



Transforming business through data-driven personalization

19.06.2018

Marcel Kling, IATA Aviation Data Symposium 2018

Transforming business through data-driven personalization



Marcel Kling

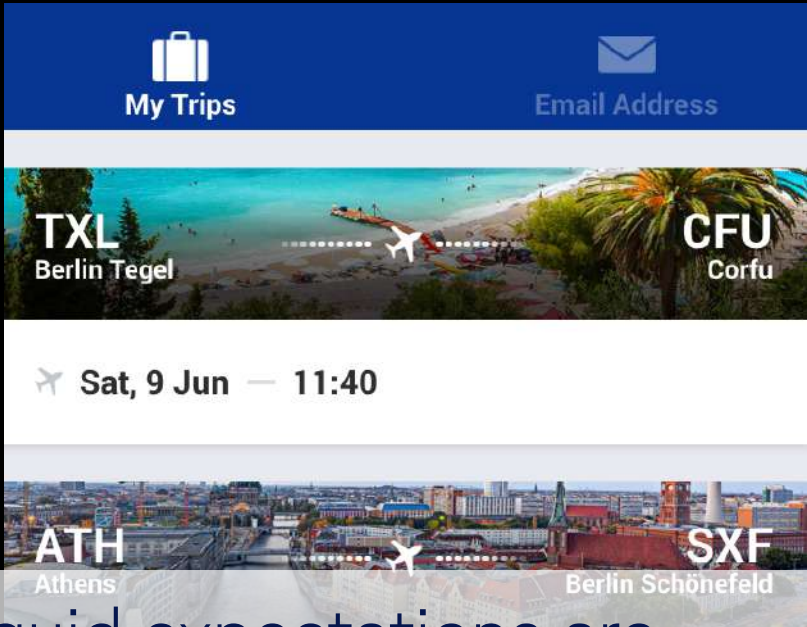
Director
Program Lead Personalization
Program SMILE Lufthansa



The markets of aviation are changing



LUFTHANSA GROUP



Liquid expectations are changing our customers

Playlists made just for you



Your Discover Weekly

Discover Weekly

PLAYLIST • BY SPOTIFY



Your Release Radar

Release Radar

PLAYLIST • BY SPOTIFY

Top recommendations for you



LUFTHANSA GROUP

Digital entrants disrupt competitive arenas

Your **taxi** to airport
arriving in 5 minutes



smile 



...and we respond with a SMILE



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Customers deserve relevance

” Getting information off
the Internet is like taking
a drink from a fire
hydrant.”

Michael Kapor



WAGOOD
TRUST

„...all others, bring data
”

W.E. Deming

Companies need data-driven
decisions

A high-angle photograph of a massive crowd of people at a festival. In the center, a group of people in red and white uniforms has formed a human pyramid. The ground is covered in colorful confetti. In the top left corner, a banner reads 'LES PETITS ANGES' and 'S.M. VAN DER GRANDE'.

Digital demands better
collaboration

smile ..



SMILE is data-driven
personalization every step on
the go



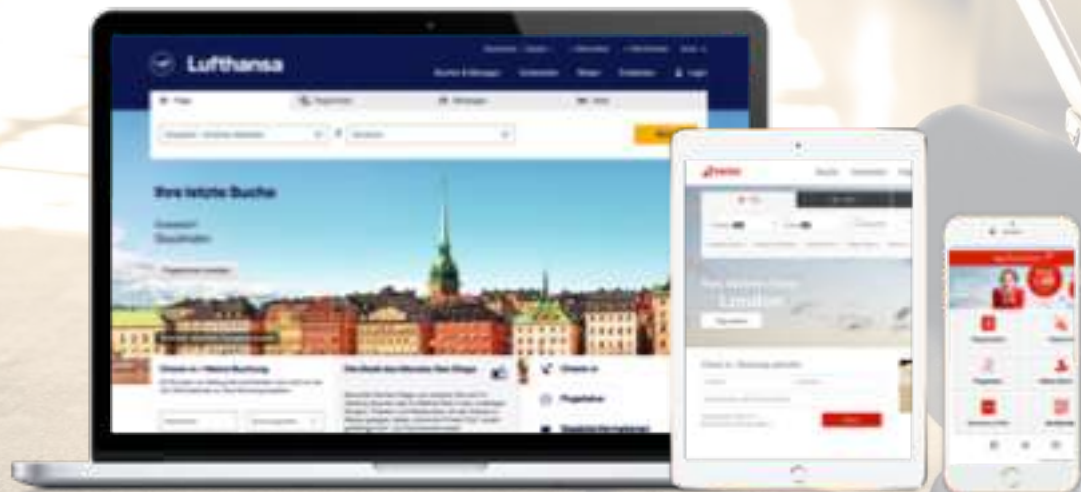
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The SMILE Customer Journey



Personalization of flight offers

Last Search



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Personalization of flight offers

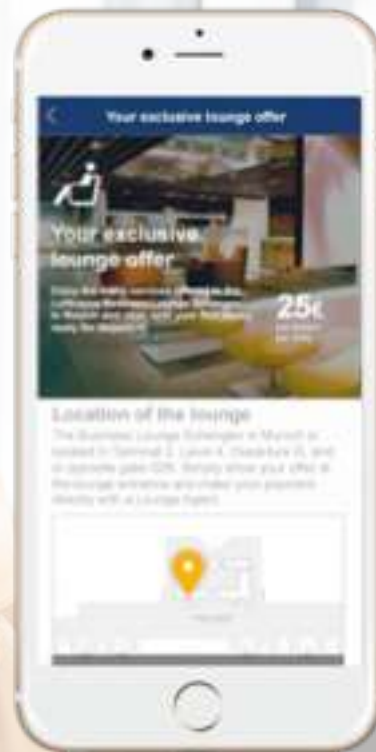
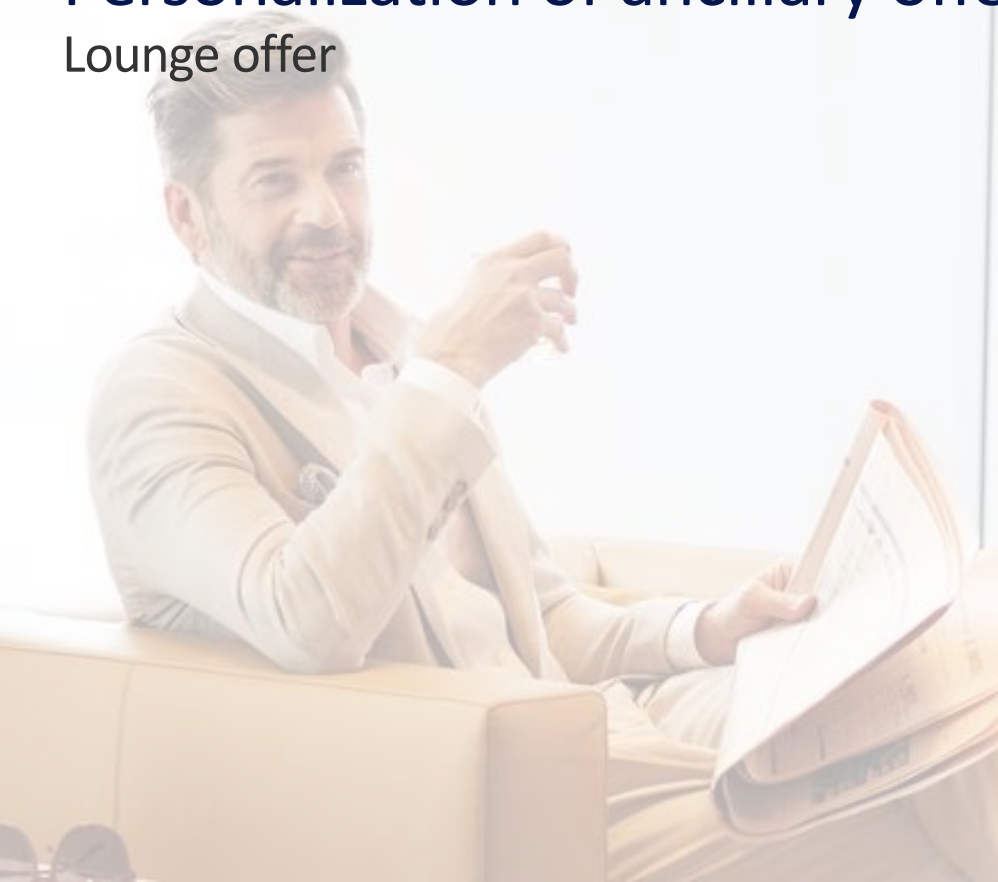
Personalized lufthansa.com

DRAFT



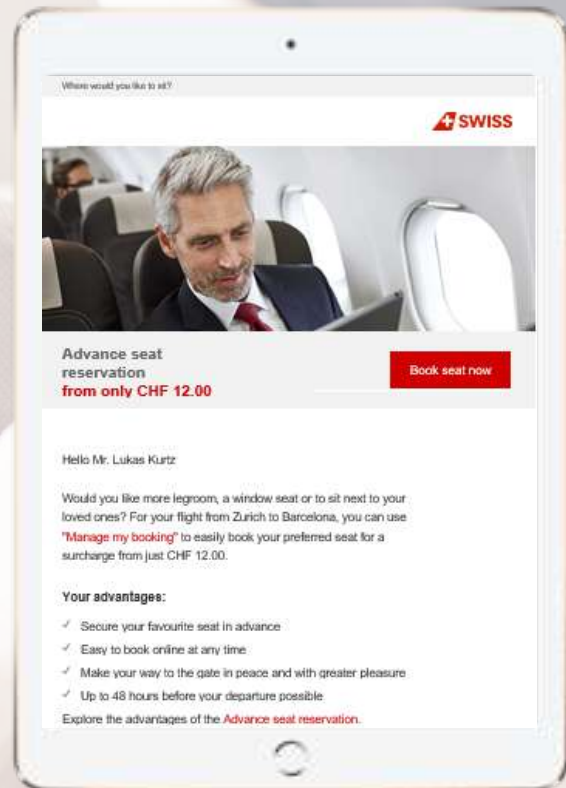
Personalization of ancillary offers

Lounge offer



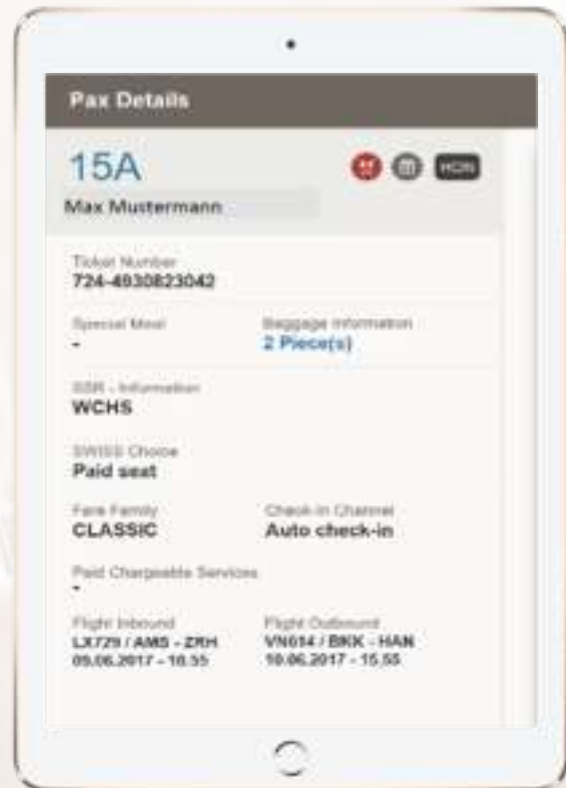
Personalization of ancillary offers

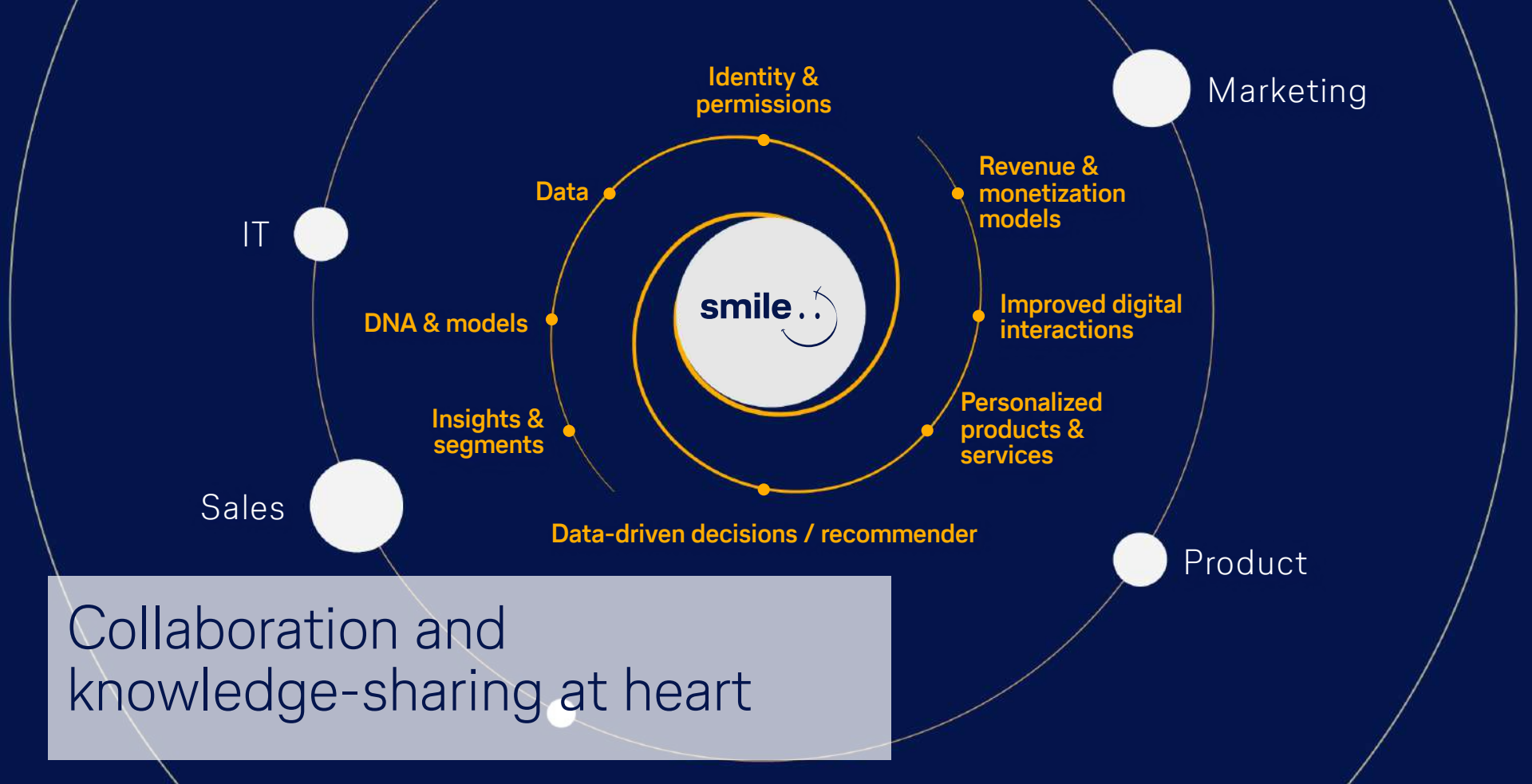
Advanced seat reservation



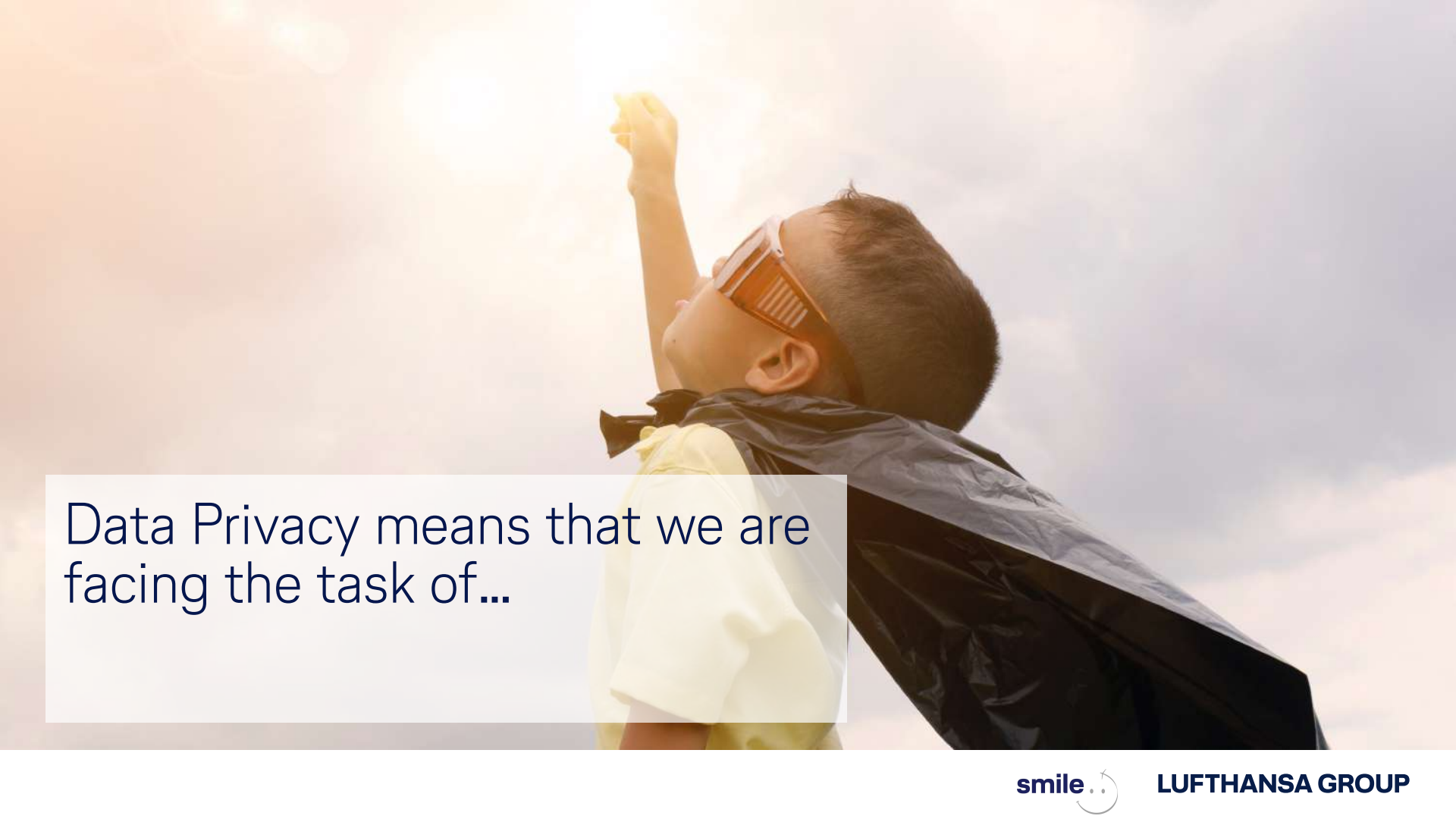
Personalization of customer service

Customer Retention Score





Collaboration and knowledge-sharing at heart



Data Privacy means that we are facing the task of...



...delivering personalized offers
and services



...and safeguarding our
customer data



Key Takeaways

Decision first

Data second

Durchstich third



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Keep on smiling!



