17/11/2017	1,224	1,383	1,025	987	975		975
18/11/2017	976	1,938	975	985	975		
19/11/2017	1,059	9	945	955	945	854	945
20/11/2017	1,184	6	880	890	880		880
21/11/2017	909	871	865	875	865		865
22/11/2017	909	1,088	865	875	865		865
23/11/2017	939	983	895	902	896		
24/11/2017	989	901	895	902	896		
25/11/2017	1,784	901	895	905	895		895
26/11/2017	1,769	1,163	1,180	1,027	1,015	757	865
27/11/2017	1,469	1,103	880	887	971		880
28/11/2017	1,019	871	865	875	865		865
29/11/2017	869	871	865	872	865		865
30/11/2017	899	901	895	905	895		895
01/12/2017	899	901	895	902	895		895
02/12/2017	899	941	895	905	895		895
03/12/2017	909	871	865	872	865	671	865
04/12/2017	881	928	880	887	880		880
05/12/2017	869	871	865	875	865		865
06/12/2017	869	953	905	875	865		865
07/12/2017	989	1,029	985	910	935		895
08/12/2017	1,199	1,214	1,480	1,130	1,045		1,045
09/12/2017	1,124	1,097	1,480	1,055	985		895
10/12/2017	1,019	917	905	915	905	632	865
11/12/2017	974	932	970	895	920		
12/12/2017	1,094	911	1,165	920	905		
13/12/2017	1,119	1,134	1,715	1,055	1,115		
14/12/2017	1,074	1,047	2,230	1,221	995		
15/12/2017	1,434	1,164	1,145	1,155	995		
16/12/2017	1,164	1,388	885	895	975		
17/12/2017	909	903	764	774	1,040		
18/12/2017	1,059	876	779	789	921		
19/12/2017	768	770	764	774	764		
20/12/2017	999	1,277	764	774	765		



ON THE SHELF

① How are my available “on the shelf” prices today versus my competitors ?

Am I Lower/Matching/Higher than my competitors?

IN THE WAREHOUSE

② What is the spread of published prices “in the warehouse” for myself and my competitors ?

③ How are these published prices nested per RBDs and what are their related Fare Basis?



03 / Case Study

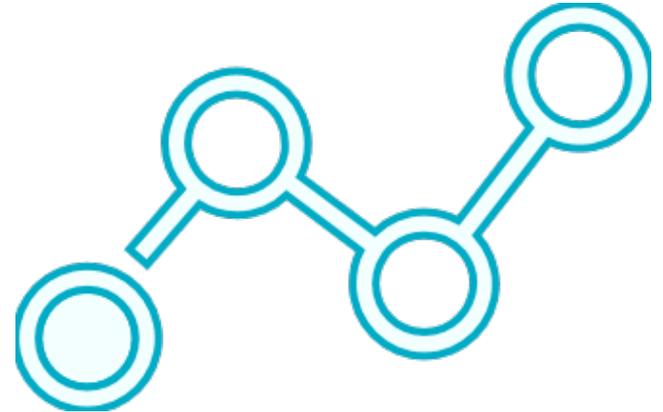
Merging different data sources:
Sales data with fares data

As a manager in revenue management, I want to reduce costs and increase revenue by determining the optimum number of fares in markets. To accomplish this, I want to know what fares are selling or not selling at any given time.

When this analysis was run for one tariff for one airline, during the sampling period, the following information was reported

- There were 2.8 million unique specified fares across 47,000 directional market pairs
- 72% of the directional market pairs had no sale
- Of the markets without sales, there were 51 fares per market
- Of the markets with sales, there were on average 83 fares per market and 91% of fares in these markets were unsold

Data used for this analysis:
Fares, Fare Class, Rules, and Sales data



How Do We Move Forward?

- Data Ownership
- Data sharing/comprehensive data
- Open API
- Data usability (data dictionaries, data cleansing, data normalization)
- As an industry, we need to look at what governance and mechanisms we need so we can have the right data at the right place at the right time



atpco

atpco.net



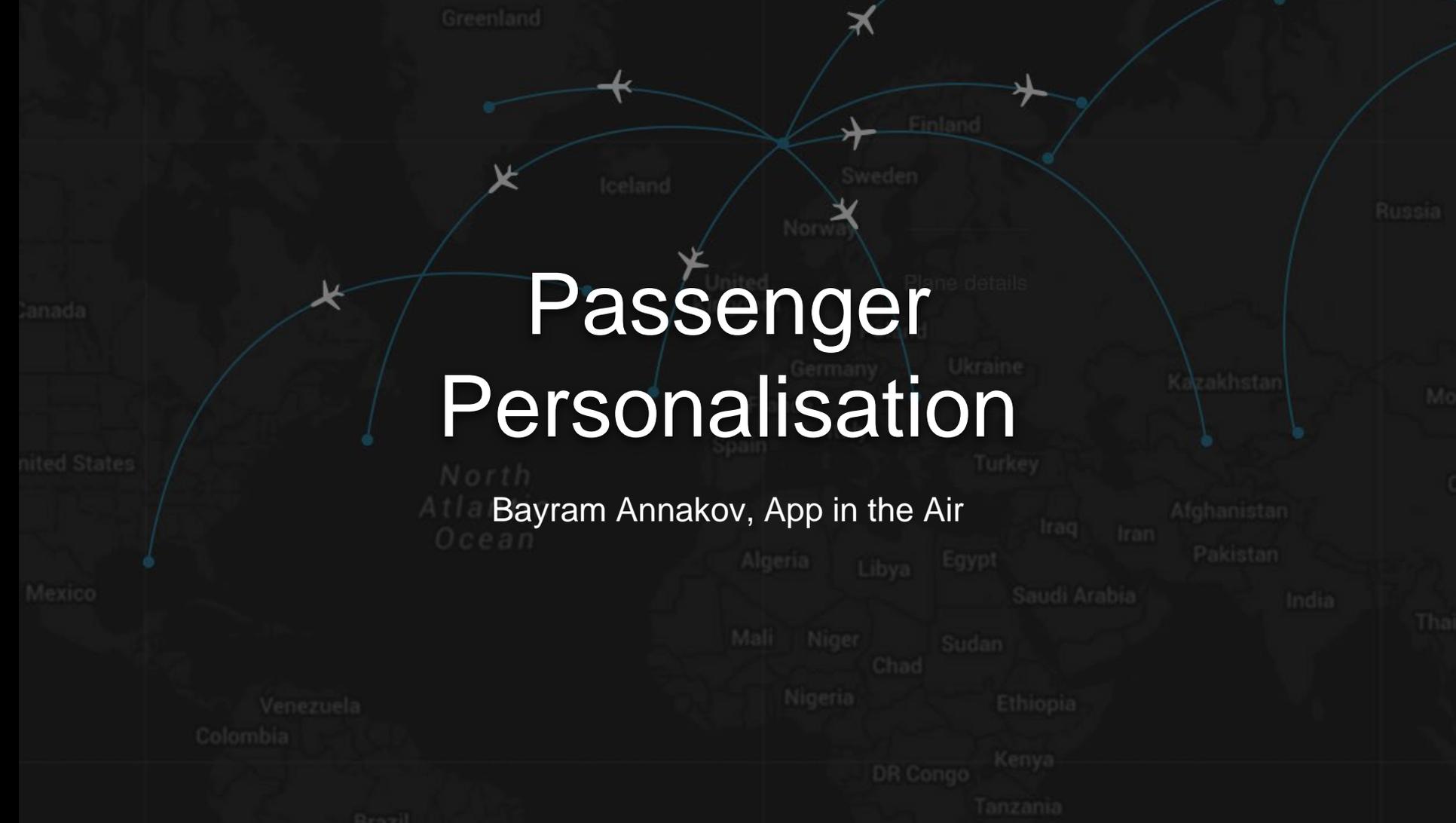
Passenger Personalization, How Do We Get There?