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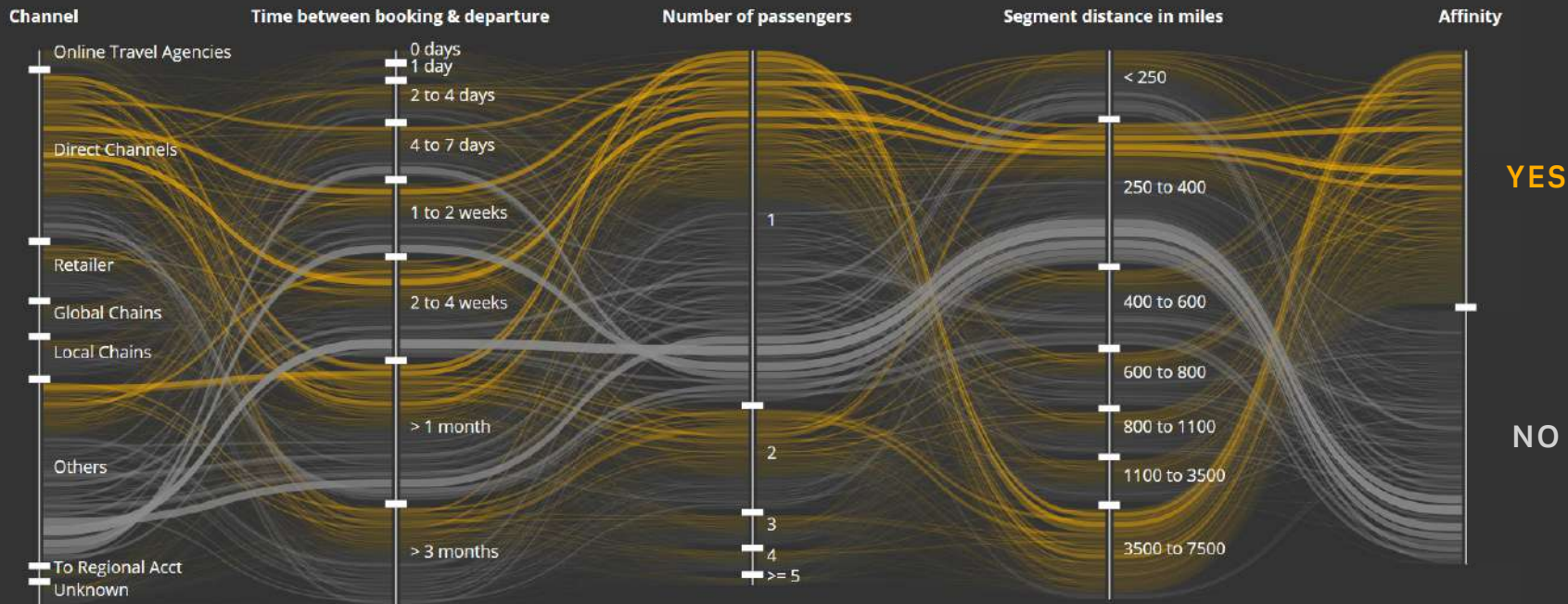
smile 😊

SMILE Behind the scenes

Seat Upgrade Affinity



Insights

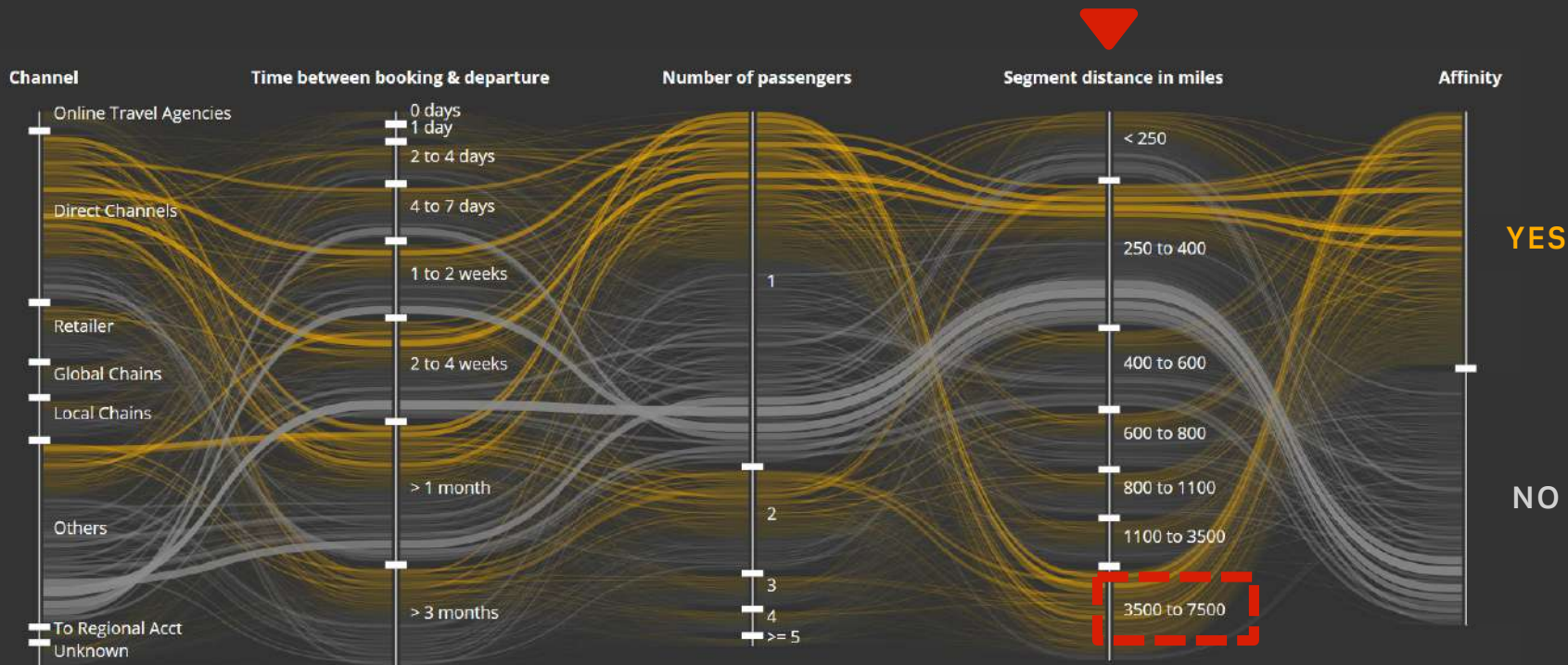


SMILE Behind the scenes

Seat Upgrade Affinity



Insights

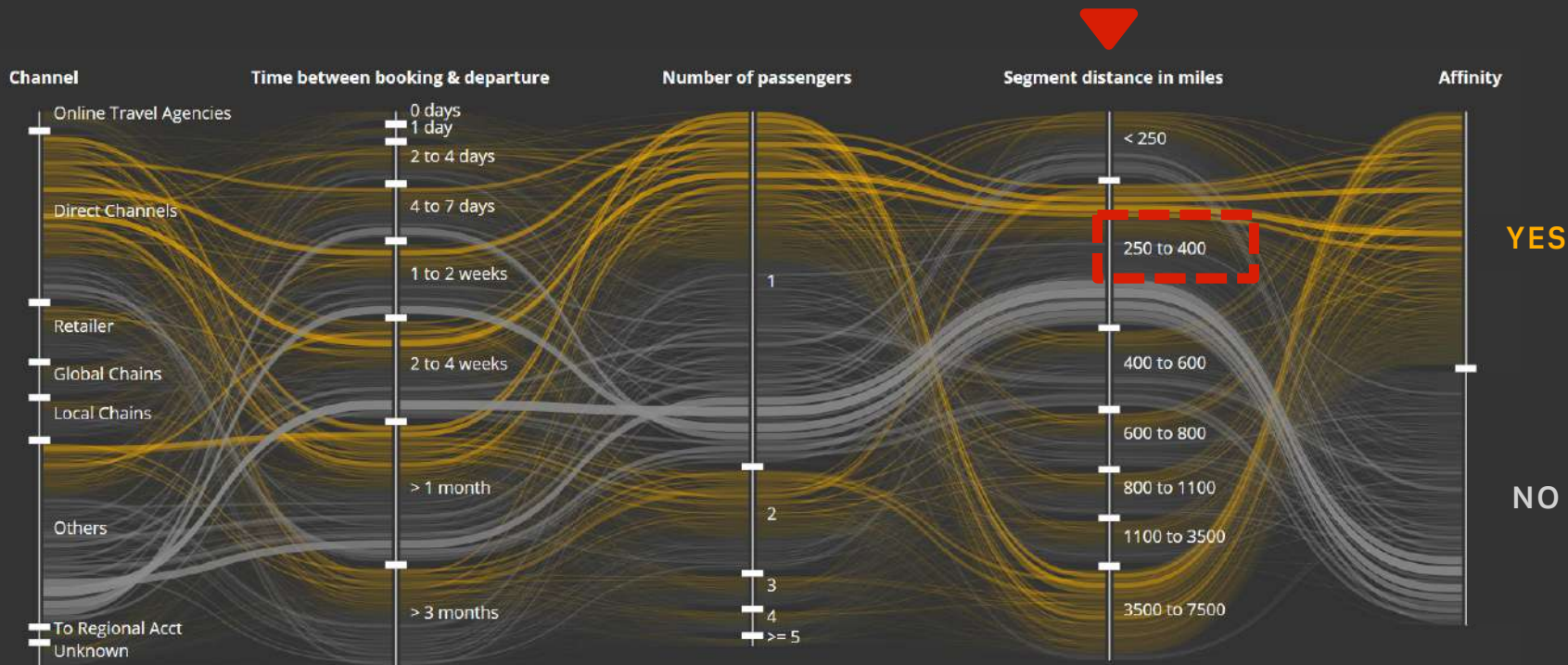


SMILE Behind the scenes

Seat Upgrade Affinity



Insights





The Future of in-Flight Duty Free is Around the Corner... **and its Also About Data**

Kian T. Gould
(Founder & CEO at AOE)

Who is  AOE  ?





The World's No.1

Travel Retail Digitalization Company



22 airports/airlines currently in rollout, tender or consulting phases





Global Travel Retail: Digitally Disrupted or Digitally Evolved?

Yesterday's Travel Retail Shopping | Banking 100% on Impulse Purchasing

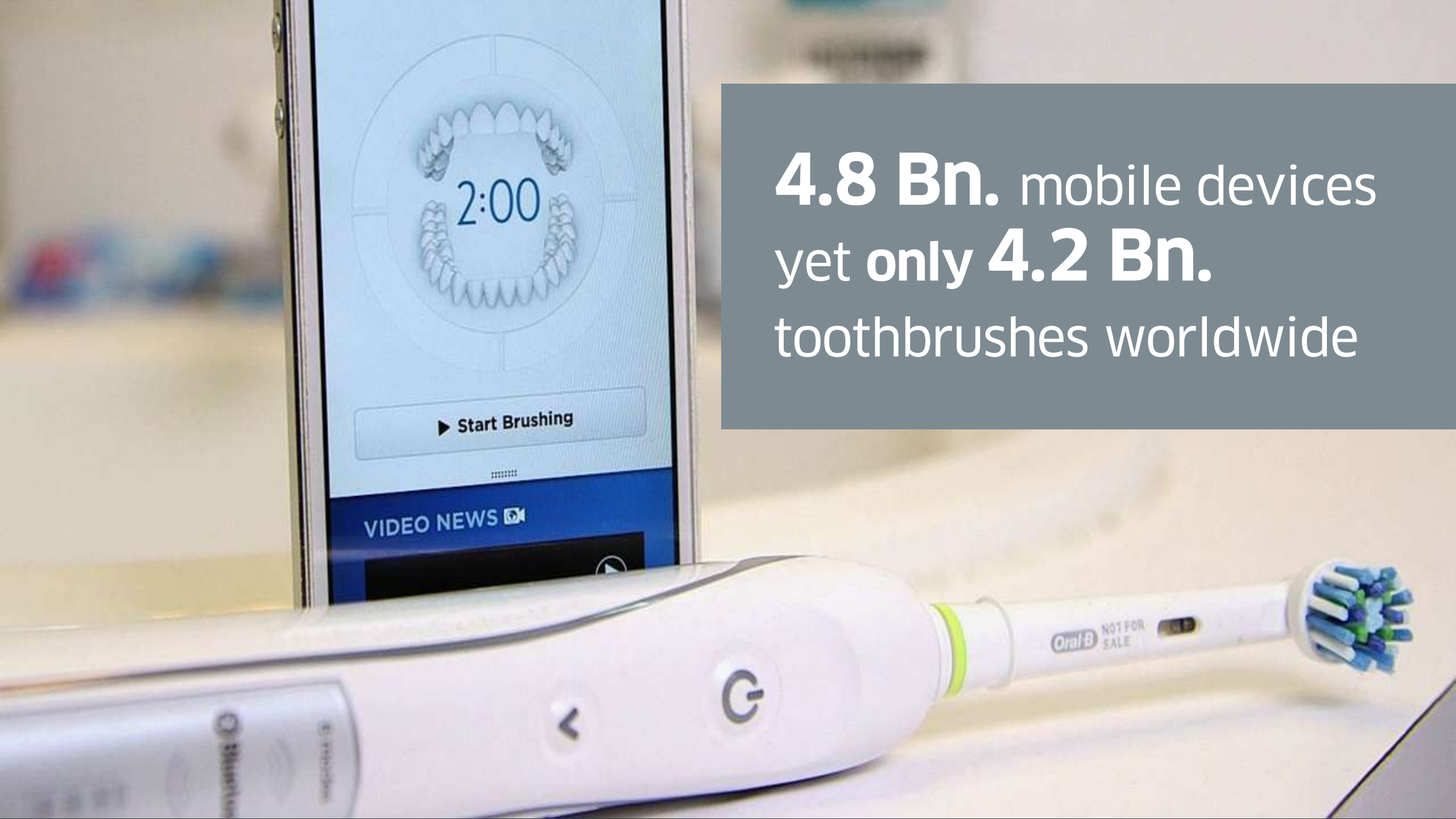


But is this still the reality of consumer behavior?



**REALITY
CHECK
AHEAD**

4.8 Bn. mobile devices
yet **only 4.2 Bn.**
toothbrushes worldwide



The average **European**
spends close to
4h daily on their smartphone





25% of all eCommerce sales
are made on mobile
in the **USA**

In **China** it is
already approaching **75%**



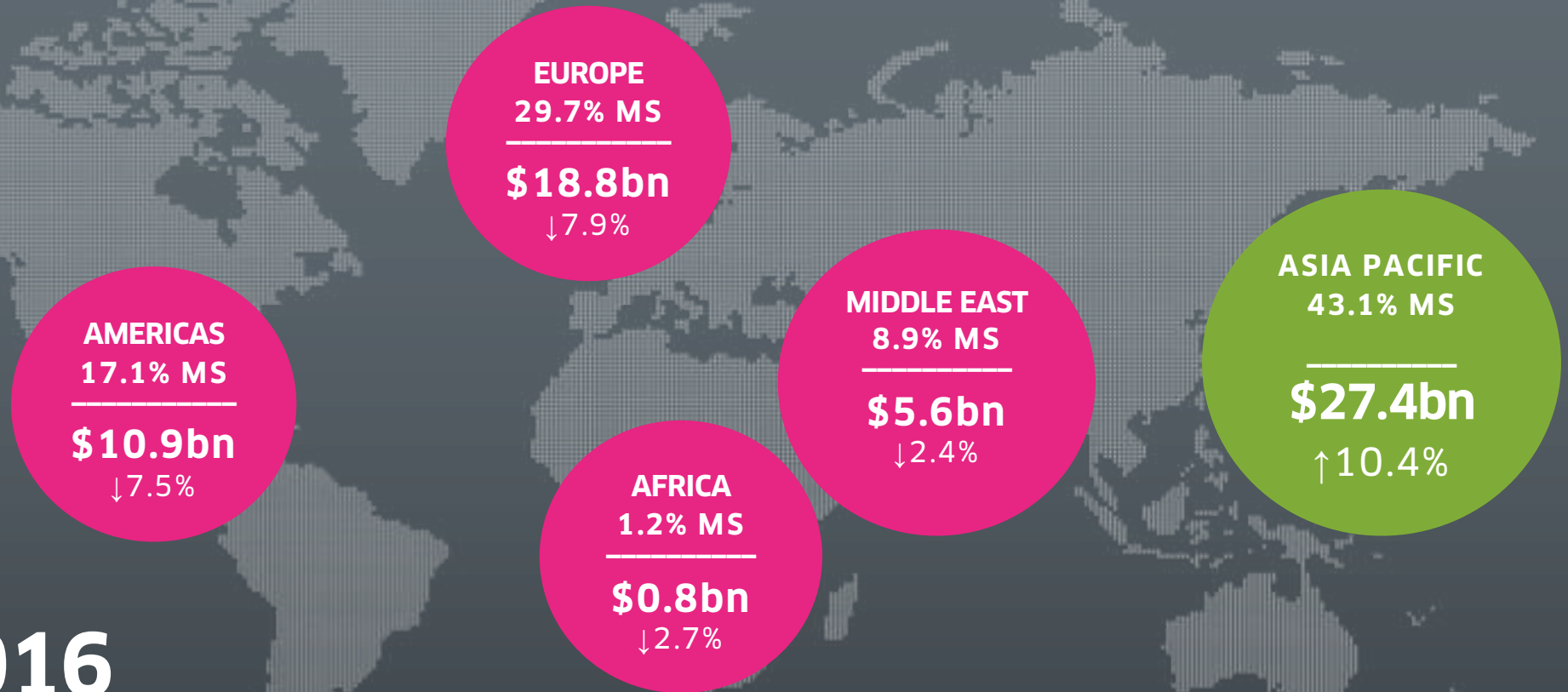
So is this today's (No-)Shopper?



The disruption has begun | A look at the global Travel Retail market



The 67 billion USD (2017E) global Travel Retail market is contracting



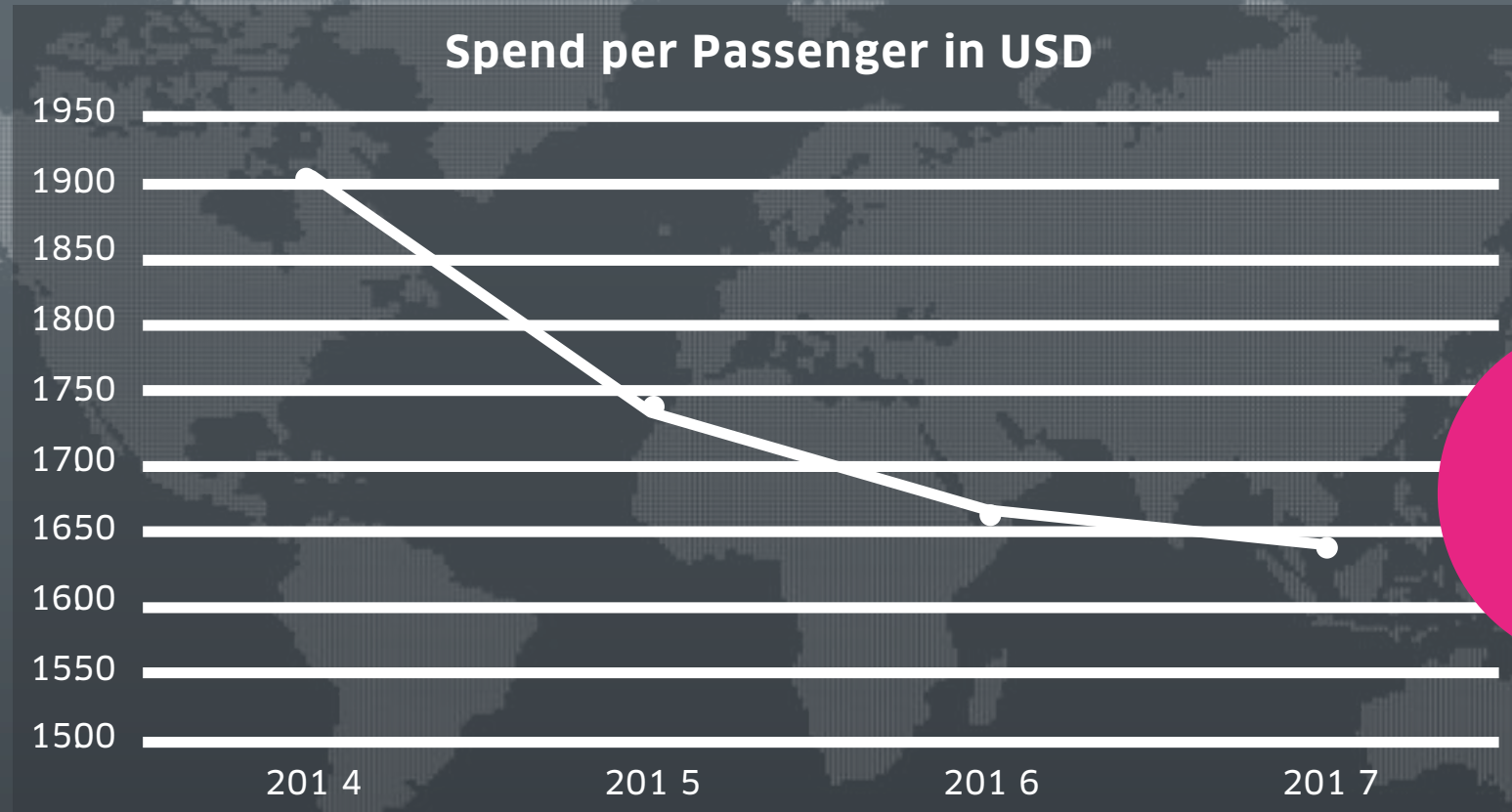
2015 - 2016

Asia Pacific growth driven by Down-Town Duty Free +17.7% vs. Airports +1.5%

- Global Airport Shopping +0.4%
- Airlines -6.6%
- Ferries -2.7%
- Other Shops & Sales +7.3%



But the market is still growing!? Market yes, spend per passenger no...