Bayram Annakov

CEO

App in the Air



A world map with a dark background and a light grid. Several curved lines represent flight routes, with small airplane icons placed along them. The routes are concentrated in the North Atlantic and Europe. The text 'Passenger Personalisation' is centered over the map in a large, white, sans-serif font.

Passenger Personalisation

Bayram Annakov, App in the Air

“personalisation is like teenage sex:
everyone talks about it,
nobody really knows how to do it,
everyone thinks everyone else is doing it,
so everyone claims they are doing it...”

–Anonymous

Traveler's data is fragmented, duplicate and insecure



airline



GDS



OTA



TMC



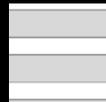
car rental



metasearch



ride sharing



tours & activities



hotel



Airline

OTA

GDS

Metasearch

Tours & Activities

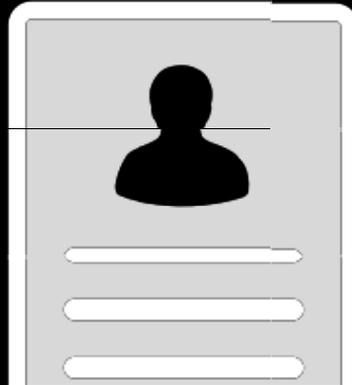
Hotel

Ride sharing

TMC

Car rental

Traveler's Data



Itineraries

Loyalty programs

Travel preferences

Documents & visas

Payment data

Users are ready to share
data if they benefit



Email Import



50%

Use Case 1

Look-to-Book

The screenshot shows a mobile application interface for booking flights. At the top, the status bar displays 'Carrier', signal strength, '11:13 AM', and battery level. Below this is a navigation bar with a back arrow, the text 'Shop', and the route 'JFK — LHR'. A filter bar contains three options: 'Stops' (selected), 'Time', and 'Airlines'. The main content area is titled 'Recommended for you' and lists seven flight options. Each option includes the airline logo, the route 'JFK — LHR', the departure and arrival times, the flight duration and route type, and the price.

Airline	Route	Departure	Arrival	Duration	Route Type	Price
Aeroflot	JFK — LHR	7:10 PM	8:00 AM	31 h 50 min	SVO	\$399
Iberia	JFK — LHR	10:15 AM	10:10 PM	6 h 55 min	Direct	\$347
Iberia	JFK — LHR	5:30 PM	10:30 AM	12 h	DCA, IAD	\$351
Iberia	JFK — LHR	8:59 PM	7:25 PM	17 h 26 min	BOS	\$351
Iberia	JFK — LHR	5:45 PM	11:35 AM	12 h 50 min	BCN	\$361
Iberia	JFK — LHR	9:35 PM	6:20 AM	27 h 45 min	DCA, IAD	\$362
Iberia	JFK — LHR	5:00 PM	12:15 PM	14 h 15 min	MAD	\$362

Use Case 2

One-click Checkout



eCommerce



Social



mCommerce



Travel

Unique passenger !=
Passenger

Use Case 3

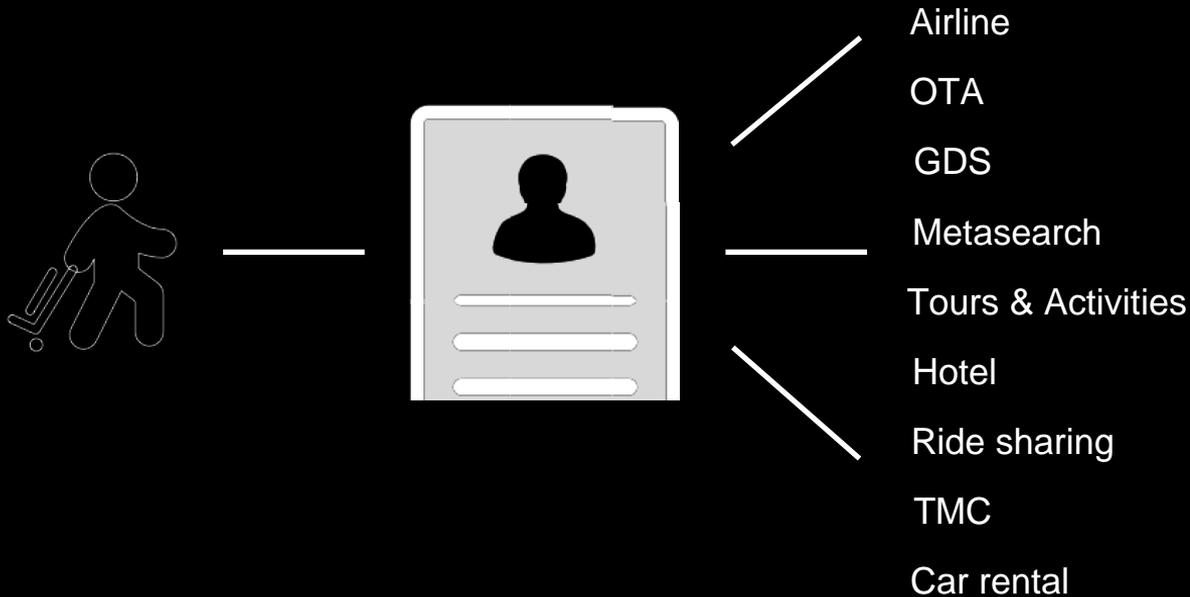
Retention Analysis

Quarter First Used	+1	+2	+3	+4	+5	+6
Q1, '16	23 %	21 %	25 %	12 %	7 %	5 %
Q2, '16	22 %	27 %	14 %	11 %	9 %	
Q3, '17	27 %	22 %	12 %	7 %		
Q4, '17	7 %	5 %	3 %			

Impact on

- **Customer acquisition** - use look-a-like to attract returning customers
- **Competitive intelligence** - MIDT data is useful, but lacks direct bookings info, so it could be enriched by data from the registry

Single registry of traveler's data with authorised access





The Role of Intermediary Providers in Improving Customer Visibility

Slido.com # ADSPAX

Moderator

- Gary Doernhoefer, Former IATA and Orbitz General Counsel

Panelists

- Gianni Cataldo, Director of R&D, Business Development, ATPCO
- Bayram Annakov, CEO, App in the Air
- Emmanuel de Lassagne, Head, Commercial Solutions, Accelya
- Jeremy Jameson, CCO, 3Victors





The “Who is Who” in the Passenger Journey

Frederic Leger

Director, Airport, Passenger, Cargo and Security, Products

IATA





Why do passenger document check?

Airlines must ensure that **each passenger** has sufficient travel documents for their destination and transit points...





How **Document Check** works?





Timatic – An Immigration Regulations database

Passport



Visa



Health



Customs



Currency



Airport Tax



- All nationalities
- All destinations
- All transit points
- All airports



100%
checked





Itinerary Details

- Departure Point
- Departure Date
- Destination Point
- Destination Arrival Date
 - *Duration of Stay*
- Destination Return/Onward Ticket
- Transit Point(s)
- Transit Date & Time
- Operating Carrier

Document Details

- Nationality
 - *Residence Country*
 - *Birth Country*
- Document Expiry Date
- Date of Birth
- Document Type
 - *Document Group*
- Document Issue Country
- Gender
- Passport Series
- Document Feature
 - *Stay Type*





Itinerary Details

- Departure Point
- Departure Date
- Destination Point
- Destination Arrival Date



NOT OK



OK



VISA REQUIRED

- Document Type
 - Document Group
- Document Issue Country
- Gender
- Passport Series
- Document Feature
 - Stay Type





Mining Timatic Data with Timatic Analytics

.....

- ✔ Optimize Self-Service Solutions
- ✔ Improve Operational Processes
- ✔ Identify Solution Enhancements
- ✔ Boost Targeted Marketing





How does **Timatic Analytics** work?



Manual Operation: The aim is to reduce the **No** and **Conditional** responses

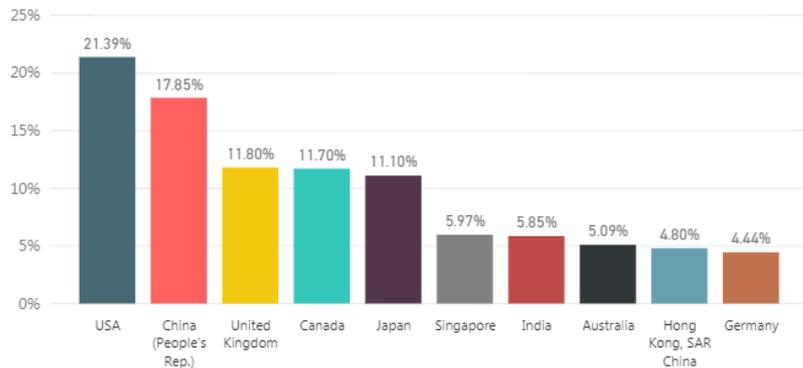


Airport **BKK**

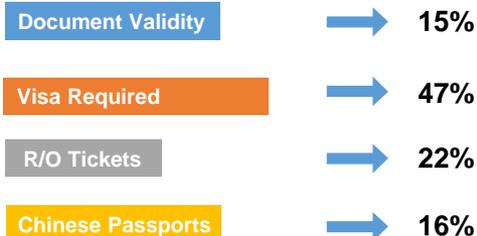
Destination **Thailand**



Nationality Ratio



Reason Category



Send
Passport
Series

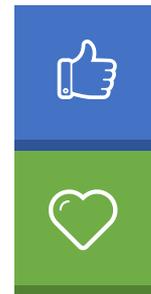




57%



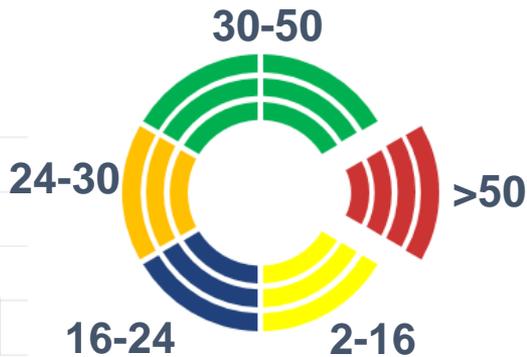
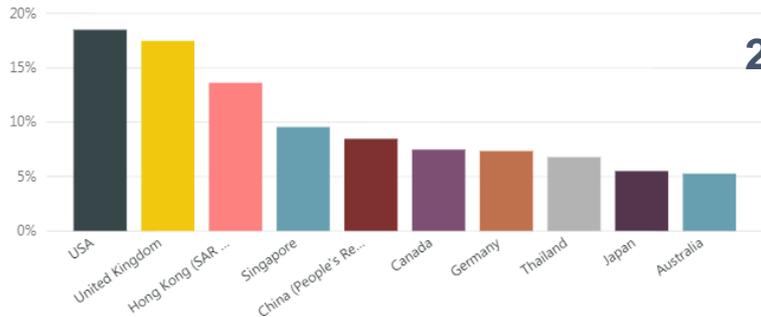
43%



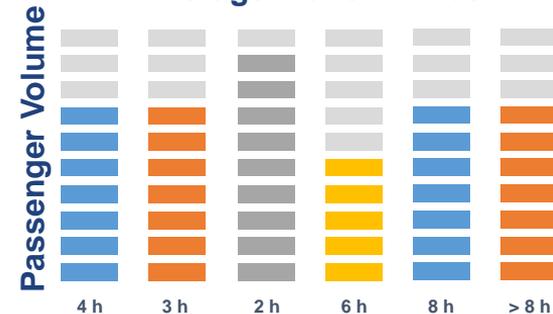
Business **26%**

Leisure **74%**

Destination Country Ratios

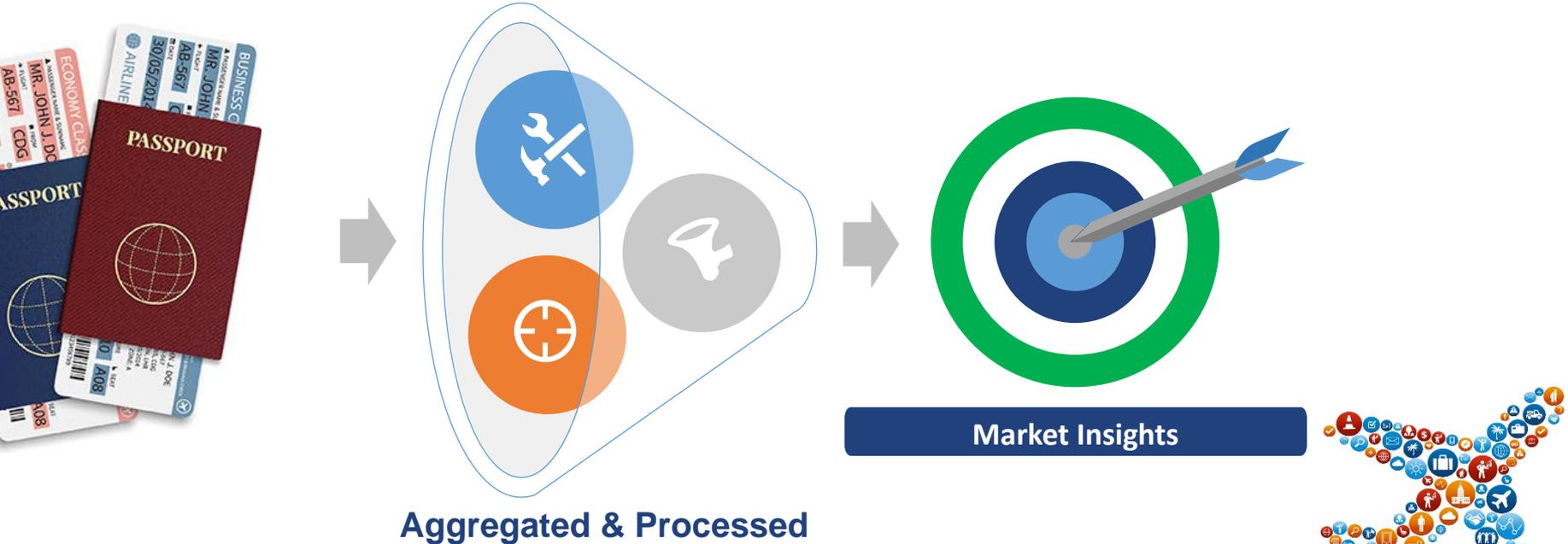


Average Transit Times





What is Timatic – Big Data?