**\$16.
4**

Passengers in (billion)	3.328	3.561	3.810	4.081
Travel Retail market (in billion)	63.48	62.00	63.50	67.00E



Is this why some have give up already?



DFNI

HOME LATEST NEWS PRODUCT NEWS REGIONS

Home » Latest News » Retail News » Inflight » United Airlines to stop selling duty-free

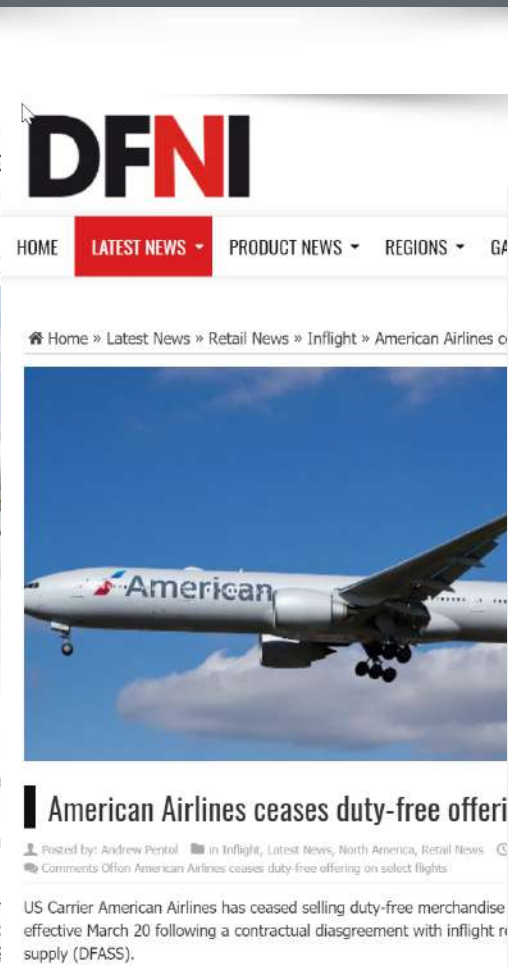


United Airlines to stop selling duty-free

Posted by: Andrew Perrot in Inflight, Latest News, Retail News March 20, 2018

The Association of Flight Attendants has confirmed local media will cease offering duty-free merchandise effective March 31.


According to the statement, the decision was made based on declining in-flight concessionaire, **Duty Free World**, which has been running the program since 2003 under various contracts. Its latest agreement began on July 1, 2017.



DFNI

HOME LATEST NEWS PRODUCT NEWS REGIONS

Home » Latest News » Retail News » Inflight » American Airlines ceases duty-free offering



American Airlines ceases duty-free offering

Posted by: Andrew Perrot in Inflight, Latest News, North America, Retail News March 20, 2018

US Carrier American Airlines has ceased selling duty-free merchandise effective March 20 following a contractual disagreement with inflight retailer **DFASS**.

The carrier merged with US Airways on March 31 2014 and DFASS, which had held the onboard duty-free contract since 2003.



DFNI

HOME LATEST NEWS PRODUCT NEWS REGIONS GALLERY EVENTS DFNI TV DIRECTORY SUBSCRIBE SEARCH...

Home » Regions » Europe » BA considers scrapping short-haul duty-free Add to Bookmarks



Tourvest has operated the airline's inflight retail since 2012

BA considers scrapping short-haul duty-free

Posted by: Liam Coleman in Europe, Inflight, Latest News, Retail News January 8, 2018

British Airways (BA) has told *DFNI* it is "reviewing" the need for inflight retail on its short-haul routes.

The national-flag carrier airline for the UK has announced it is set to introduce 35 A320neos and A321neos for its short-haul flights.

Following the introduction of these planes to the BA fleet, the airline has said it is considering whether the space currently used for inflight retail products "could be put to better use".

A statement released by the airline to *DFNI* said: "There is limited take up of duty-free shopping on short-haul flights."



New Asia strategy for Dufry following West Kowloon win





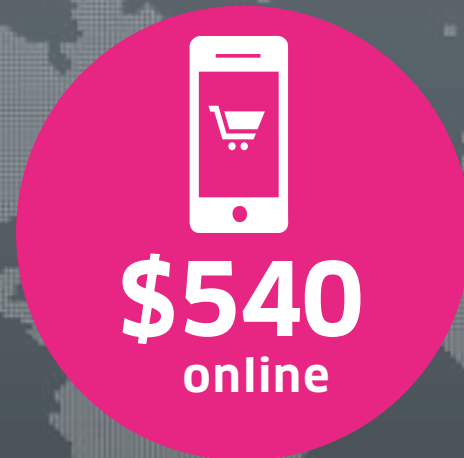
Tweets by @DFNI



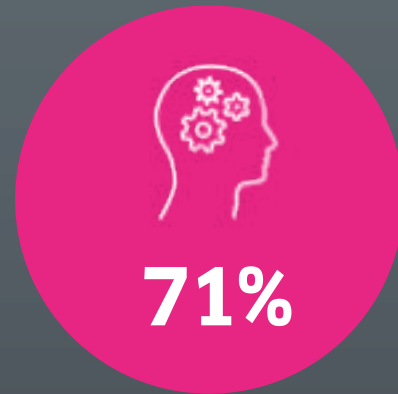
DFNI's live coverage from today's Nordic Travel Retail Seminar in Copenhagen is underway dfnionline.com/lead-stories/...

Popular	Recent
 <p>DFNI Blog: TFWA Singapore 2018 May 4, 2018</p>	 <p>DFNI Asia Awards celebrate regional travel retail excellence May 9, 2018</p>

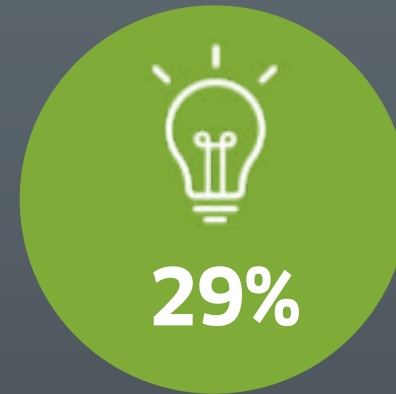
But look at the potential: Here is what these same passengers roughly spent when not traveling...



Planned vs Impulse Purchase



Planned in advance



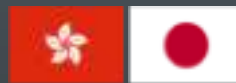
Bought on impulse



83%



79%



75%



44%



42%



40%



The need for Omnichannel Digital Travel Retail

PRE-TRIP ONLINE TOUCH POINTS

34%
Search for / see information about DF shopping Online

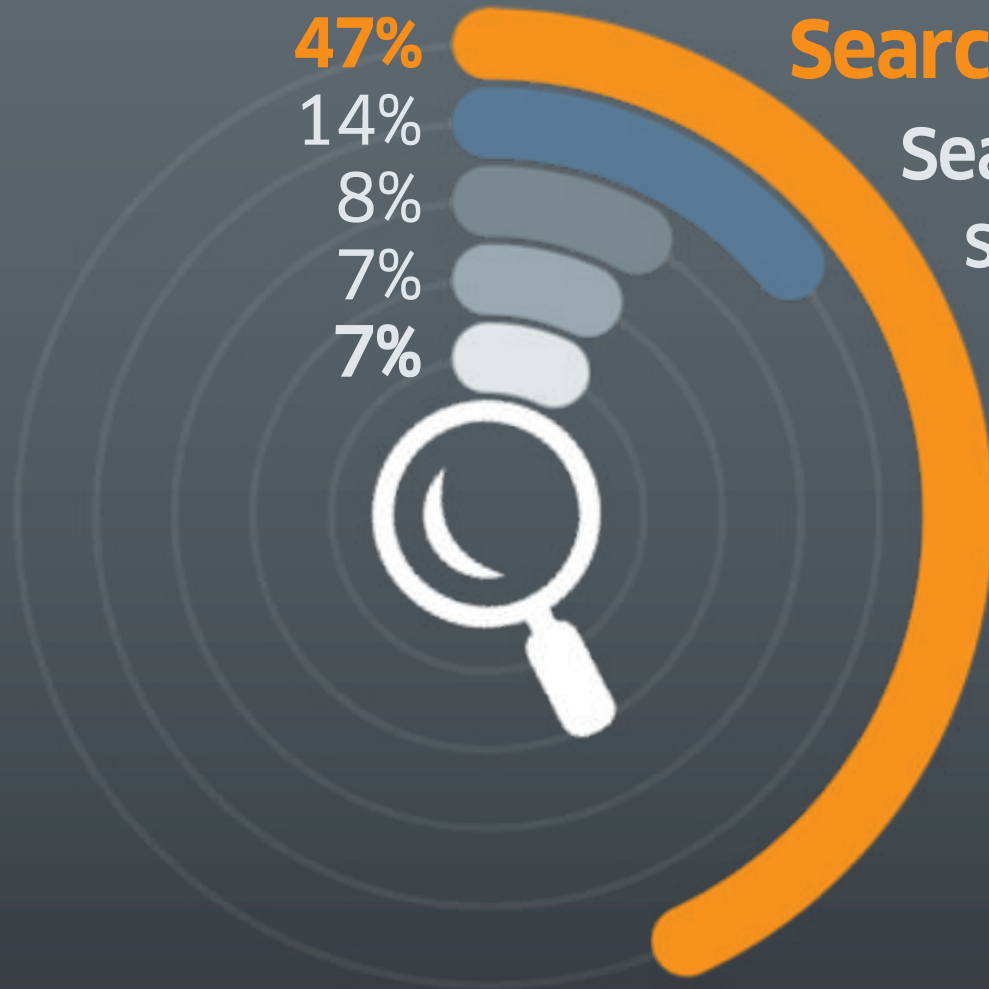
40%
Would like to do online DF shopping before the trip

53%
Make the decision to buy in DF before travelling

62%
Book their flight directly online

83%
Find mobile check-in to be the most convenient





Search Online / Buy Online

Search Online / Buy In-Store

Search Online and In-Store / Buy In-Store

Search Online and In-Store / Buy Online

Search In-Store / Buy Online

79% of today's purchasing methods involve Online search



So the consumers want to shop digitally, but most airlines still try to sell from carts...



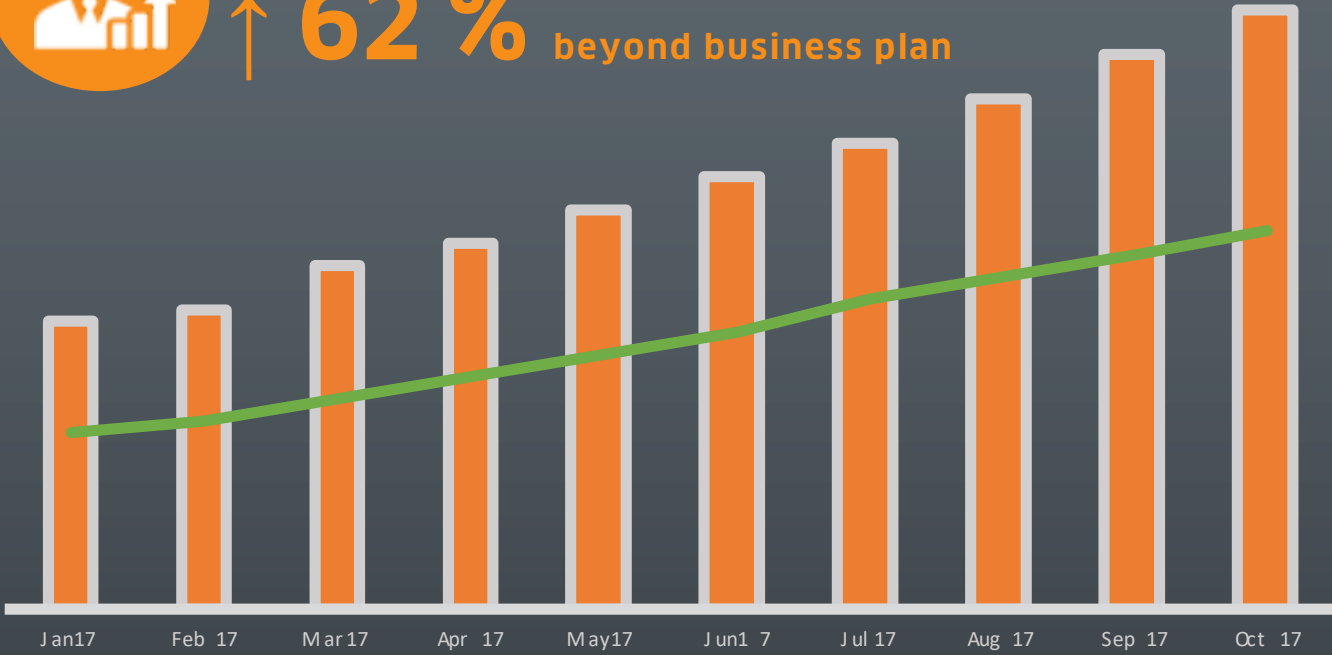
Frankfurt Airport | How we started digitalizing the travel retail world...





Customer Growth Rate

↑ **62 %** beyond business plan



300,000+ Loyalty sign-ups to-date

■ YTD
— Plan



Additional spend
(by FRA Rewards members)

+90 €



Repurchase rate

30 %



Avg. Basket increase (online vs. offline)

230 %



Avg. Cross-/Upsell

35 %



The webrooming effect in numbers...



for every
100,000
unique visitors to the
airport
e-Commerce
platform

Physical retail sales
increase by
500-750k EUR



The new Quaternity of Travel Retail

CUSTOMER INFORMATION

Airports/Airlines know much more about passengers than most retailers do

PARTICIPATION

in the international eCommerce growth

INTEGRATED ADVERTISING

Via Wifi, Smart-Panels and InfoTerminals offer unique abilities

CUSTOMER EXCELLENCE

Attractive digital offers and services form a unique customer experience

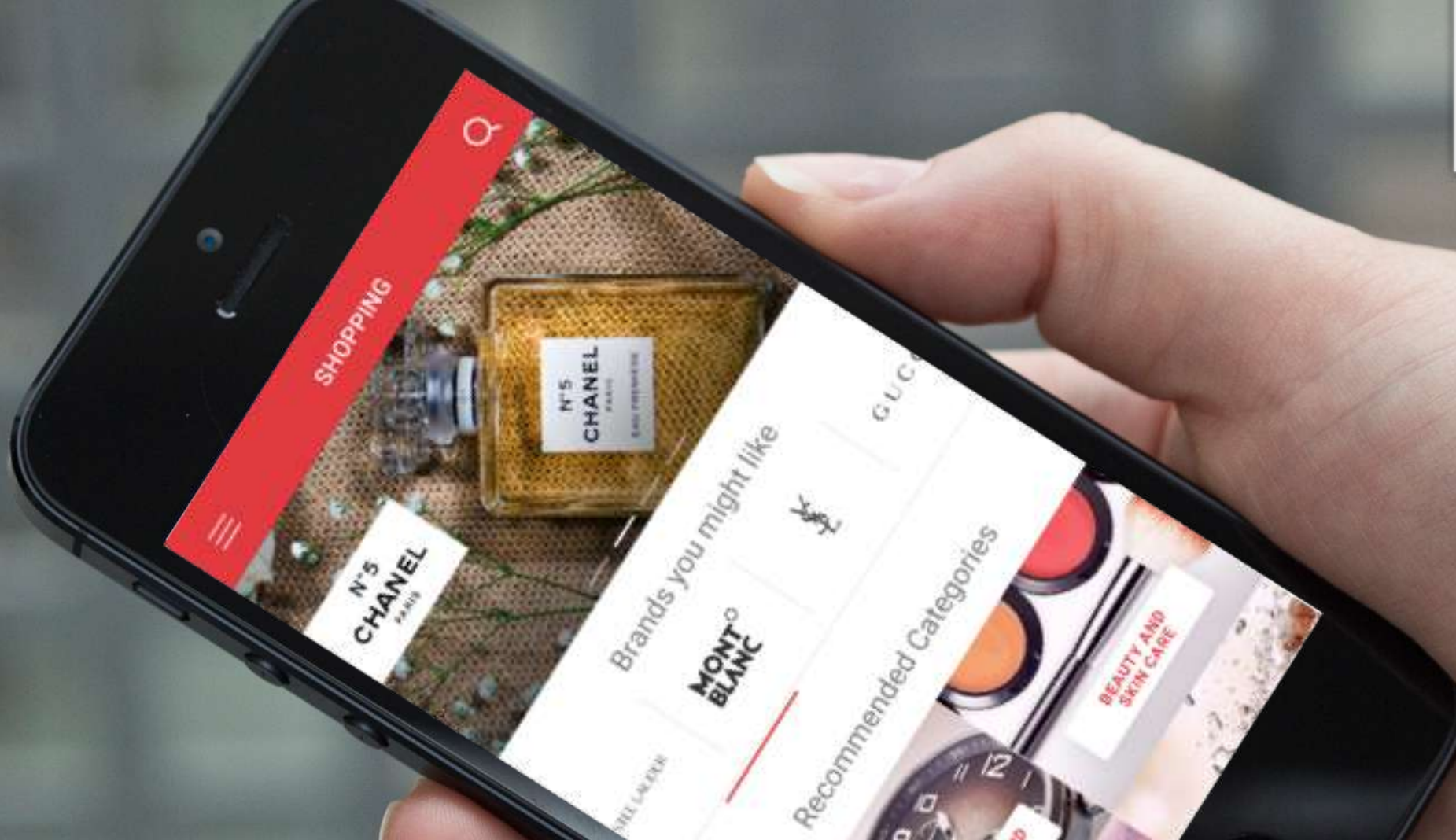
DIGITAL DEVICES

create new transaction and communication channels

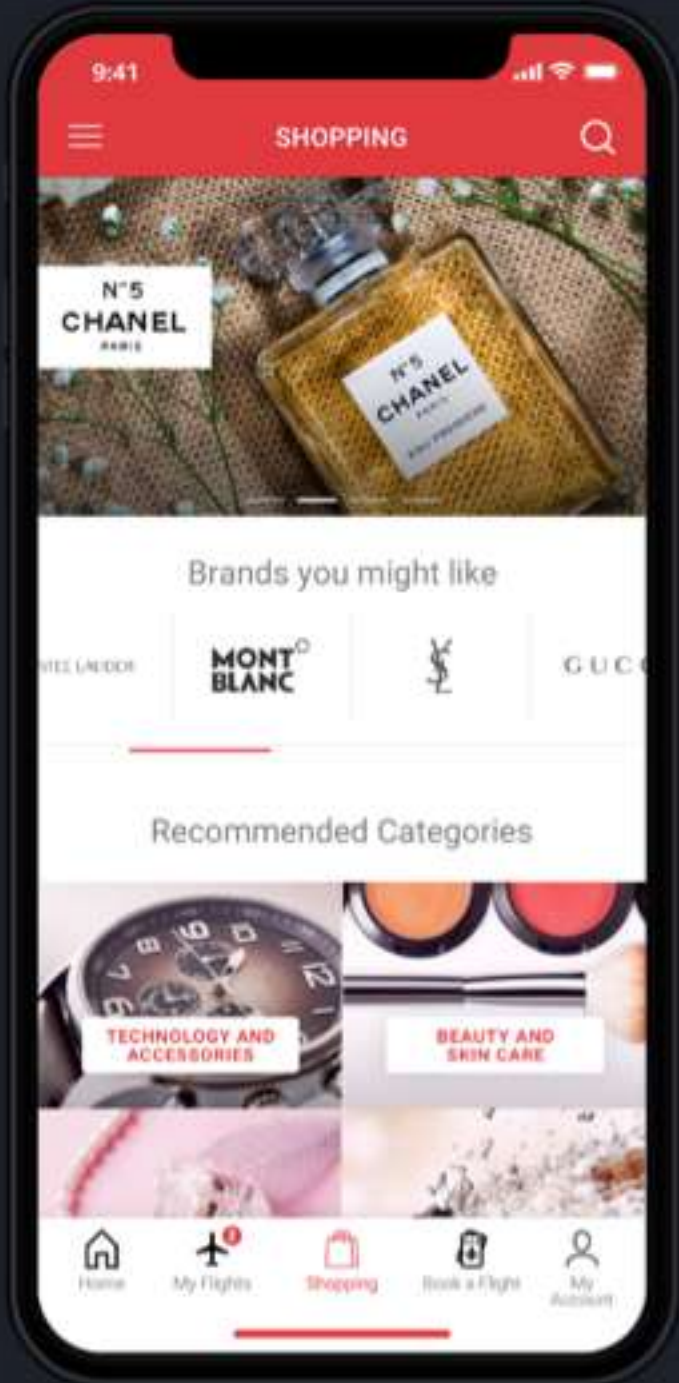
DIGITALIZATION

of the travel journey creates new touchpoints





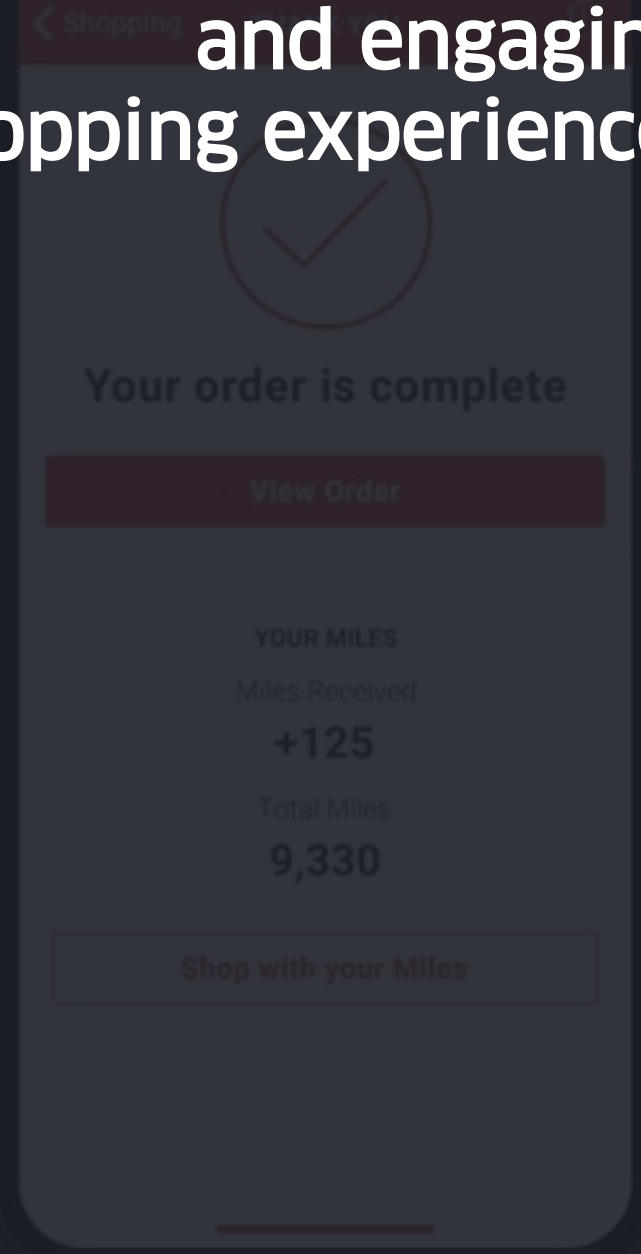
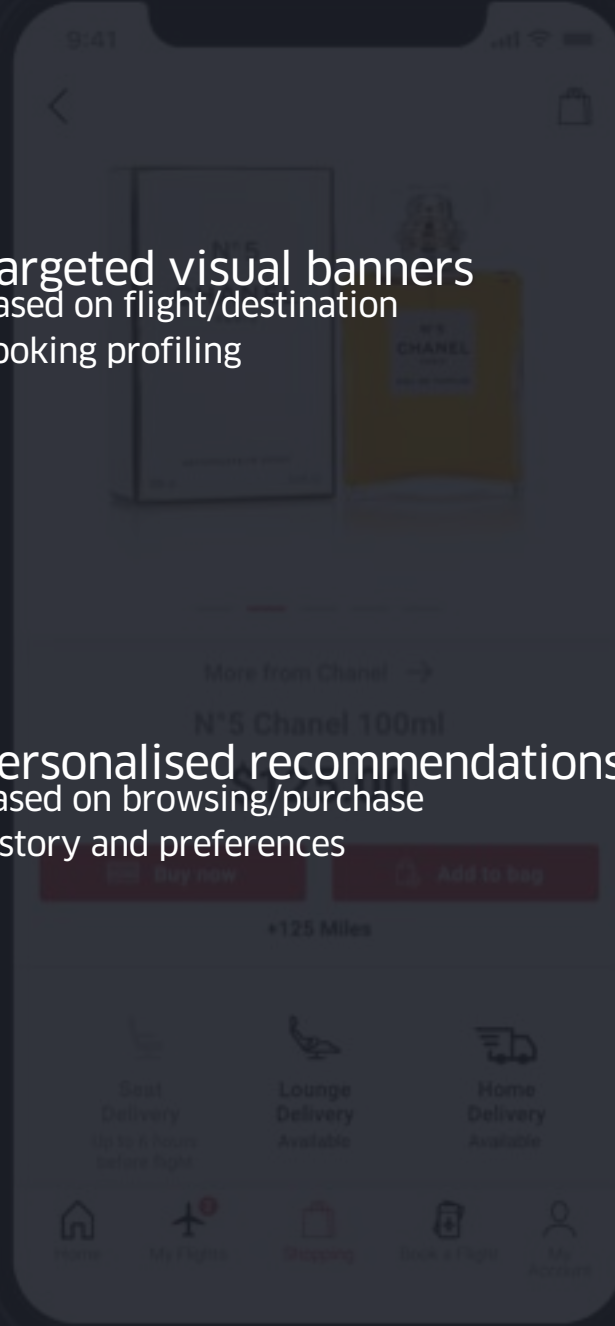
The future of Airline E-Commerce is at your fingertips



Targeted visual banners
Based on flight/destination
booking profiling

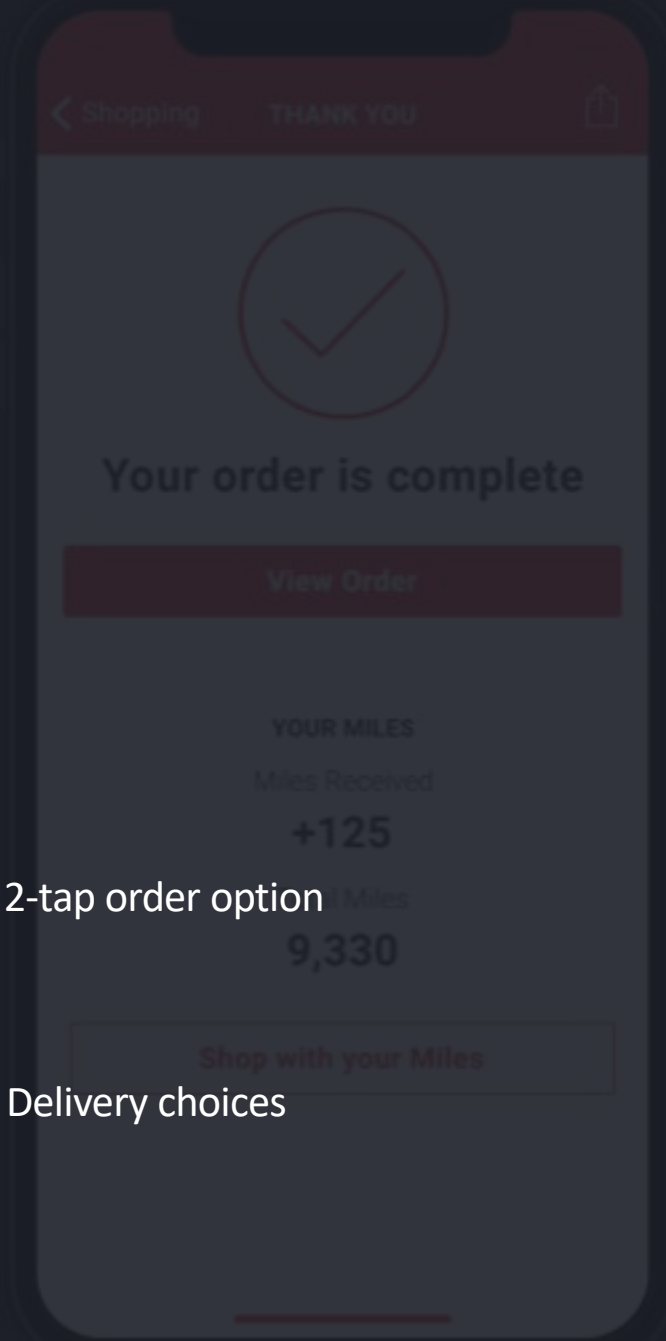
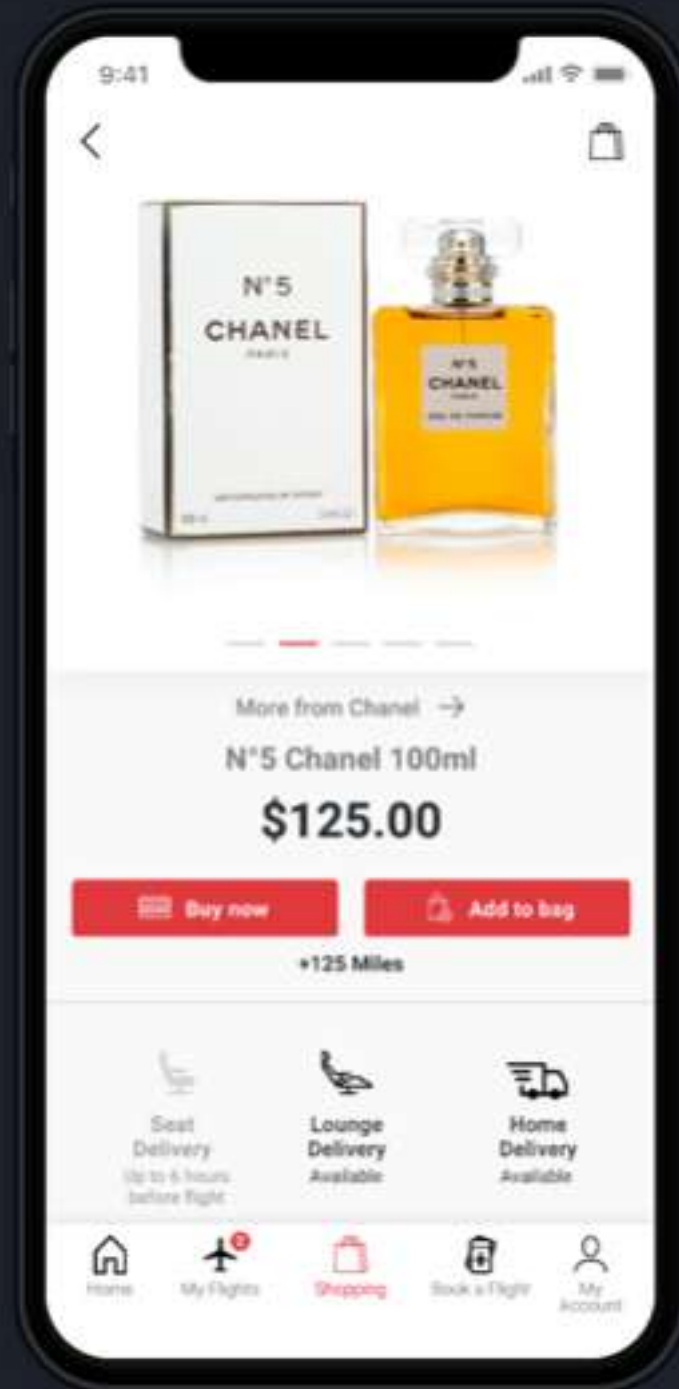
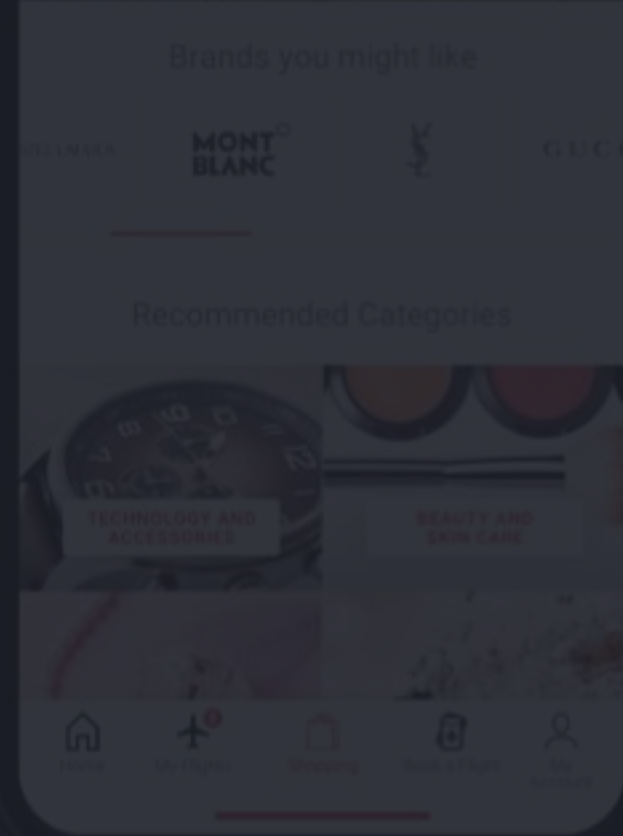
Personalised recommendations
Based on browsing/purchase
history and preferences

A sophisticated, simple
and engaging
shopping experience.



Keeping the checkout process short and effortless.

Flexibility and choice that consumers expect.

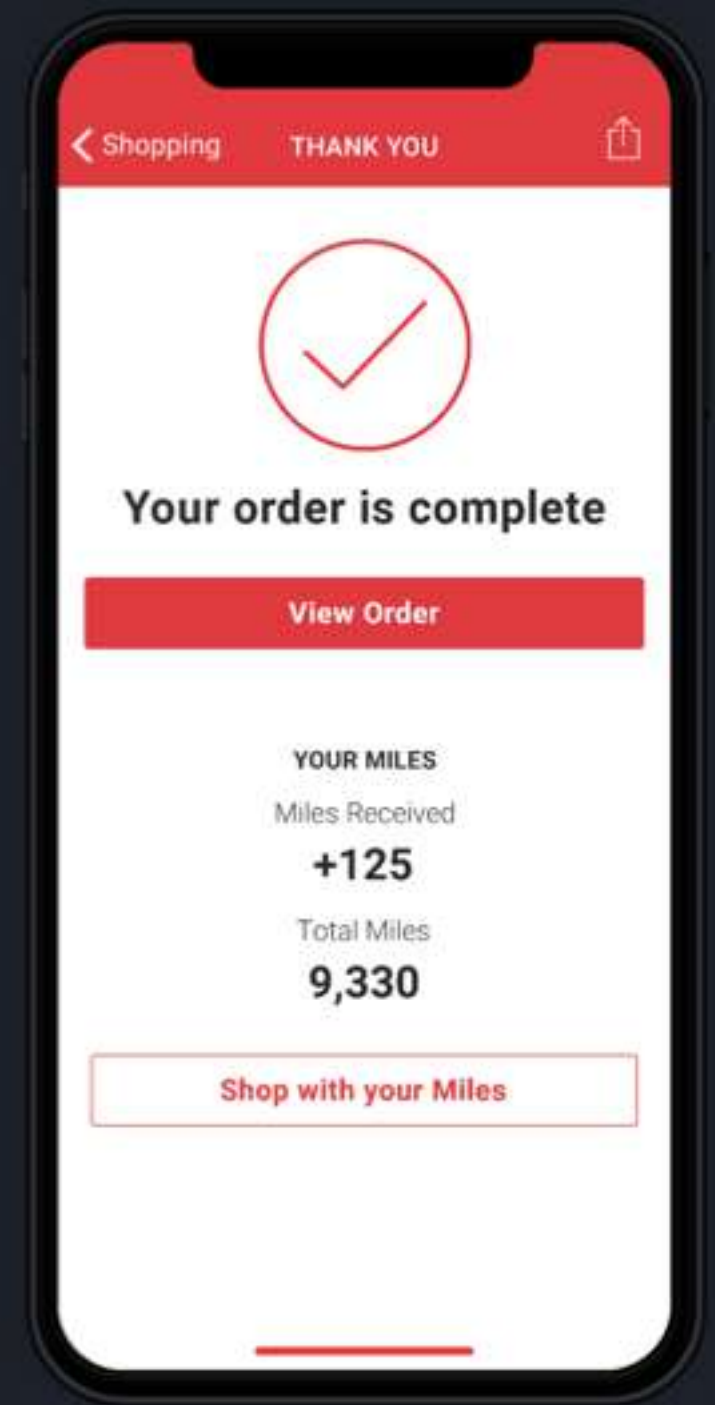
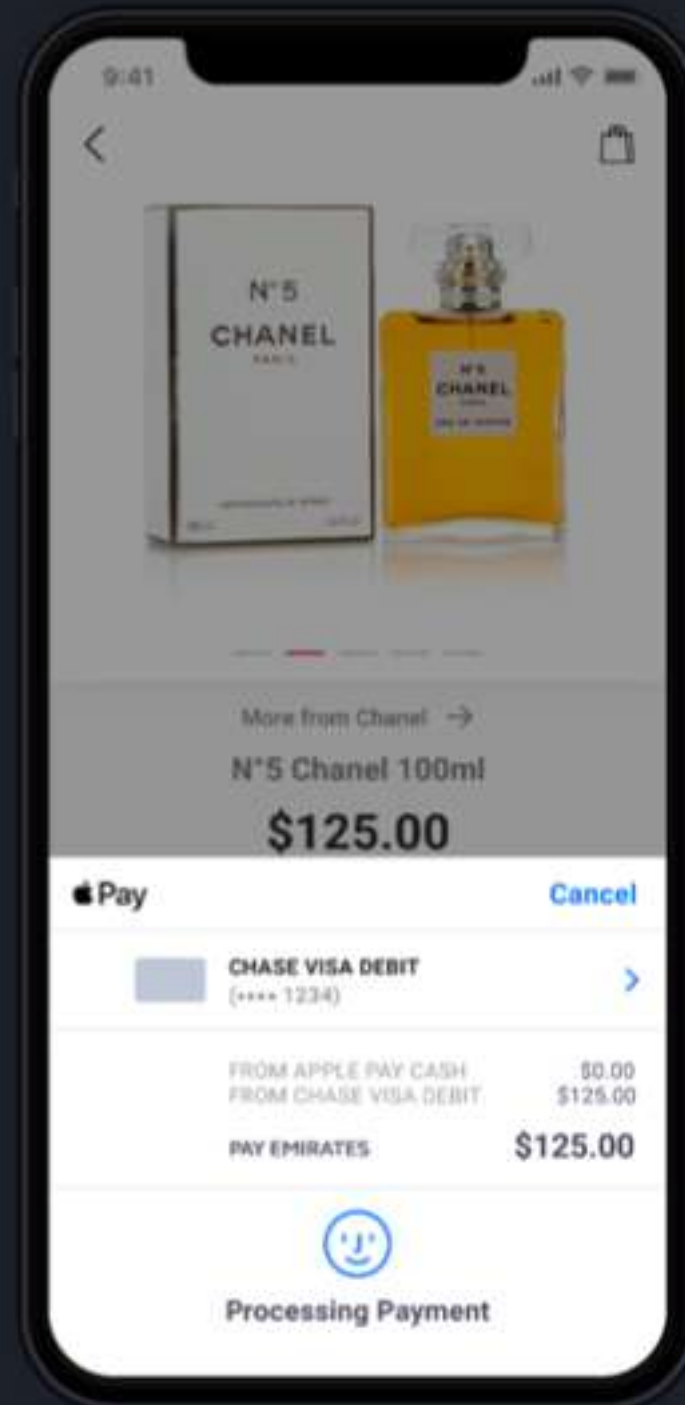
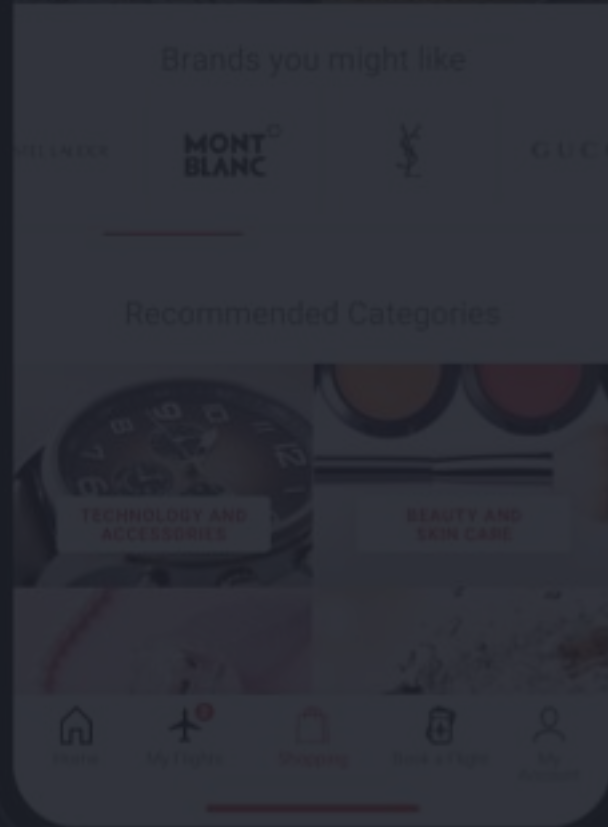


2-tap order option

Delivery choices

Leverage the power of mobile payment.