Who can benefit from Timatic - Big Data?

	Nationality	Gender	Age	Transit Info	Stay Duration	Residence	Volumes
Tourism Offices	✓	✓	✓	✗	✓	?	✓
Travel Agencies	✓	✓	✓	✗	✓	✓	✓
Airports	✓	✓	✓	✓	?	✓	✓
Retailers	✓	✓	✓	✓	✗	✓	✓
Airlines	✓	✓	✓	✓	✓	✓	✓
Policy Makers	✓	✓	✓	✗	✓	✓	✓

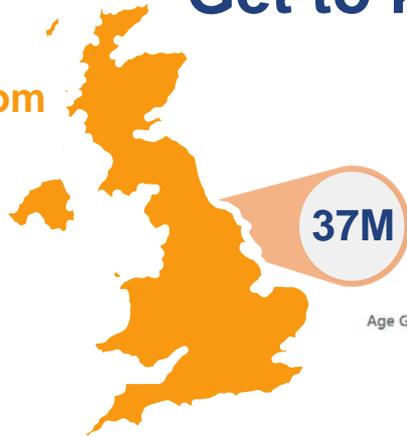
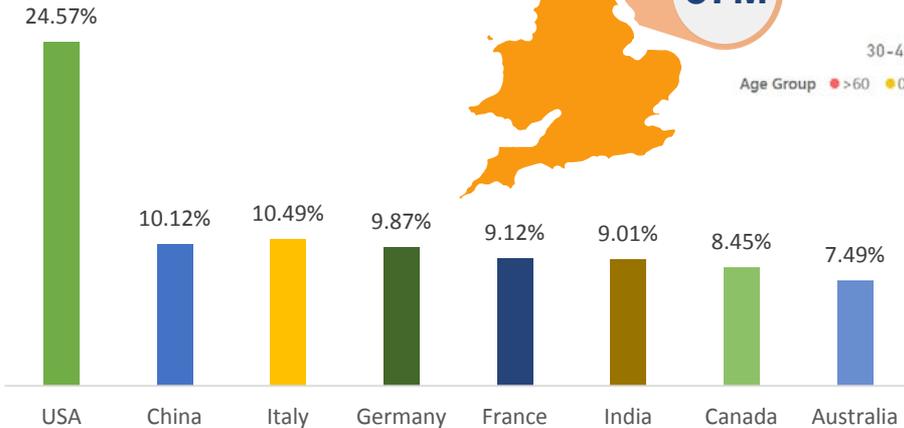




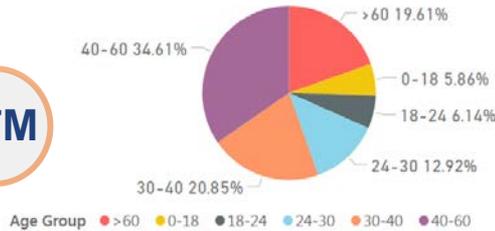
How can **Tourism Offices** utilize **Timatic Big Data**? Get to know your **visitors!**

Destination **United Kingdom**

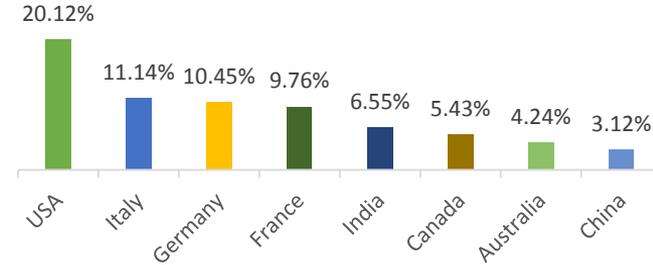
Nationality Ratio



Age Group Ratio



Residence Country Ratios



Business 26%

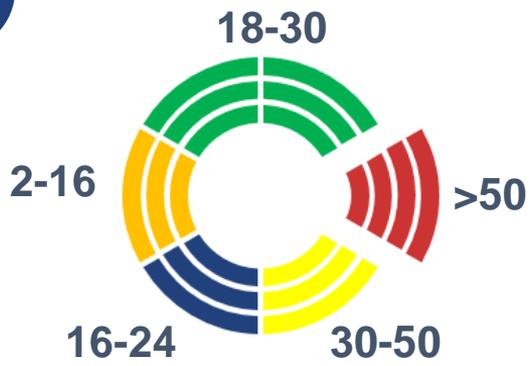
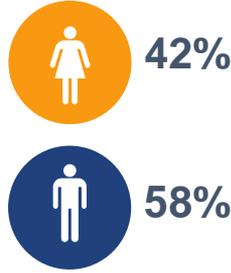


Leisure 74%

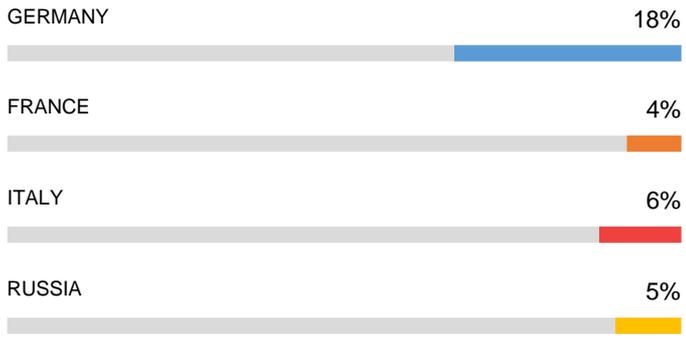




How can Travel Agencies utilize Timatic Big Data? Get real insights into passenger demands!

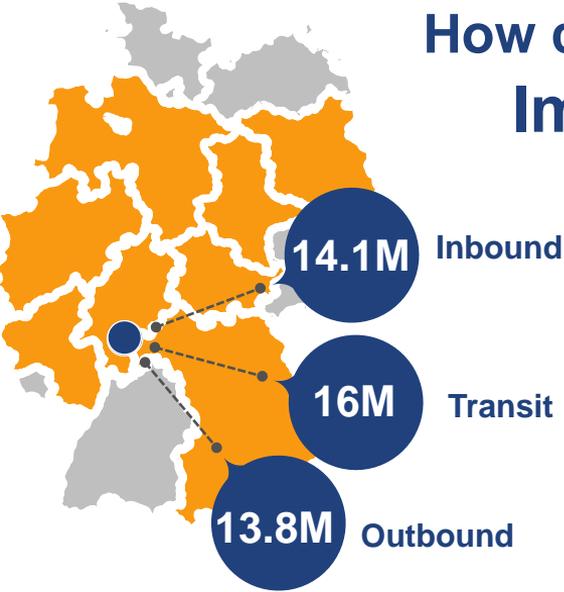


Country of Residence Turkey

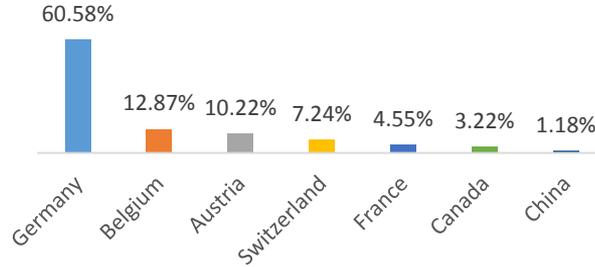




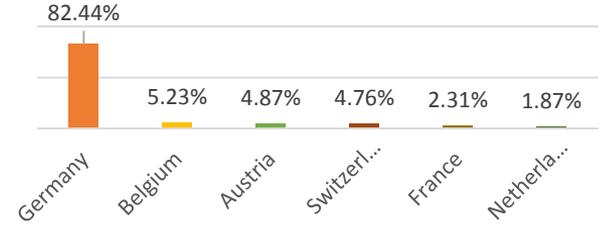
How can **Airports** utilize Timatic Big Data? Improve your **catchment area!**



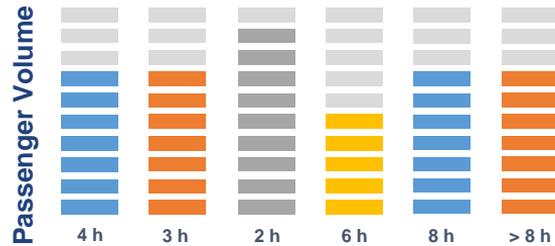
Nationality Ratio



Residence Country Ratio



Average Transit Times



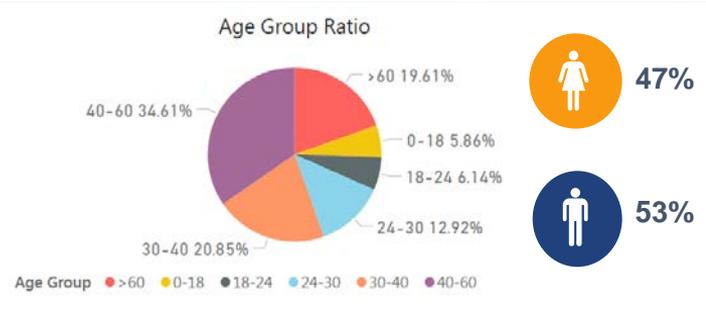
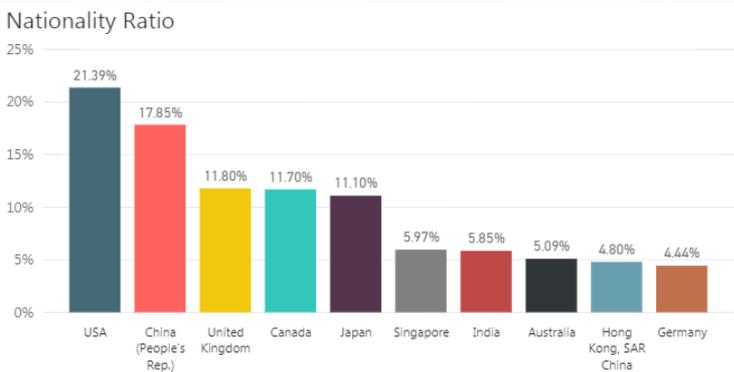
56%
Male Passengers

44%
Female Passengers





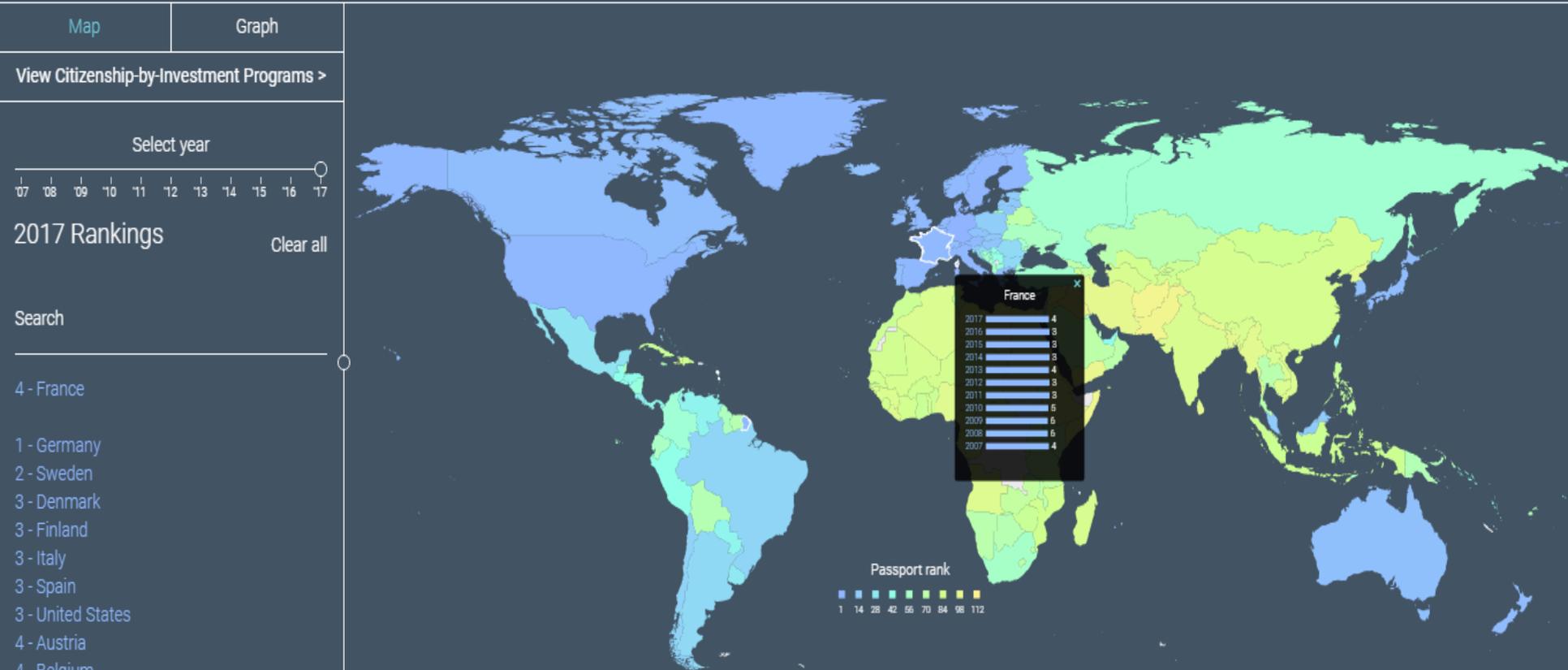
How can **Retailers** utilize Timatic Big Data? Utilize **demographics** to better target your customers!



The QNI from *H&P Henley & Partners* ranks the “quality” of nationalities worldwide using internal factors (e.g. scale of the economy, stability) and external factors (e.g. visa-free)



Timatic data is used as the basis of QNI and combined it with economic indicators it determines which passports grant the holder maximum access to countries





Thank You!