Reward loyalty with instant Miles earnings



No Wi-fi? No Problem.
Keep browsing.



Contextual notification

...at the airport
...when connected to Wi-Fi

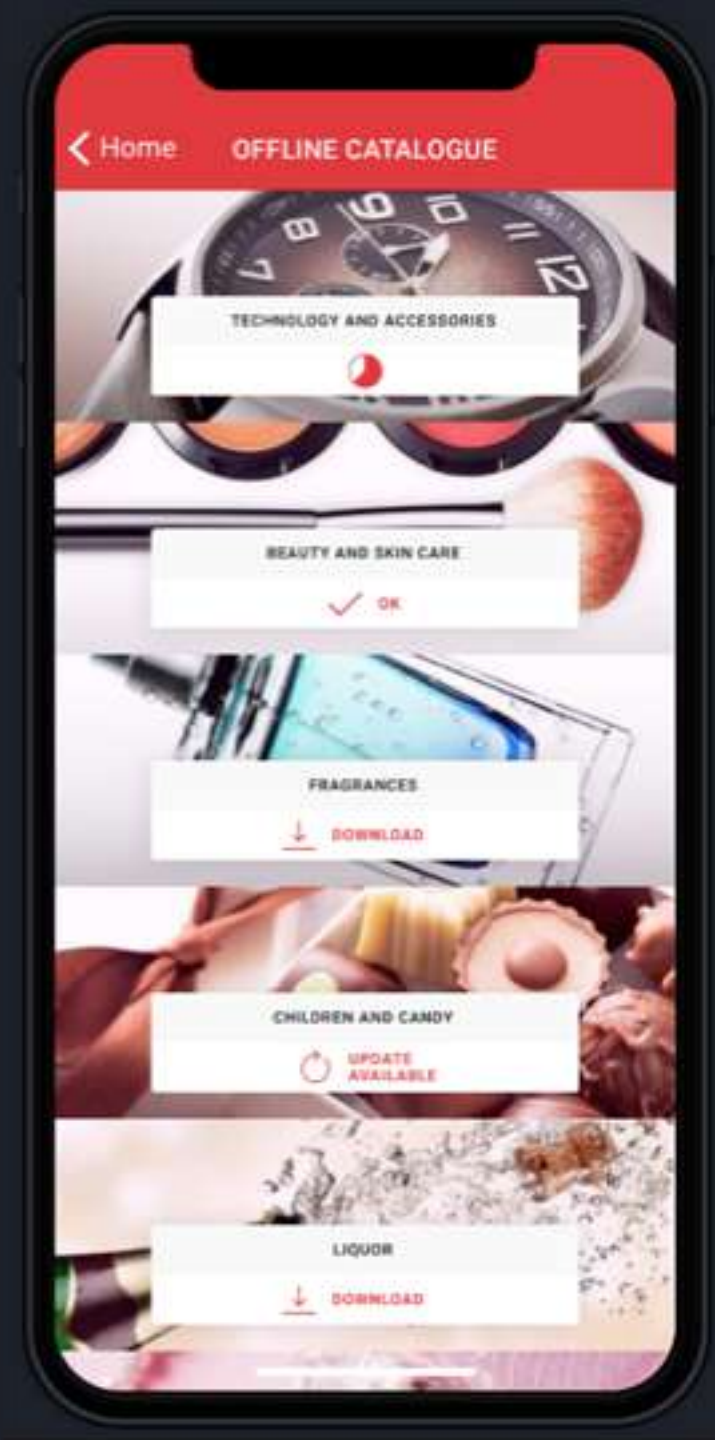
...up to 30 minutes before
boarding

Control and Choice

...choose categories
...manage data settings

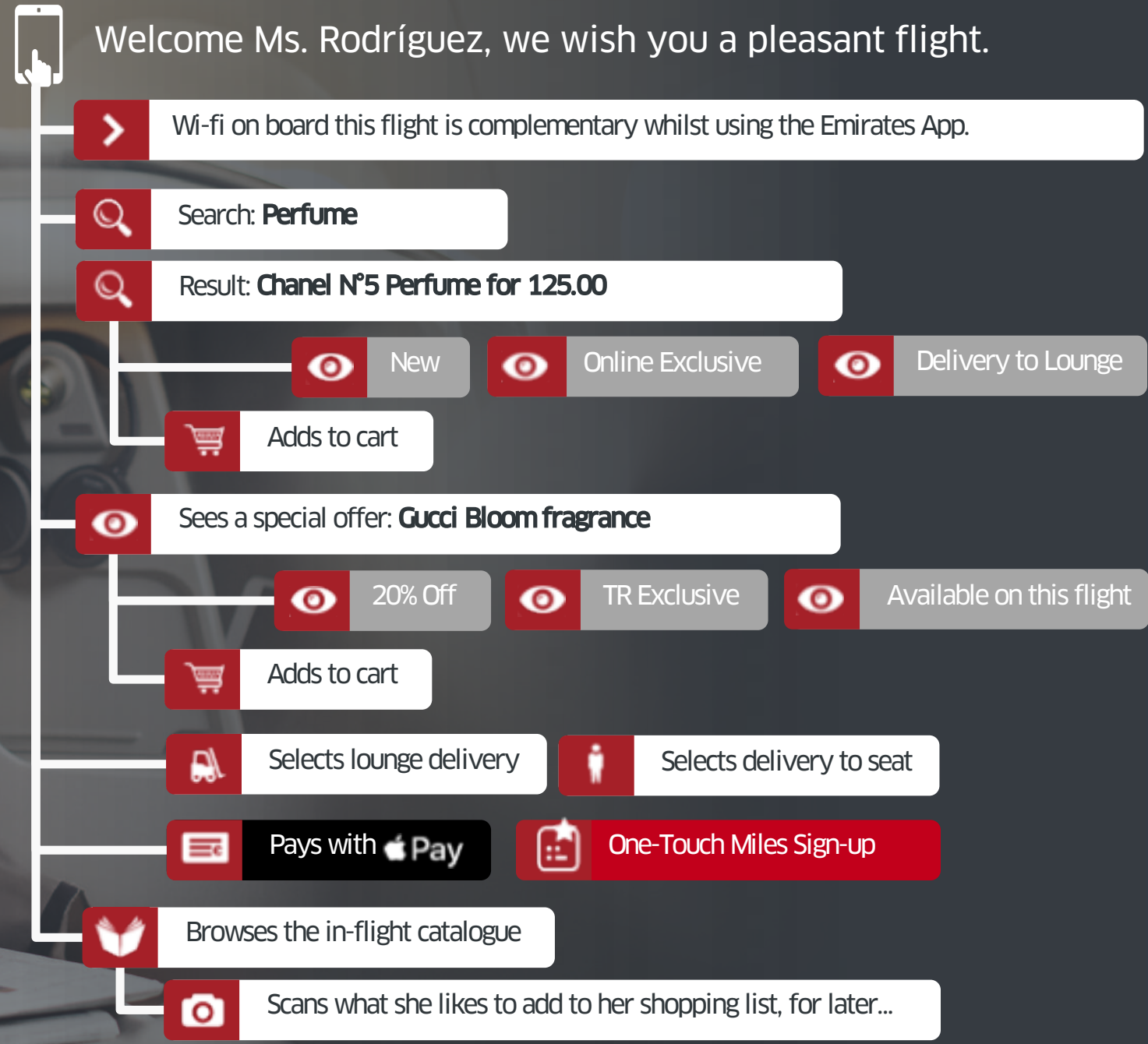
Full browsing

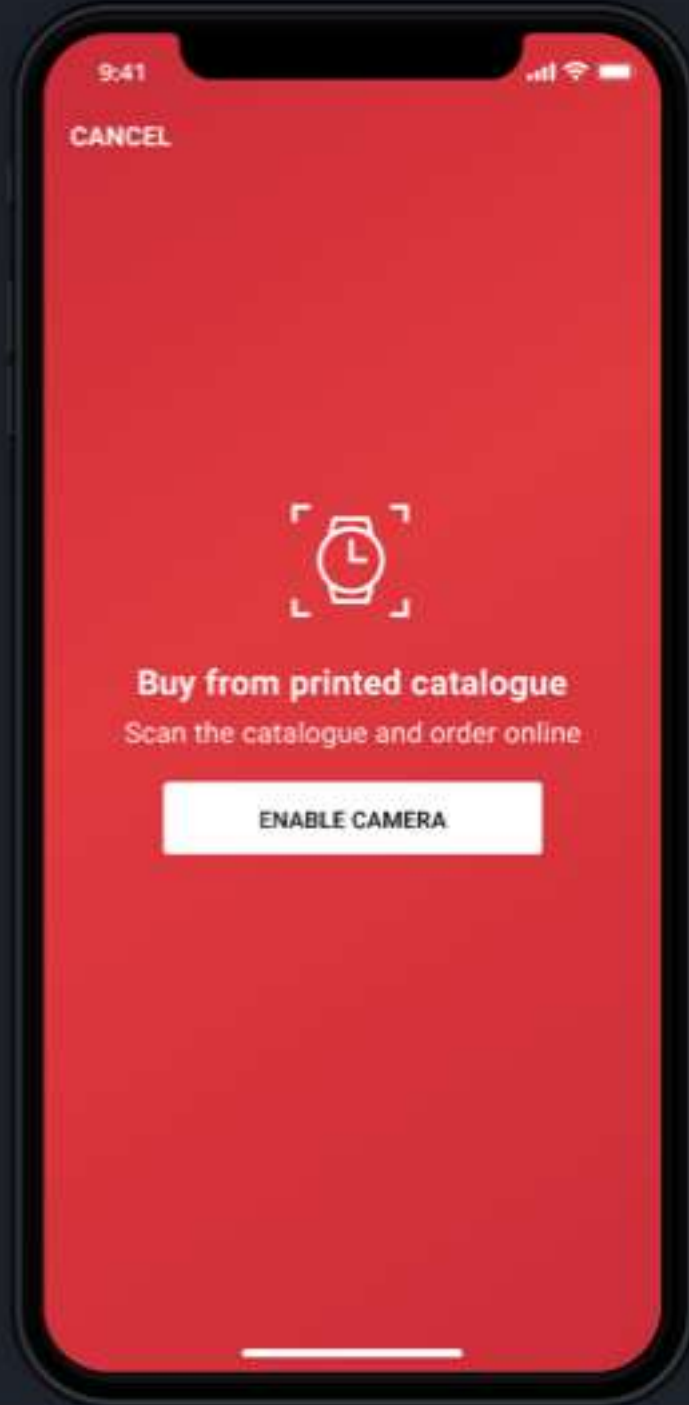
...of cached and
downloaded content



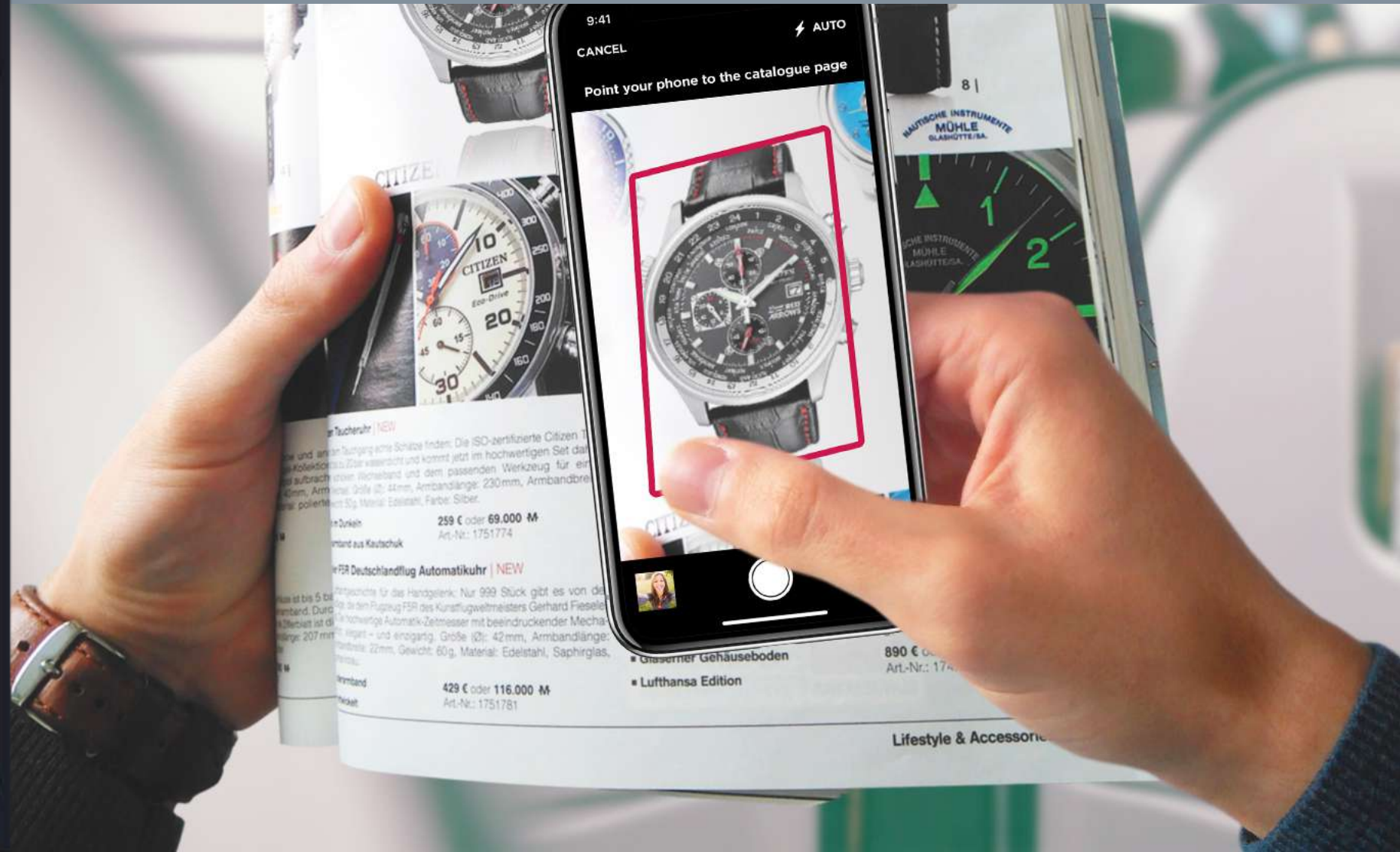


In-flight, in-app.
Bridging the gap.



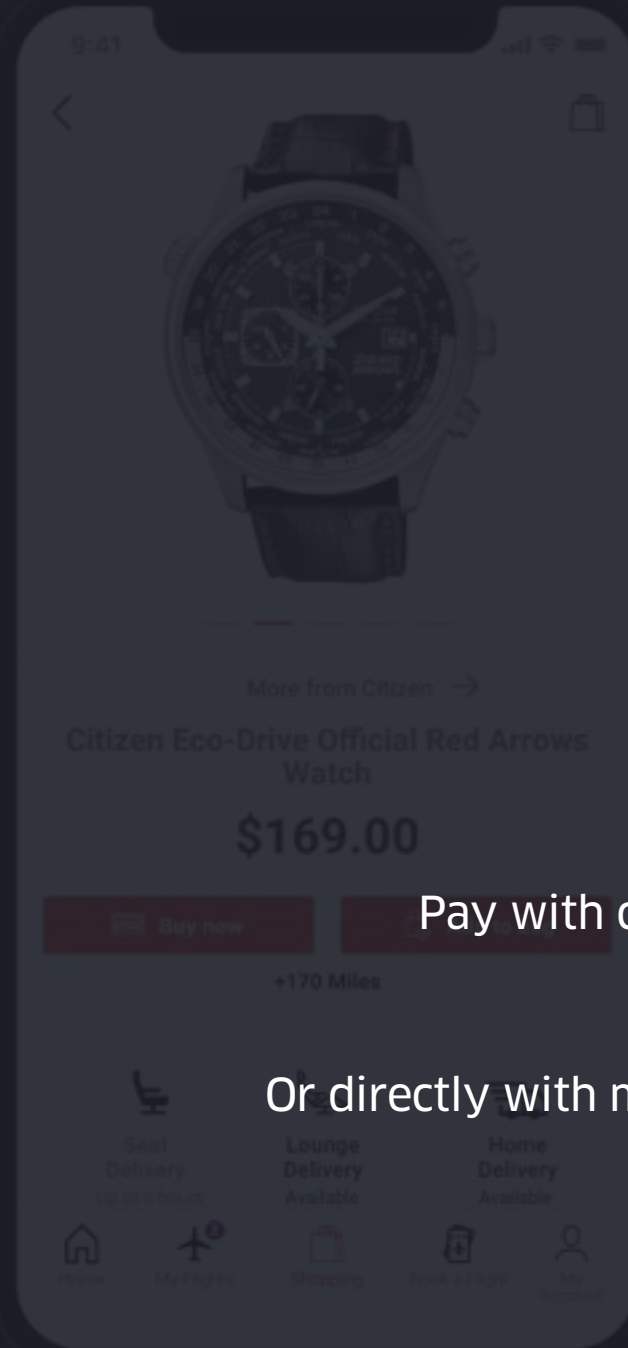
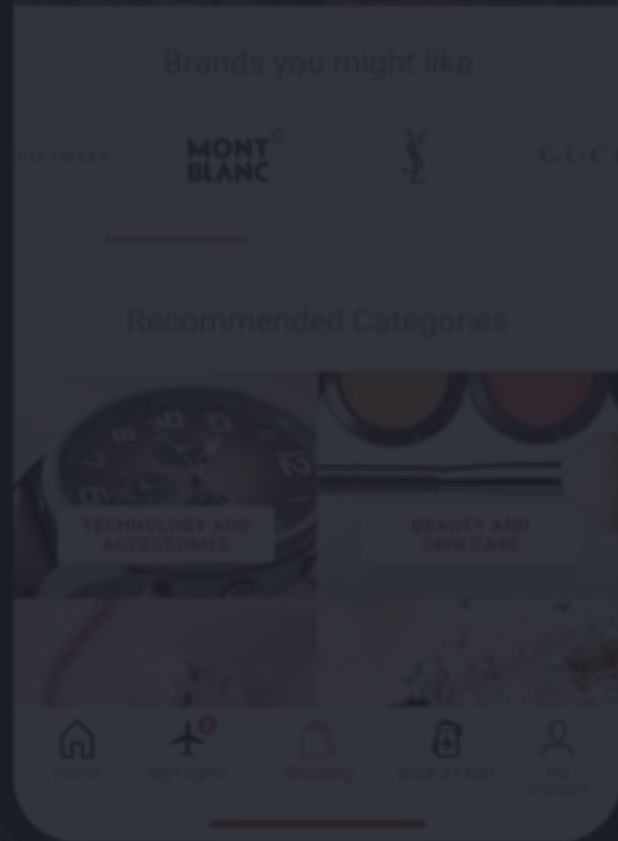


App meets printed catalogue.
With image recognition.