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Aviation Data Symposium 2017



Assembling the Personalization Puzzle: Unveiling the Value of Data Aggregation

Tim Lum

Head of Data and Insight
Virgin Atlantic Airways Ltd





Assembling the Personalization Puzzle: Unveiling the Value of Data Aggregation

Tim Lum
Head of Data and Insight
Virgin Atlantic

 www.linkedin.com/timothylum
 timothy.lum@fly.virgin.com



Head of Data and Insight
Virgin Atlantic

Current Obsessions:



Airbus A350-900



Singapore Changi



LGW - HAV



Airplane Enthusiast

Business Economist

Statistical Sociologist

Marketing Technologist

Data Nerd

Travel Geek

Marketing Innovator

Commercial Leader



55 countries



47 states



So who is your customer, and what do they want?

Beth and Ian Wilkinson

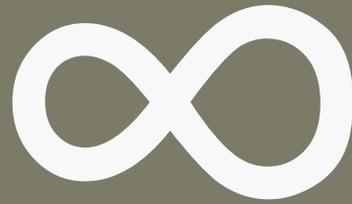


- Traveling from Manchester to San Francisco
- They are going for two weeks
- Beth is British, Ian is Irish
- Beth is in Seat 34K, Ian is in 44J
- One PNR E4JPYD
- Both are 28 year olds
- And have purchased their ticket from Expedia

Beth and Ian Wilkinson



How many incorrect assumptions have you made from the PNR data?

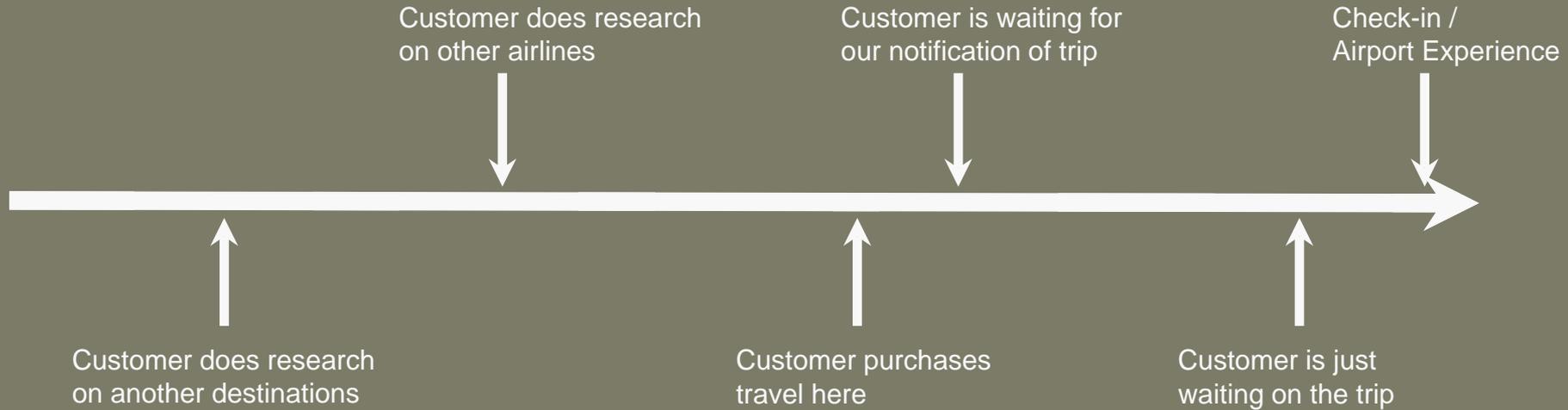


Beth and Ian Wilkinson

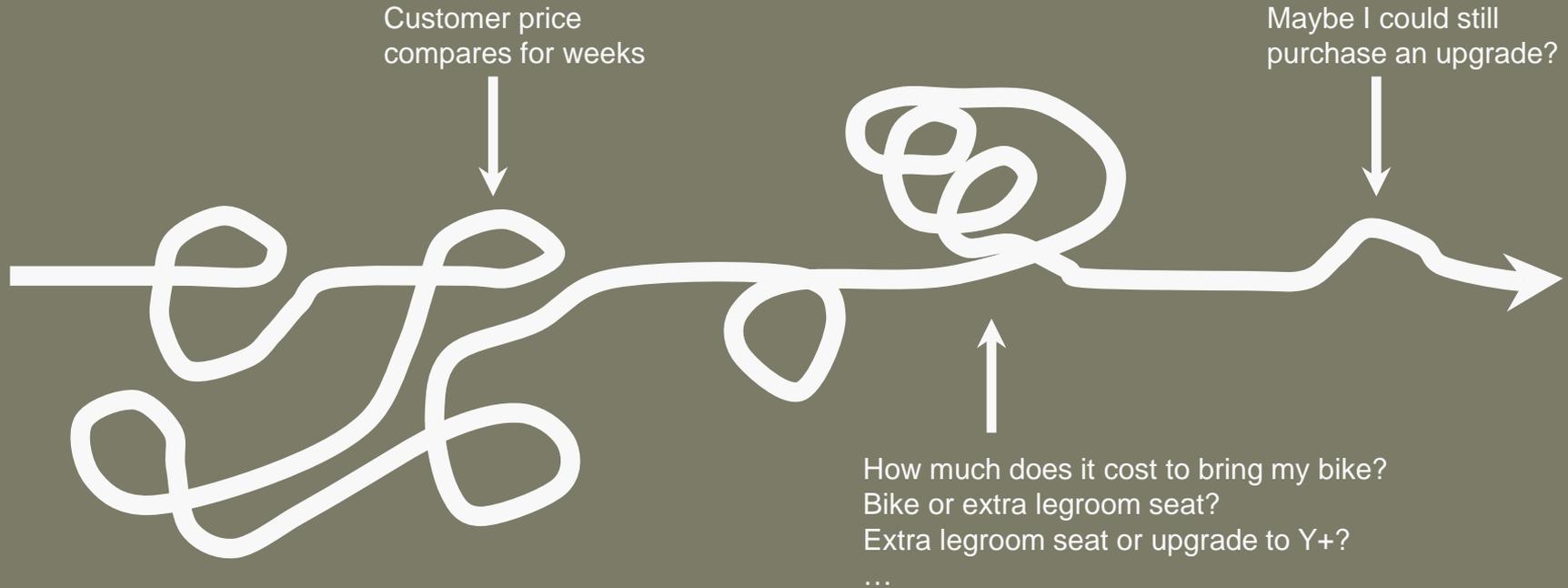


- Beth is actually lives in Amsterdam
- They aren't a couple nor related but have the same family name
- They are on a work trip to SFO for the same company
- Beth telecommutes from Amsterdam for their company in Manchester
- She is also a frequent flyer member of another airline
- And... Is Ian's boss.

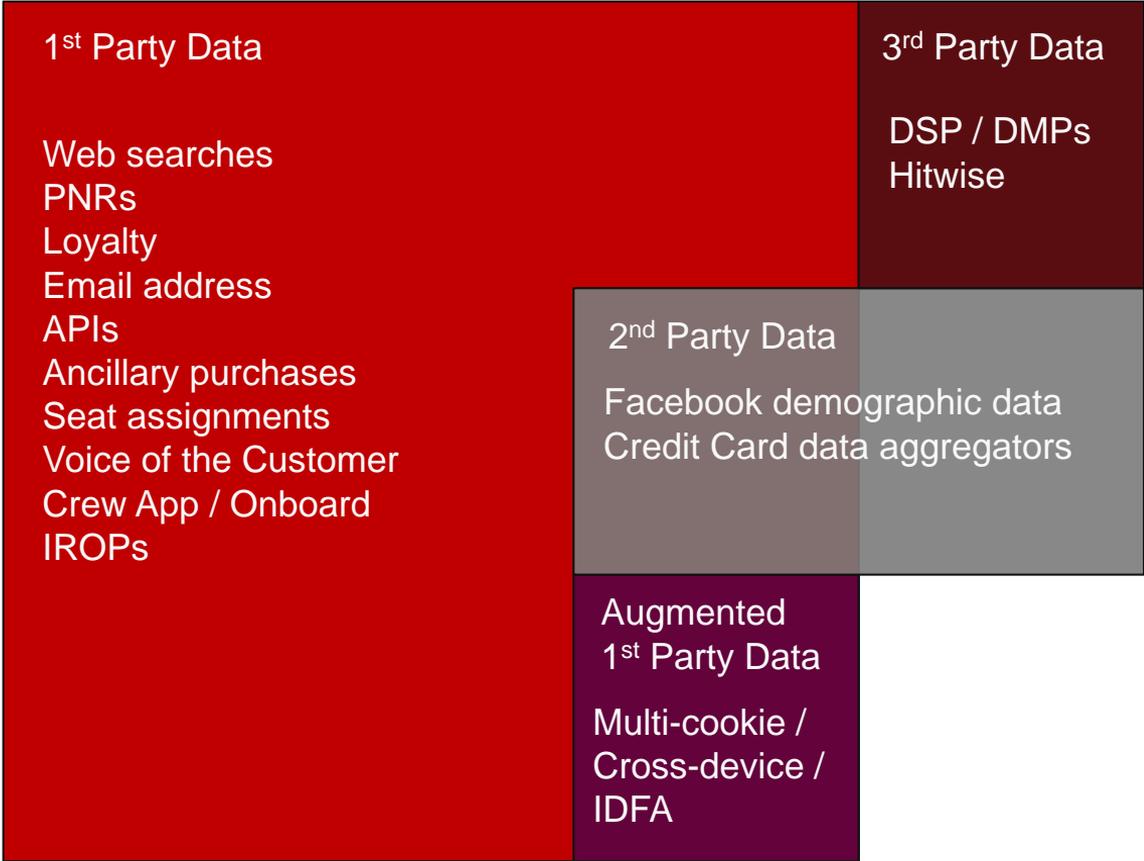
Our presumed customer journey



The real customer journey



The Marketer and Advertiser Data Landscape for Airlines



1st Party Data



1st Party Data

Do you think Customer, not Department?

Customer ID

{
PNRs
Email address
IROPs
VOC
Call Centre
Crew Apps

1st Party Data

What do you use today to aggregate your customer information?

1st Party Data

150%

increase in customer identification using email@ddress

Augmented 1st Party Data



Augmented 1st Party Data

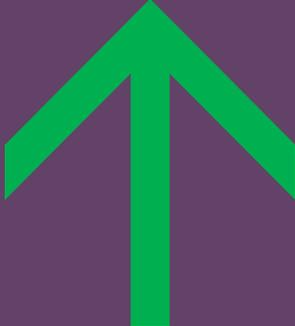
30%

of all conversions had a multiple device path

Augmented 1st Party Data



Augmented 1st Party Data

50% 

of customer information after stitching multiple cookies

2nd Party Data



2nd Party Data



2nd Party Data



Audience Insights

(New Audience)
2.5m - 3m monthly active people

People on Facebook
Country: United States of America

Demographics | **Page Likes** | Location | Activity | Household | Purchase

Top Categories

1	Athlete	Kara Goucher • Fitness Model/Writer Jamie Eason
2	Recreation/Sports	Running on the Wall • RunHaven • I <3 to run
3	Outdoor Gear/Sporting Goods	Brooks Running • Altra Running • REI
4	Sports Event	The Boston Marathon • Ragnar Relay Series • Spartan Race • IRONMAN
5	Sports/Recreation/Activities	Eat To Perform • Hot Chocolate 15K & 5K
6	Health/Wellness	Favorite Run • The Betty Rocker • BodyRockTv
7	Health/Beauty	Fitness World
8	Sports League	The CrossFit Games
9	Baby Goods/Kids Goods	The Land of Nod
10	Company	Rock 'n' Roll Marathon Series • Active.com • Rogue Fitness • Nike+ Run Club

See All

2nd Party Data



Login with Facebook

User Data

Read Permissions - User Attributes

- `email`
- `public_profile`
- `read_custom_friendlists`
- `user_about_me`
- `user_birthday`
- `user_education_history`
- `user_friends`
- `user_hometown`
- `user_location`
- `user_relationship_details`
- `user_relationships`
- `user_religion_politics`
- `user_work_history`

Read Permissions - User Activity

- `user_actions.books`
- `user_actions.fitness`
- `user_actions.music`
- `user_actions.news`
- `user_actions.video`
- `user_games_activity`
- `user_likes`
- `user_photos`
- `user_posts`
- `user_tagged_places`
- `user_videos`
- `user_website`

Read Permissions - User Events and Groups

- `user_events`
- `user_managed_groups`

2nd Party Data



Customer Data Enhancement

- Share of Wallet
- Category Spend Propensity Score
- Share of Visits
- Discretionary Spend Index
- Advanced Buyer Segment

In Summary:

- Don't look past the power of your own data, stitch it together!
- Think Customer, not Department – each area holds it's own secrets to unlocking customer value
- Augment your data – Cookie / Multi-device stitching
- Facebook and your credit card company are your friends

LIFE DOESN'T
COME TO YOU
SO GO TO IT





The Future of Passenger Data: A Journey or a Destination?

Dominique Perron

Partner

PwC

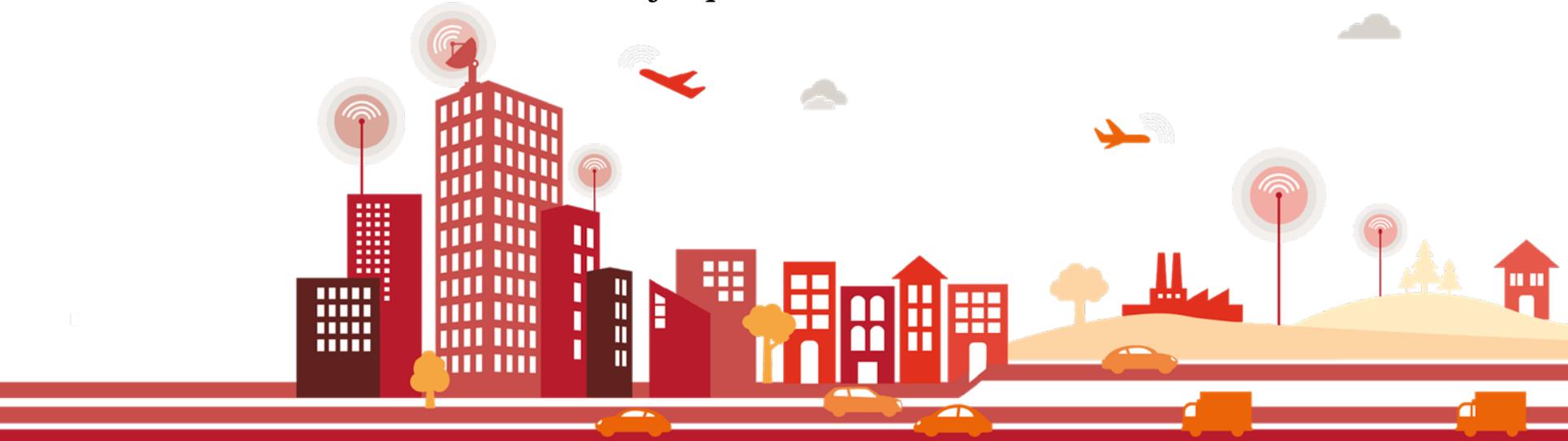


Thursday 16 November 2017



The Future of Passenger Data: a journey or a destination?