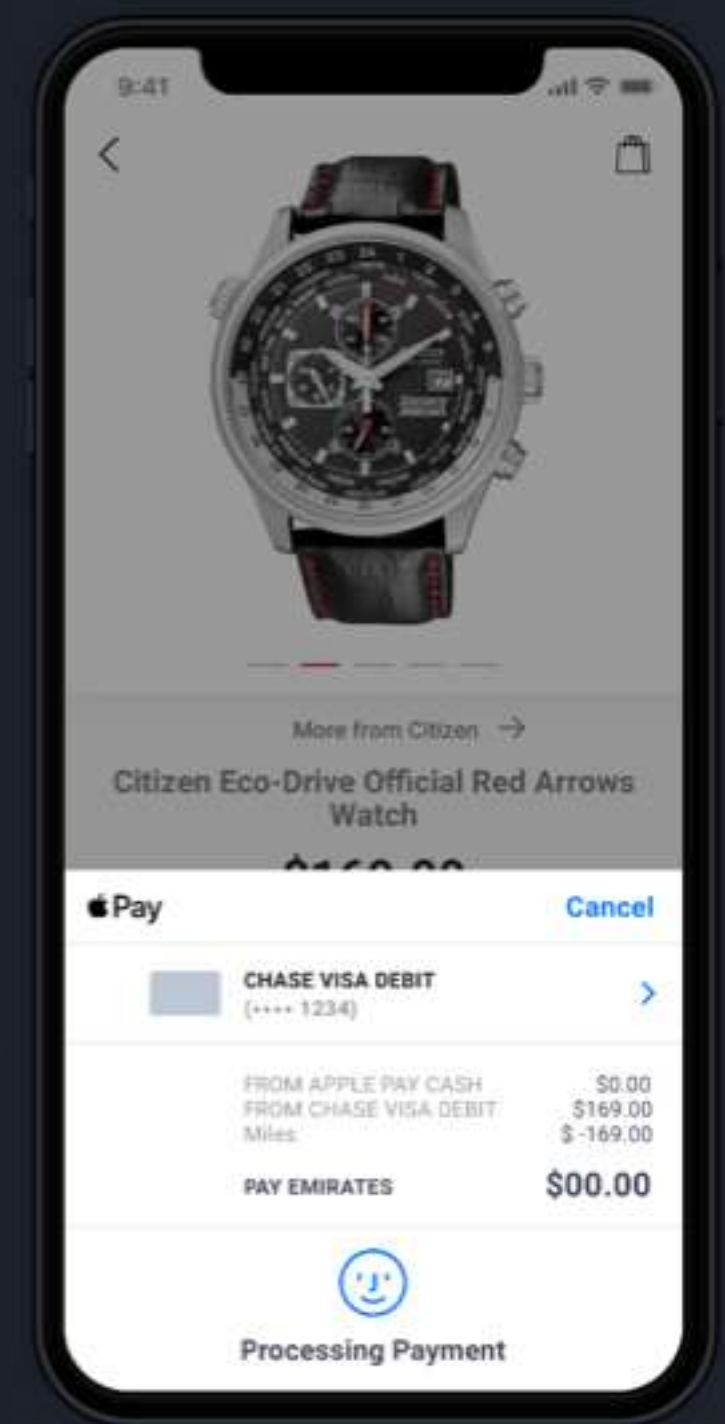
Provide instant and seamless gratification

by providing instant earn & burn with Miles



Pay with card

Or directly with miles



← Watches

🛒² Checkout 



More from Citizen →

Citizen Eco-Drive Official Red Arrows Watch

\$169.00 +170 Miles

 Buy now

 Add to bag

 **Seat Delivery**
Up to 1 hour before flight

 **Lounge Delivery**
Available

 **Home Delivery**
Available

Item Description

The UK Royal Air Force's Red Arrows display team is renowned for precision and professionalism. Citizen proudly mirrors their exacting standards with this incredible world time chronograph, which features a 1/5 second chronograph, a rotating slide rule bezel that shows the time

Continue the journey In-Flight

Online Shopping is about...





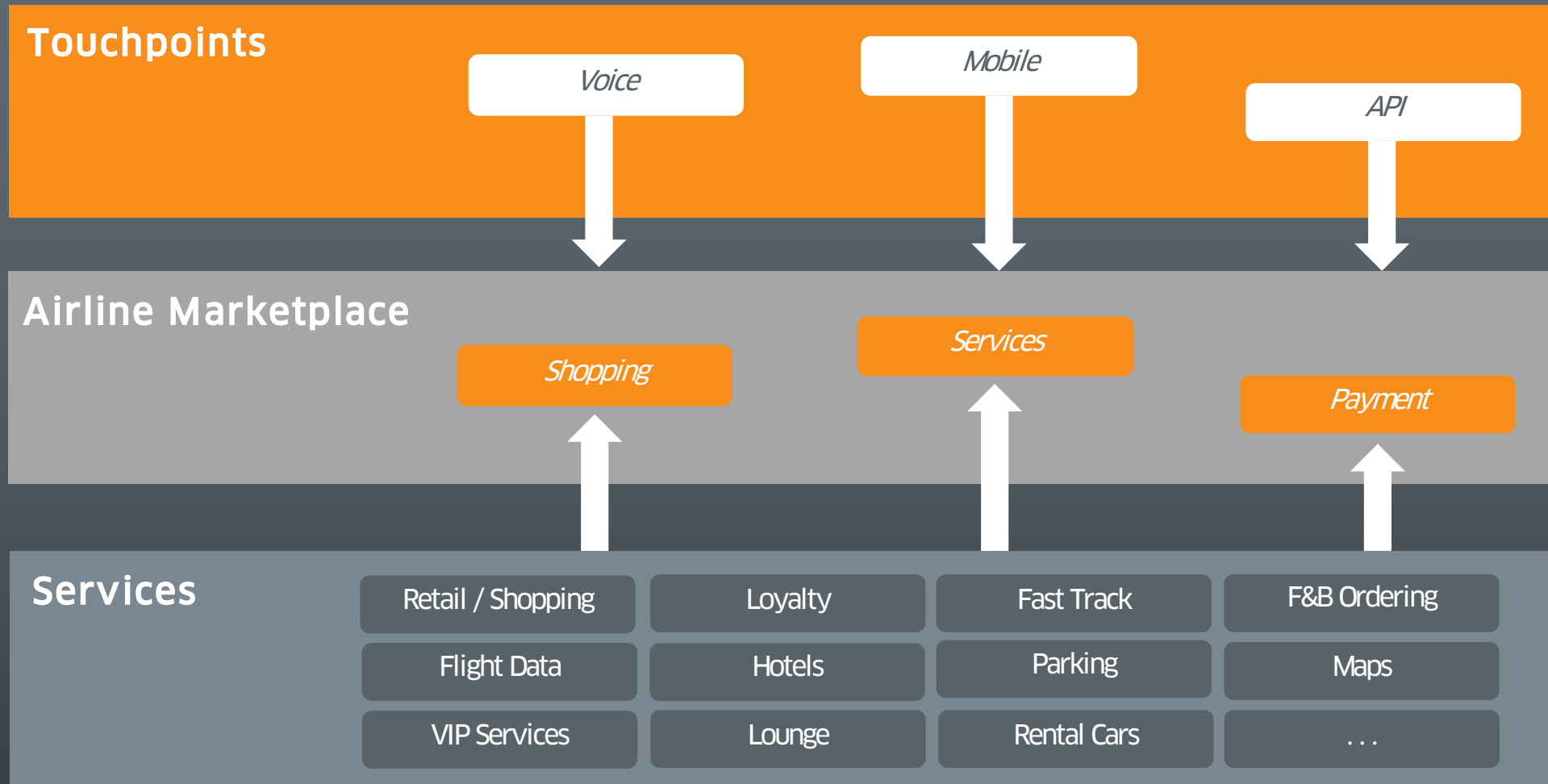
Passenger Experience



Non-Aviation Revenues



Everything Mobile – Everything at your fingertips



What would you think are best-sellers in digital travel retail?



Frankfurt Airport sold 5 premium Leica cameras online in February 2018 alone



Singapore Airlines makes more profit selling wine fridges than actual wine



Heathrow might be the only airport that can sell you a 35k JAEGER-LECOULTRE online

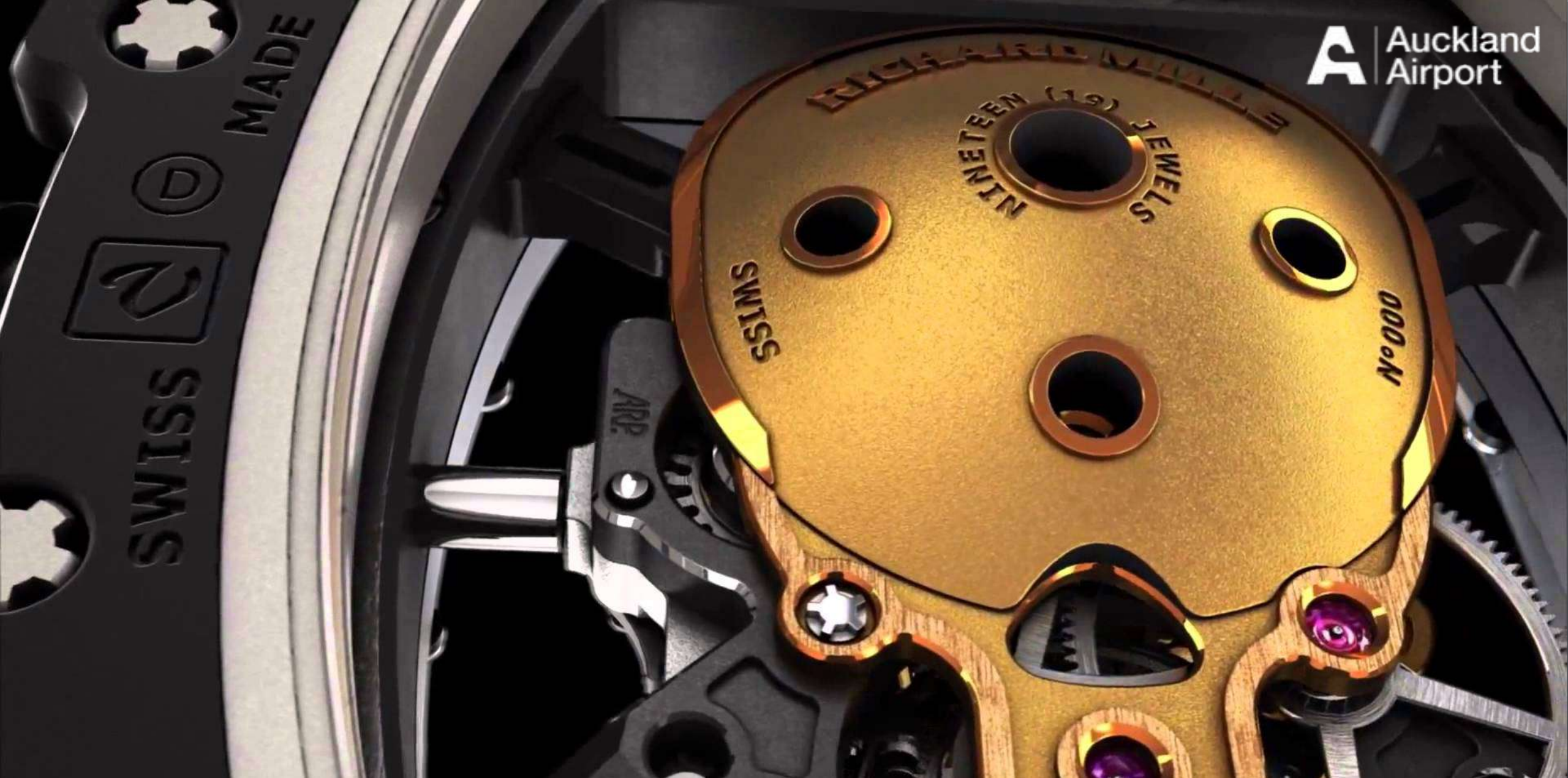


Heathrow
Making every journey better

While our TCP technology at Auckland Airport fulfills \$150+ million in downtown purchases



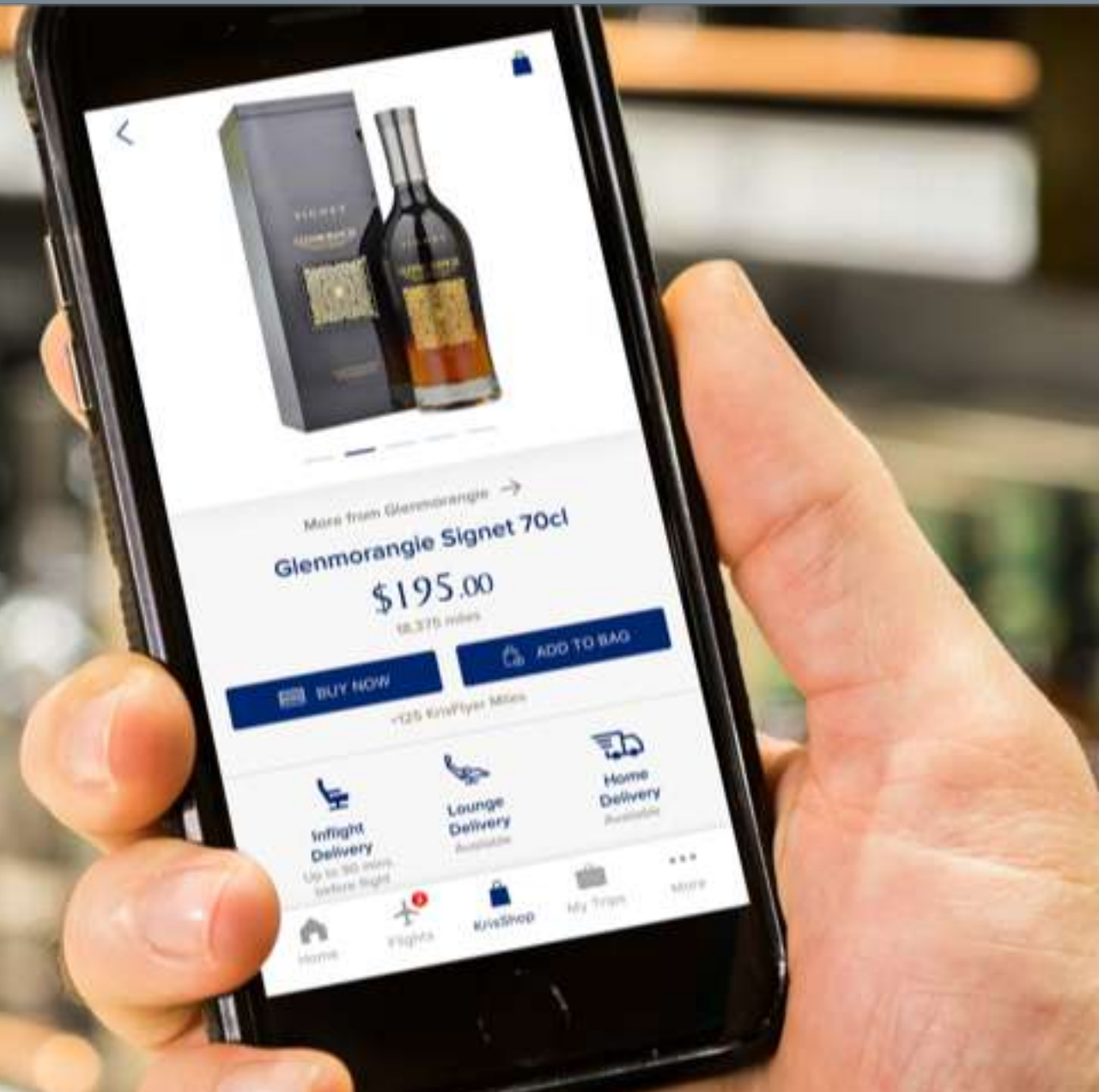
With the highest ever single watch purchase exceeding \$1.2 million!



Is it surprising many brands don't want to be sold like this anymore?



Digital won't replace physical travel retail, but it's where future growth lies...





Questions?

kian@aoe.com

© Mike Kelley





Maximizing Quality Revenue at a Customer Level

Brandon Meyers, CRO, ADARA

@meyersb brandon.meyers@adara.com

Why Are We Here?

There's a clear need for advancement in a company's ability to measure and optimize yield on a customer level.



How Do We Better Inform Both LT Customer Loyalty and ST Revenue Maximization?



How Do We Maximize Quality Revenue on a Customer Level?



What's Our Share of Wallet?

ADARA private & confidential



WHAT DOES A GDPR FUTURE LOOK LIKE?



Brands and marketers are held responsible to **do more with less**



Customer level engagement is the **answer** not the aftermath



Success comes through: **clarity, value, and diligence**

ADARA private & confidential



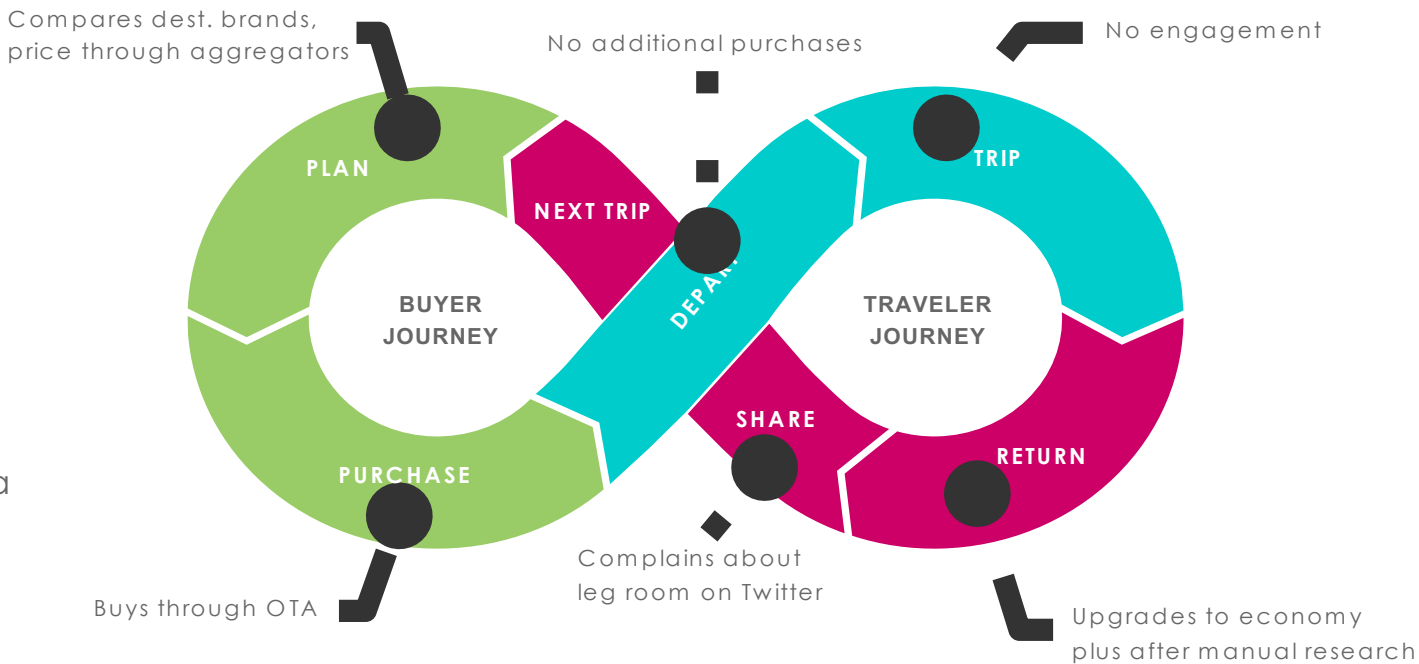
 ADARA



Maximizing Revenue: It's More Than Just Selling Seats



- Unknown traveler
- Limited Search & Trip Data
- Unknown avg purchase



TOTAL YIELD: \$500



Customer Level Connections Drive Business Value

85%

of travel consumers say personalized content has affected their purchase decisions *Source: Accenture Report 2017

61%

of marketing execs feel that they lack a clear roadmap to getting personalization right. *BCG study - May '17

PERSONALIZATION PROVIDES...

*Source: HBR - Nov 16

50%

Reduction in acquisition costs

5 - 15%

Lift in revenues

10 - 30%

Increase in marketing efficiency

Barriers To Quality Customer Connections



Lack of data, analysis, & technology



Disconnected media and marketing solutions



Incomplete measurement & view of effectiveness



ADARA private & confidential

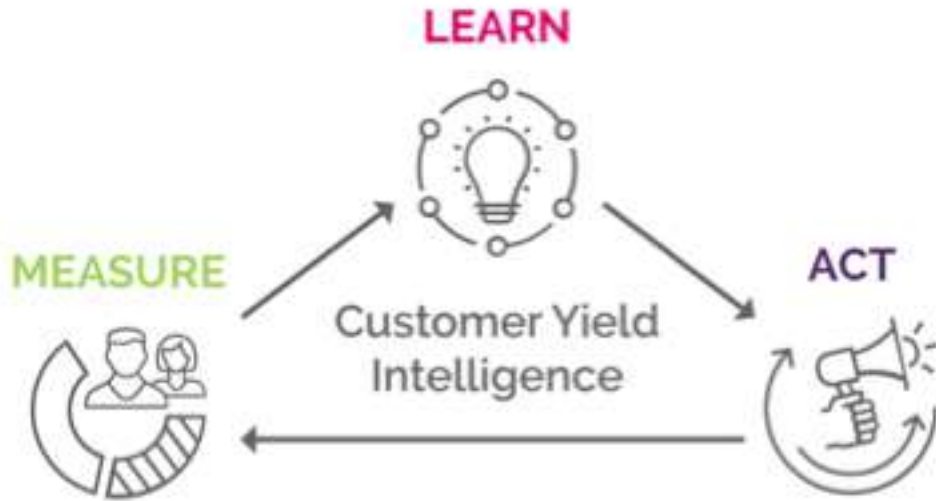




Introducing Customer Yield Intelligence

*Customer Yield Intelligence is an **evolutionary business approach** that enables travel brands to drive quality revenue and enhance yield at a customer level.*

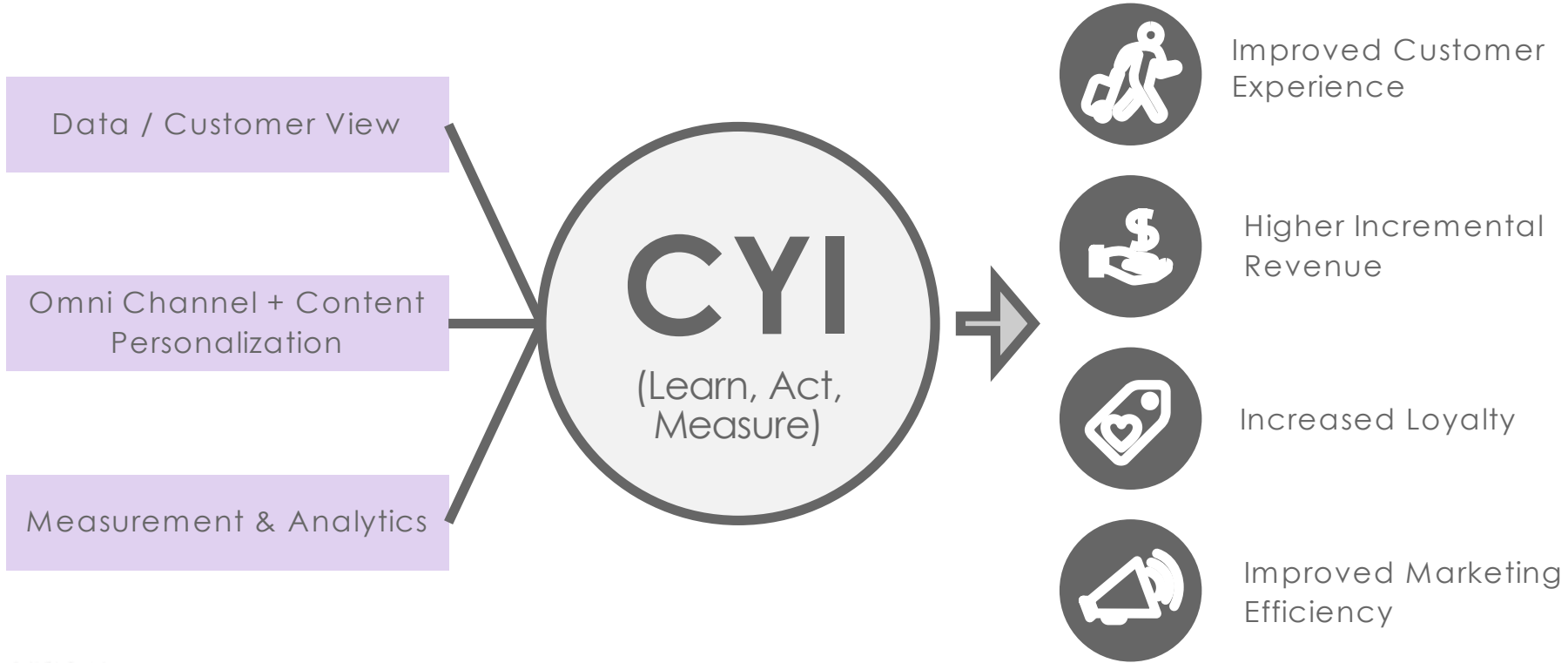
Core Pillars of Customer Yield Intelligence



ADARA private & confidential



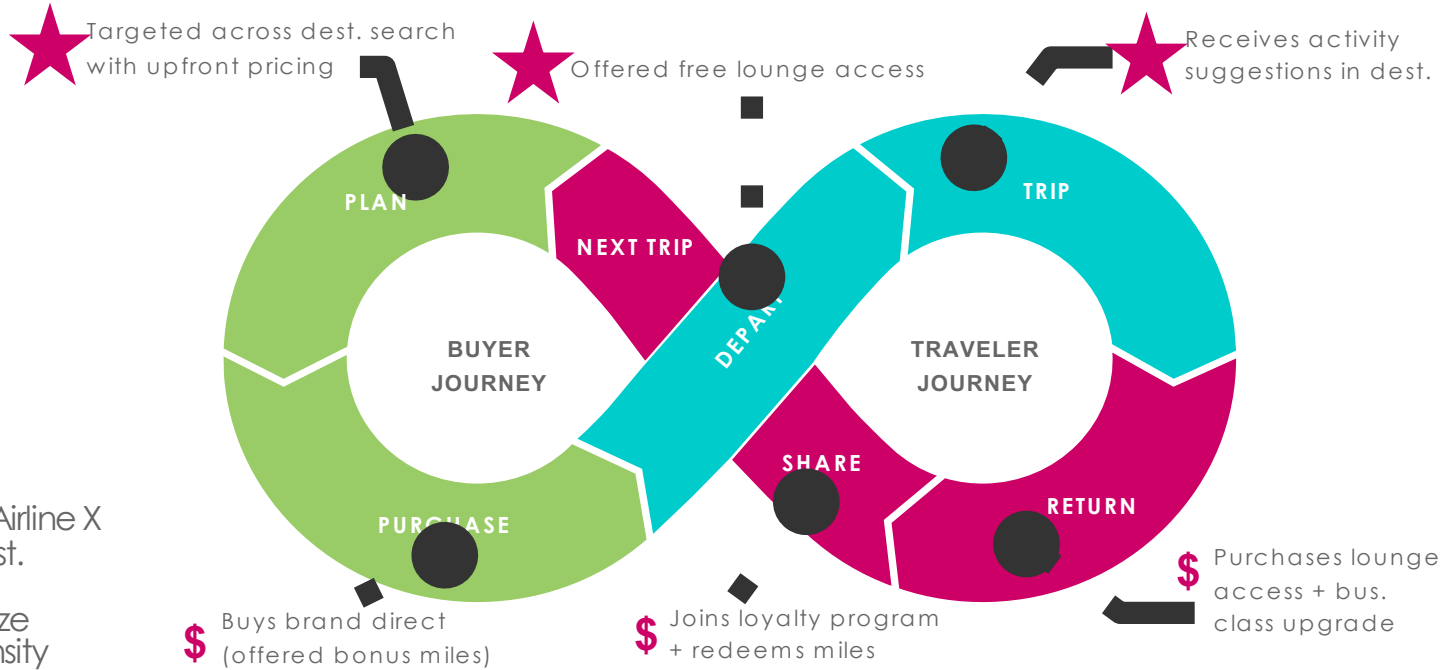
Companies Need an Integrated Approach to Maximizing Revenue at the Customer Level



Maximizing Revenue At A Customer Level



- Platinum Status with Airline X
- Dest./Activity/Alt. Dest. Search Data
- \$600 avg purchase size
- High ancillary propensity



TOTAL YIELD: \$750 + CLV

Examples In Market



Using Data & Technology To Achieve Personalization at Scale



Develop smarter, more effective media buying models and scale across all touchpoints in the customer journey



Combined contextual 1st & 3rd party data to create a predictive model with granular layers



More than twice as many bookings at same spend, and saw 40% lower cost per booking

ADARA private & confidential



Examples In Market



Using Data & Technology To Make The Booking Experience More Effective



Leverage 1st & 3rd party data to better understand each step of traveler journey



Adapted displays & product offerings put in front of travelers to drive direct-booking



Grown loyalty program to 69M+ members and seen record downloads of app

ADARA private & confidential



Examples In Market



Using Data & Technology To Deliver
A Personalized In-Flight Experience



Check-in Recognition Program
- Equipped attendants with
mobile seat-recognition tool



Identify details of passengers'
loyalty status, in-flight buying
habits and insight into past
experiences with the airline



Exceeded high-quality
traveler's expectations. Lift in
loyalty & revenue

ADARA private & confidential





Individual Traveler Engagement Meets Enterprise Impacts



Deeper
Customer
Understanding



Engage And
Persuade More
Quality Travelers



Measure And Maximize
Revenue At The
Customer Level



THANK YOU

@meyersb

brandon.meyers@adara.com



APPENDIX

Story Flow / Narrative

- 1) Customer Journey (Limitations to Inventory Based Approach)
- 2) Value of Driving Customer Level Connections
- 3) Barriers To Quality Customer Connections
- 4) The Solution: Introducing CYI Approach
- 5) CYI Framework: Learn. Act. Measure.
- 6) Outcomes of An Integrated Approach To Customer Level Connections
- 7) Customer Journey (Customer Level Approach)
- 8) Where We Are Headed

CONFERENCE TOPIC

How do you maximize quality revenue at a customer level?

- *The travel industry is undergoing a radical shift due to technological and data advancements which are changing customer behaviors and expectations.*
- *The airline industry is shifting from inventory to individuals as revenue maximization and yield optimization drivers. A winning strategy is no longer based on simply filling inventory. It is based on filling inventory with the right person, at the right time, at the right price to maximize the value beyond a single transaction and drive yield from lasting customers - not perishable inventory.*
- *ADARA's CRO, Brandon Meyers addresses how to leverage a shared data & people-based approach for smarter decision making at the customer level.*

Personalization Stats

78% of U.S. Internet users said personally relevant content from brands increases their purchase intent. - [link](#)

Increasing personalization in more channels can increase overall consumer spending up to 500%. - [link](#)

Personalization reduces acquisition costs as much as 50%, lifts revenues by 5-15%, and increases the efficiency of marketing spend by 10-30% - [link](#)

(96% of marketers agree that personalization helps to advance customer relationships)

88% think their prospects and customers expect a personalized experience

The majority (55%) of marketers feel that the industry is not currently getting personalization right

Only 30% are very or extremely satisfied with their current personalization efforts

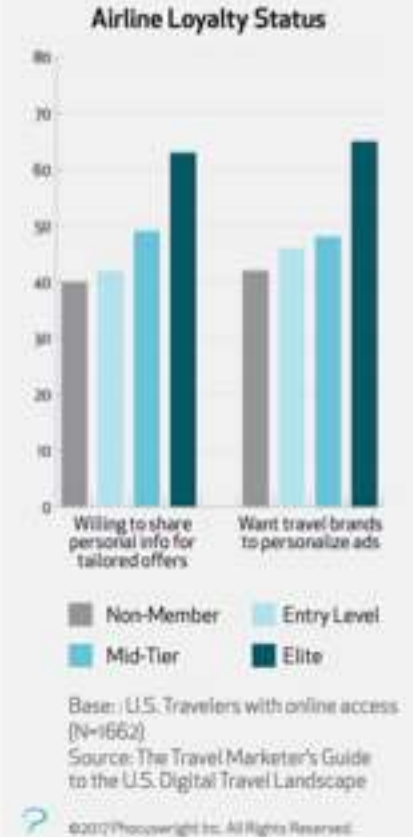
66% of marketers are seeing a 1-20% improvement in their KPIs from personalization - [link](#))

Phocuswright report stats

Travel marketers should benchmark their digital spend as a share of their total budgets against the industry-wide average of 61% as well as their competitive set. Are you ahead of – or behind – your competitors?

As online booking has grown, so has digital ad spend. Well over half of all travel marketing spend is now going to online channels. The industry-wide average for the U.S. travel market is 61%

Figure 15:
Traveler Attitudes on
Personalization & Sharing Data
by Loyalty Program Status



GDPR quote

“Airlines will also have to deal with privacy and data security, a hot-button issue in the EU—where the European Parliament recently enacted new data protection rules—and elsewhere. Customers’ privacy concerns are paramount; customers must see the benefit of giving up their personal information and know that the data is secure. If they see a clear benefit from an enhanced relationship, they will be more willing to share information. The burden will be on the airline to take a careful and progressive approach, to show tangible benefits early (and avoid any gaffes), and to make sure that the value customers see outweighs any possible concerns about the amount and sensitivity of the collected data. This is a difficult balance to strike, especially for international carriers, because customer attitudes toward privacy and security (not to mention local laws and regulations) vary significantly among jurisdictions.”