IATA, Aviation data symposium, Miami



The use of big data and advanced predictive analytics seem futuristic but it is already a reality.

Are we only scratching the surface of what's possible? 1

What business challenges can big data and predictive analysis solve? 2

How will it drive better and faster performance management models? 3

What should we do today to reap the benefits tomorrow? 4



Challenges in adopting predictive analysis and AI techniques



Too Many starting
points



Machine Learning
Magic



Data Everywhere
But Not Really
Usable



Too Many Tools,
Techniques,
Vendors



Bias-Prone



Difficult to Explain



With No Sense of
Morality



With Societal
Disregard

“What is tomorrow’s passengers travel journey and how can I as an airline create value along the entire chain?”

Sample solutions big data and AI can help with ...



Text Analytics



Recommendation System



Cognitive Robotics



Image Analytics



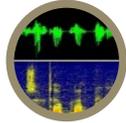
Video Analytics



Chatbot



Virtual Agents



Speech Analytics



Data Visualisation

Are we only scratching the surface of what's possible? **1**

Getting an understanding of what are existing and future big data and AI enabled applications will help provide a holistic perspective of where and how airlines can create or enhance value.

Three global trends are reshaping travel distribution business models and threaten to weaken the connection between airlines and their customers.



Shifting passenger behavior on both retail and business sides



Changing dynamics within direct and indirect sales channels



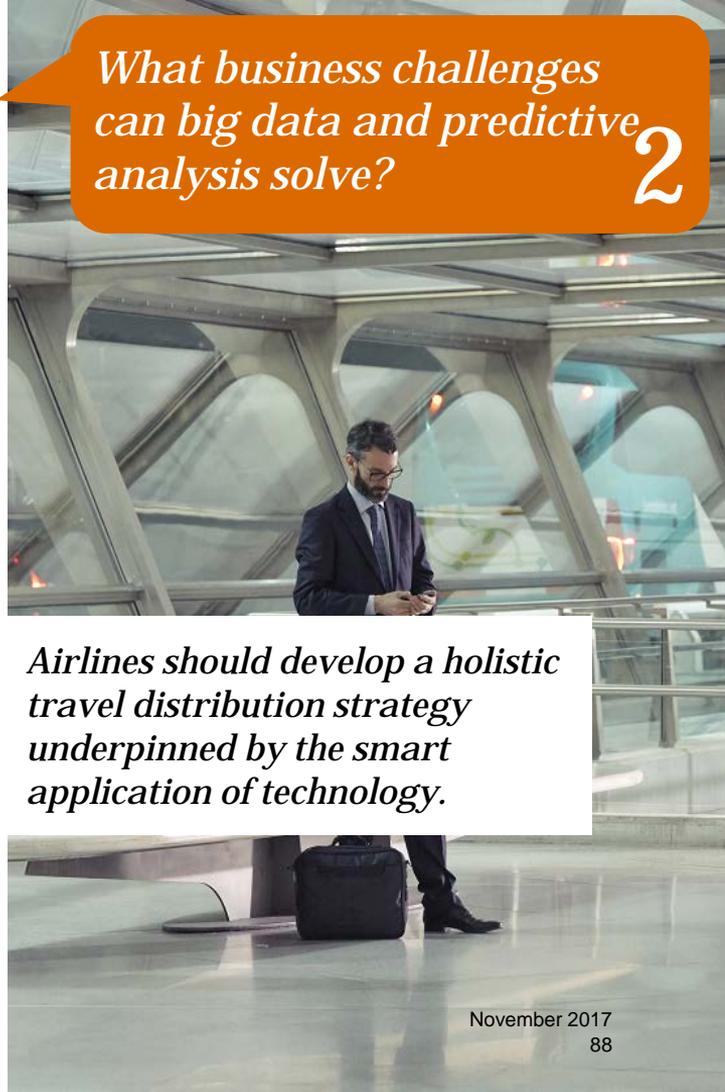
The rise of digital technologies



Airlines should develop a holistic travel distribution strategy underpinned by the smart application of technology.

What business challenges can big data and predictive analysis solve?

2



Shifting passenger behavior (focus on retail travel) – four areas to further explore



The increasing use of online channels for search and booking



The use of multiple devices during the research and booking process



The growing popularity of social media to share first-hand experiences



The increasing relevance of loyalty programs

Connecting with the customer, PwC strategy&

The future of passenger data: a journey or a destination
PwC

What business challenges can big data and predictive analysis solve?

2



Airlines should increase their understanding of how passenger behavior is changing in the retail and corporate sectors.



November 2017

89

An opportunity to strengthen the relationship with the passenger

What should we do today to reap the benefits tomorrow?

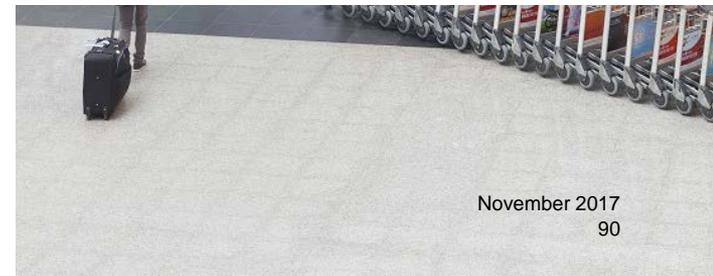
3

Transform the travel distribution business model

Pursue deeper partnerships with channel, content, and technology players

Enhance internal capabilities to engage effectively with customers new distribution trends opportunities

Airlines have an opportunity to strengthen the relationship by offering solutions that personalize travel research and booking across multiple touch points in the direct online channel.



Some application examples in terms of enhancing performance management models

How will it drive better and faster performance management models?

4

Leveraging social media

Dynamic pricing

New travel distribution business model

Connecting with the customer, PwC strategy&

The future of passenger data: a journey or a destination
PwC



November 2017

*The future of direct online is more than selling an
airline's own content.*

***It is about airline's leveraging big data and AI to offer
all the content travelers need for their entire journey.***

But what about TRUST?

Thank you



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The Future of Data: Building the Right Path to Get There Slido.com # ADSPAX

Moderator

- **Marc Rosenberg**, President, STRATACONNEX & Former VP Sales & Product Distribution, Air Canada

Panelists

- **Abhijit Patil**, Senior Director, Customer Analytics & Loyalty Data Management, Air Canada
- **Carolina Campuzano Sierra**, Head of CEM and CRM, Aerolineas Argentinas
- **Paul Chen**, Founder, Visibility .X Consulting
- **Dominique Perron**, Partner, PwC





Passenger Distribution and Sales