Personalization through Machine Learning

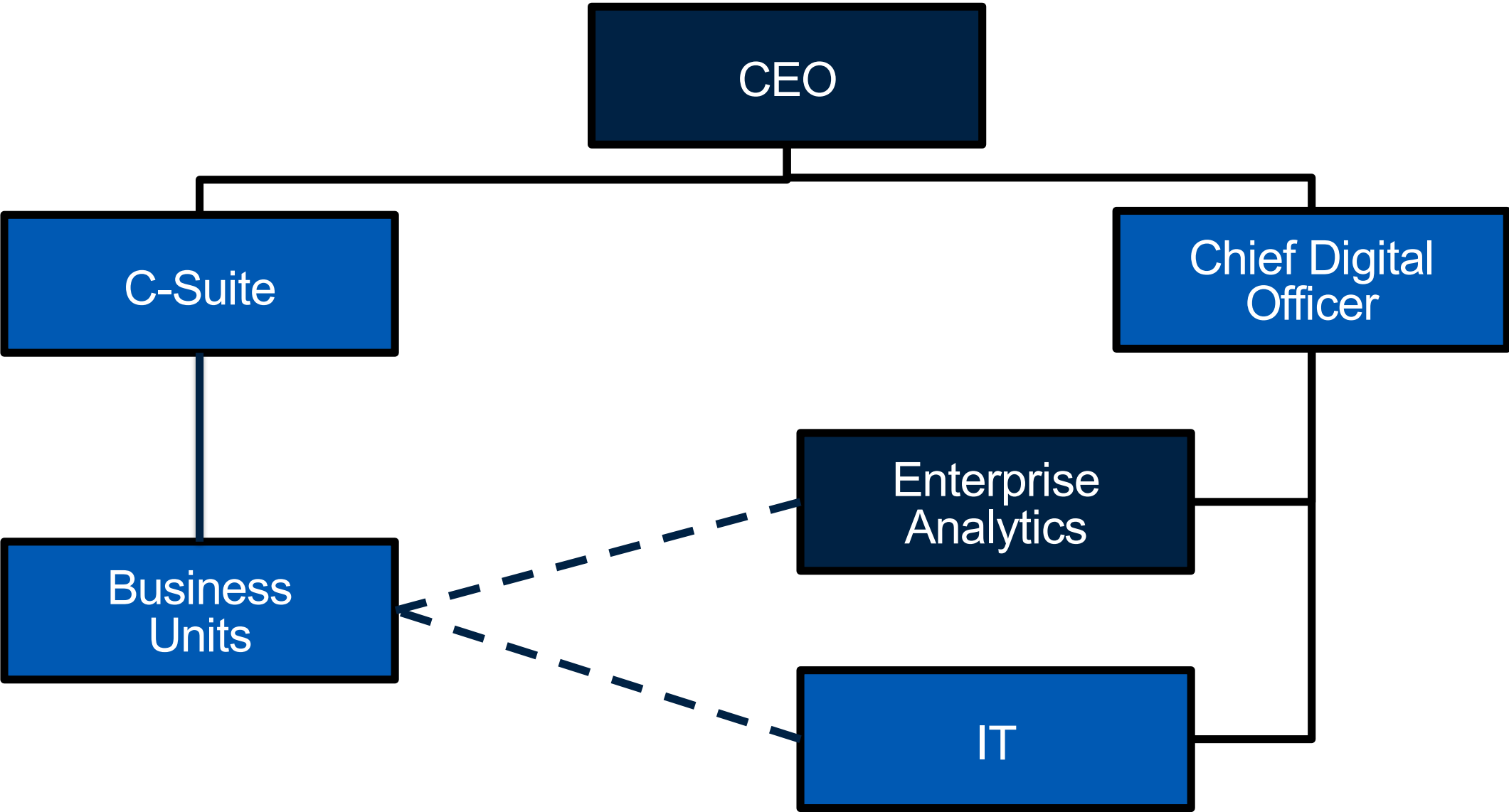
June 21, 2018



Agenda

- **Analytics at United**
- **ML & Personalization**
- **Case Study**

Machine Learning at United Airlines



Enterprise Analytics Projects



WiFi



Gate Bags



Cargo



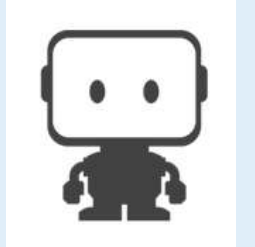
Maintenance Logs



Upgrades

Our Tech Stack

Modeling



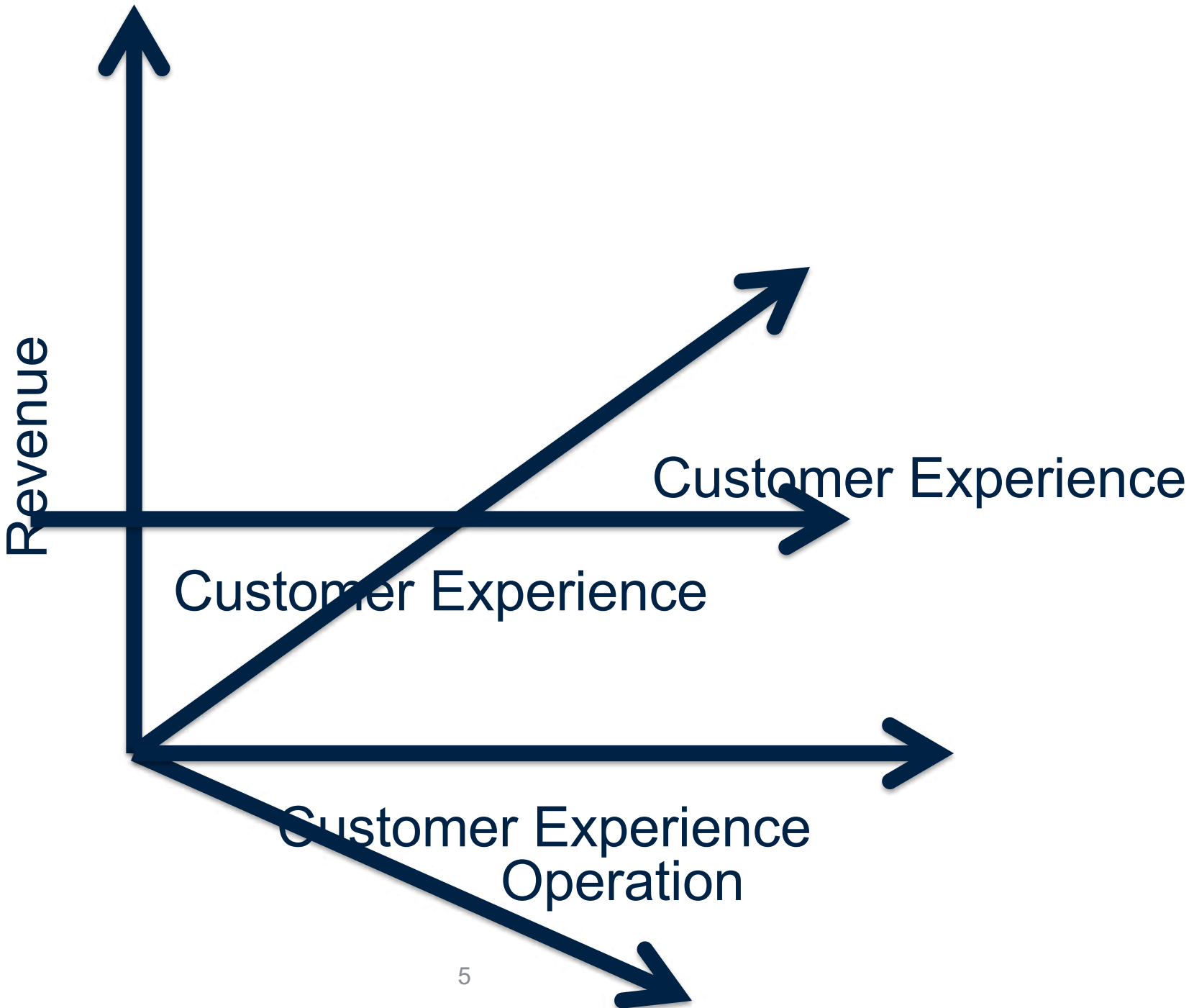
Data Processing



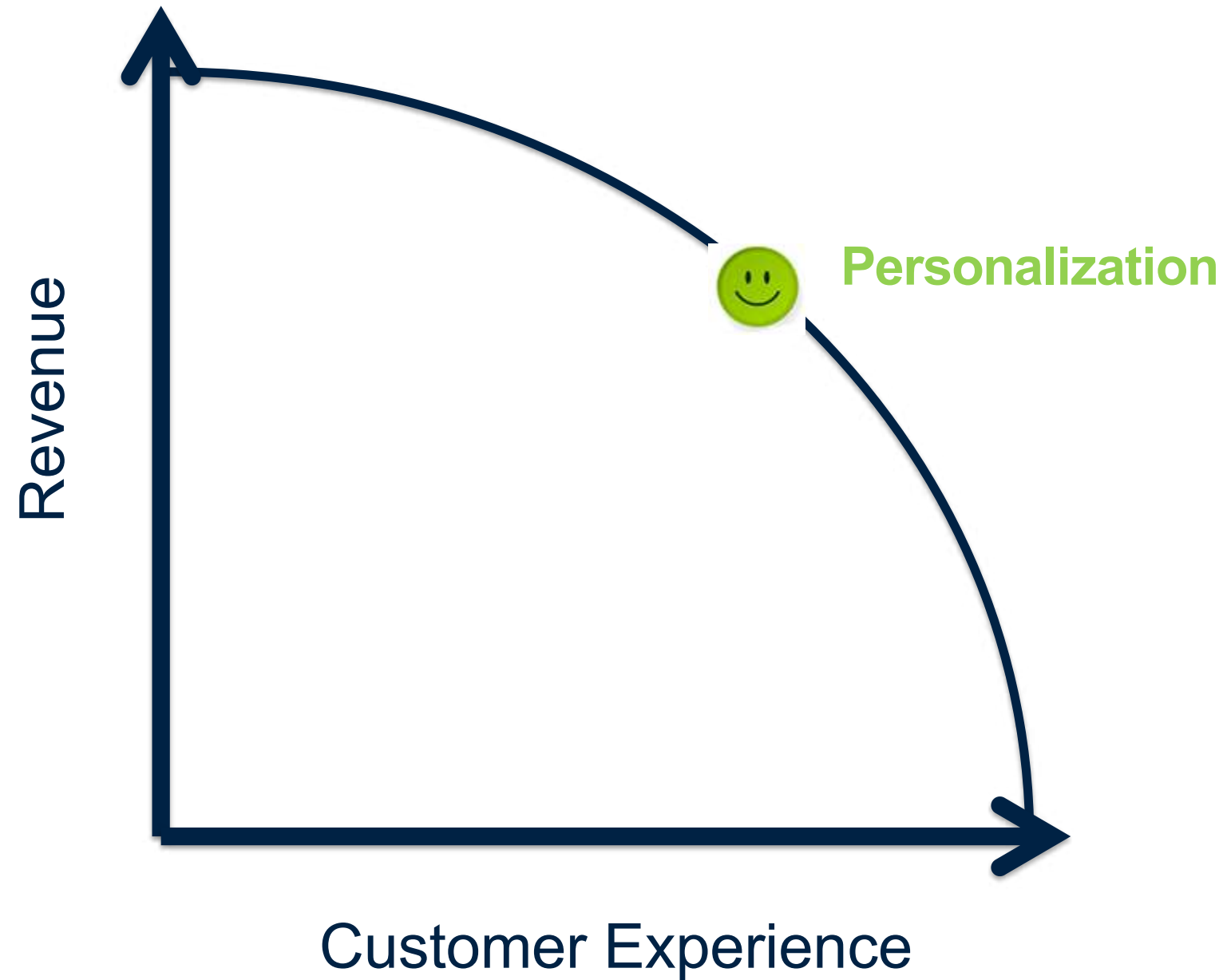
Data Storage



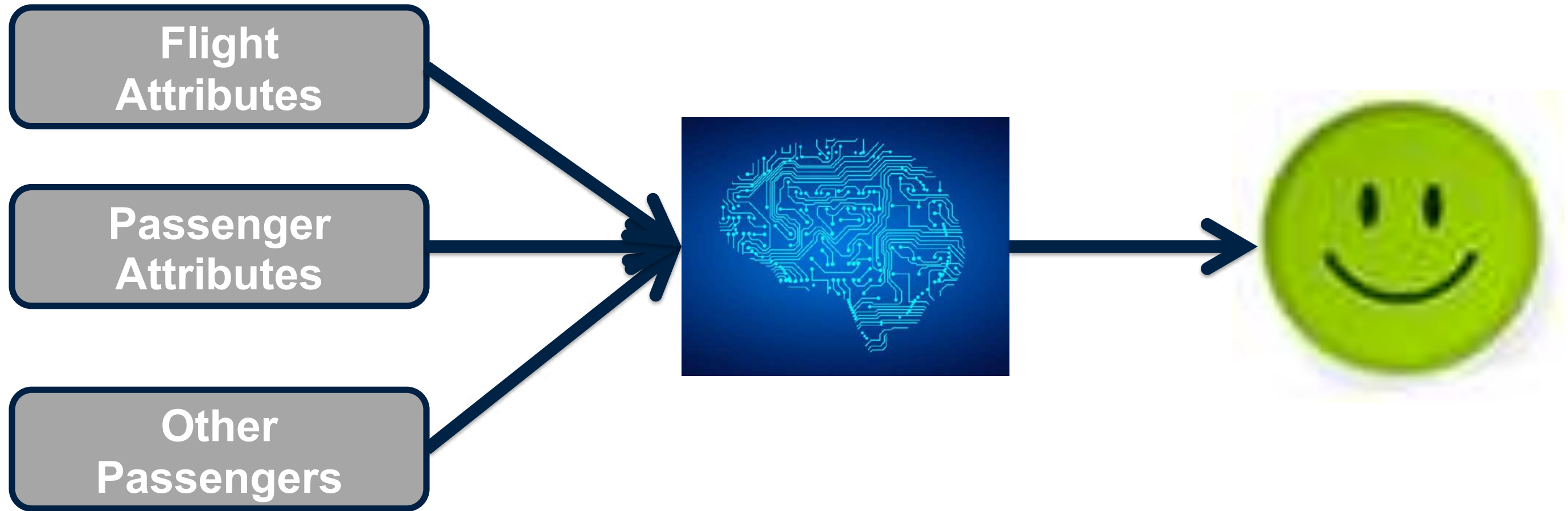
Airlines are Complex



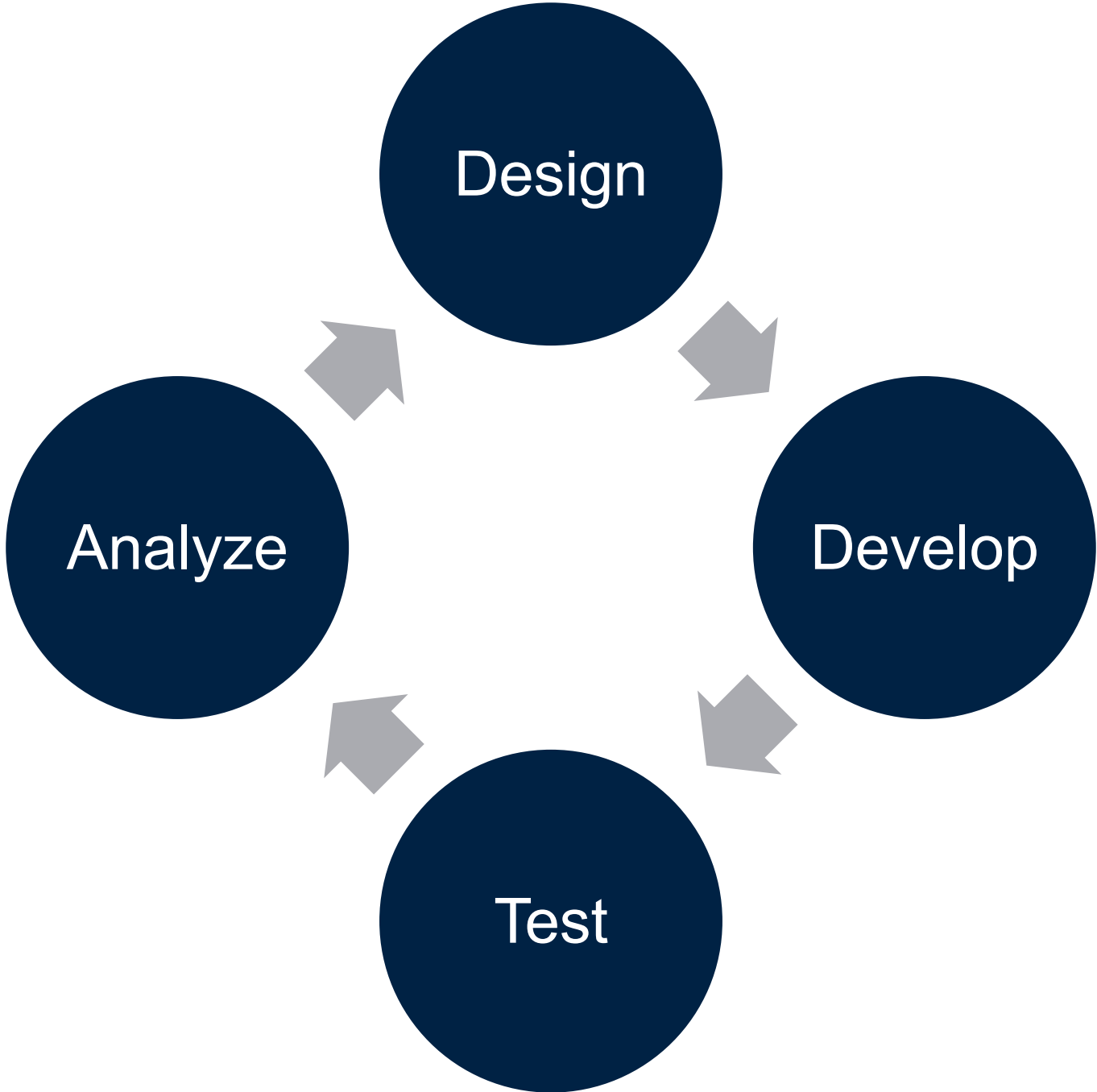
Personalization Drives Revenue and Satisfaction



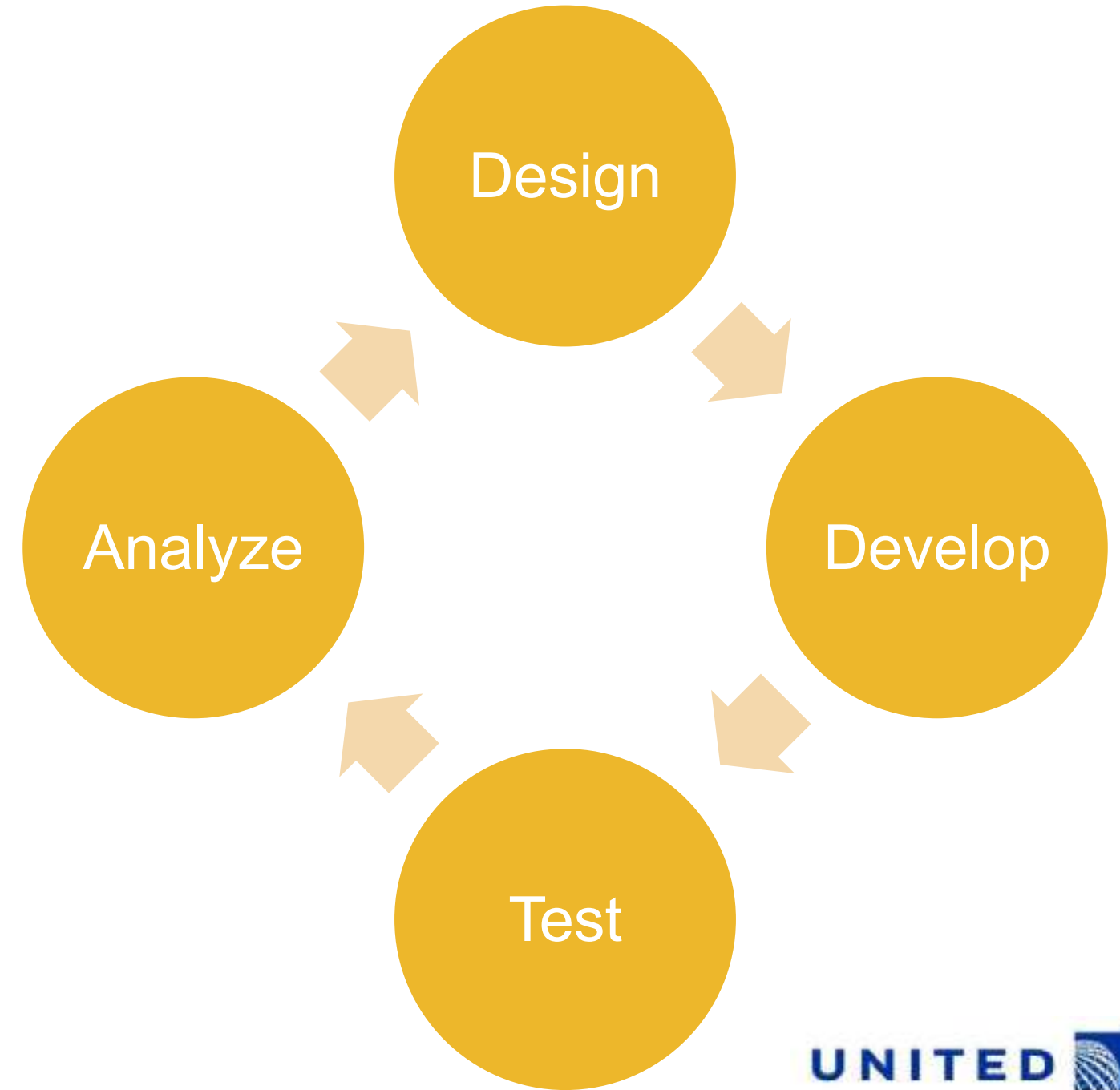
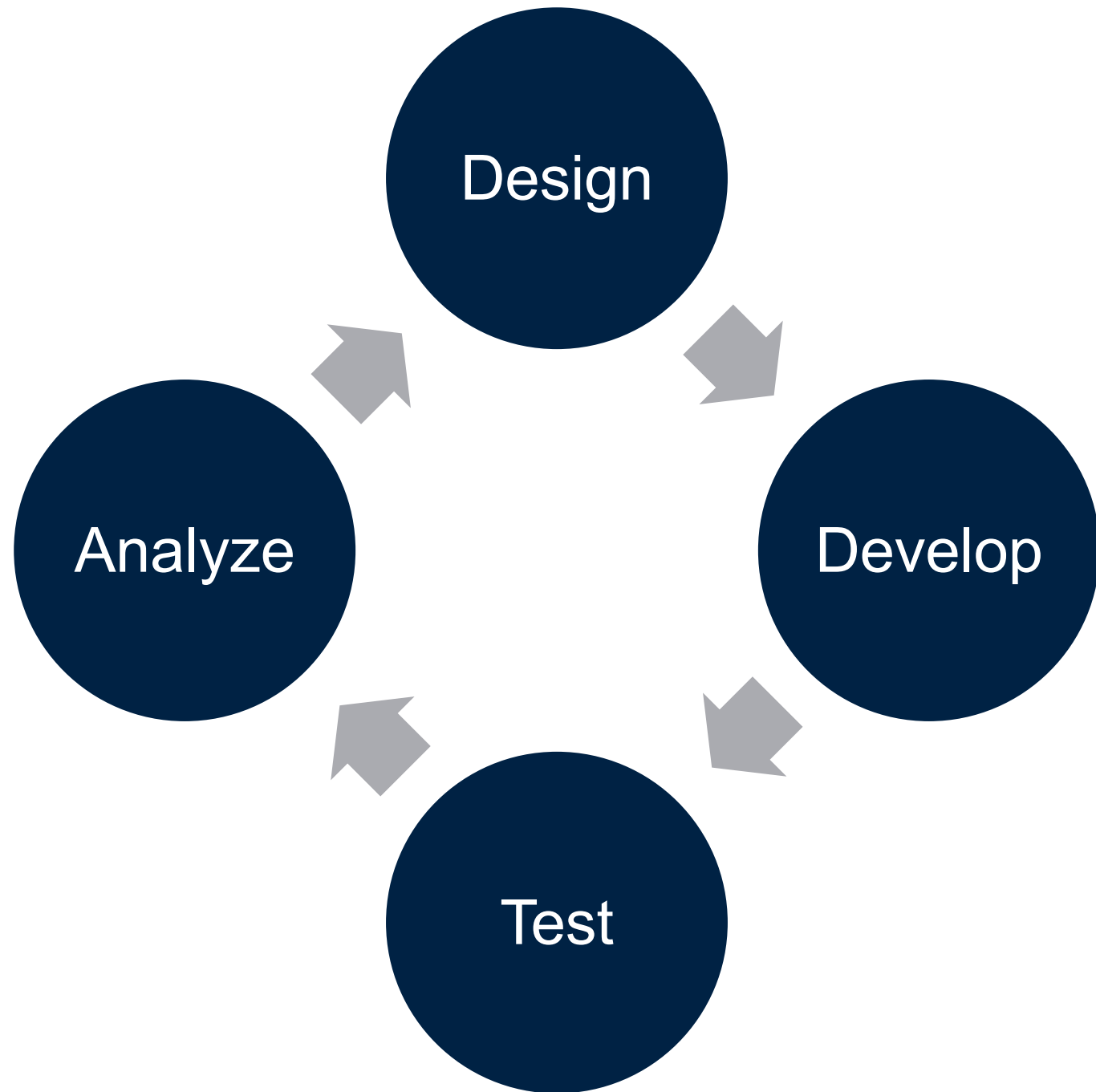
Personalization 101



The Model Life Cycle



...or Life Cycles



Personalized Search

Departure: Select your flight
Chicago, IL, US → New York, NY, US

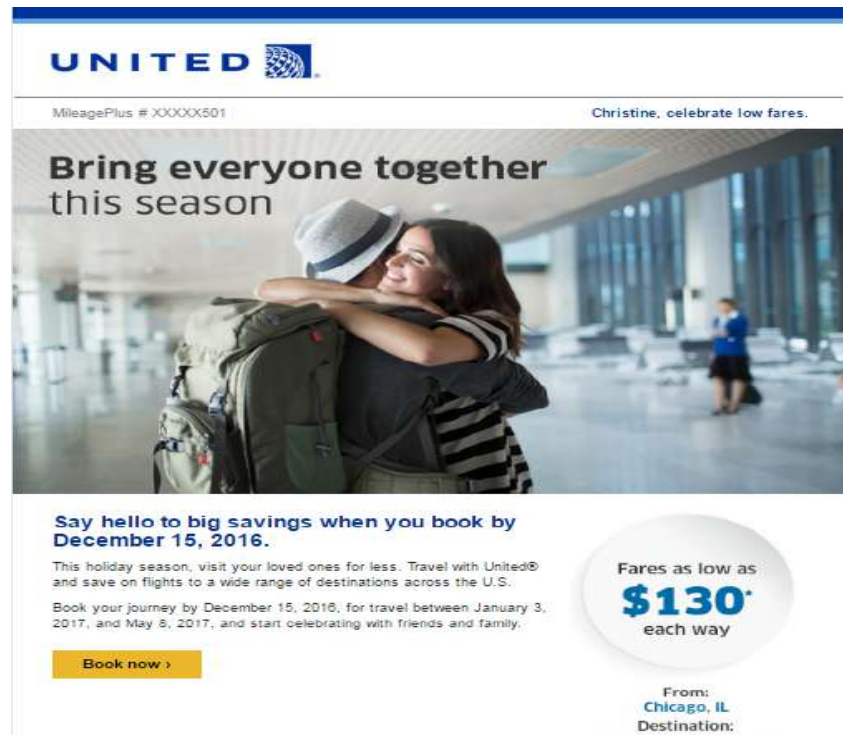
Fares are for the entire one-way trip, per person, and include taxes and fees.
Additional bag charges may apply.

Show fare type comparison ?

Depart	Arrive	Stops	Duration		Basic Economy (most restricted)	Economy	Economy (flexible)	First (lowest)
7:30 am	10:40 am	Nonstop	2h 10m	Details Seats	\$130 Select	\$155 Select 2 tickets left at this price	\$387 Select	\$436 Select 1 ticket left at this price
8:00 am	11:10 am	Nonstop	2h 10m	Details Seats	\$130 Select	\$155 Select 3 tickets left at this price	\$387 Select	\$340 Select 2 tickets left at this price
6:00 am	9:10 am	Nonstop	2h 10m	Details Seats	Not available	Not available	\$556 Select 3 tickets left at this price	\$1,132 Select 1 ticket left at this price
7:00 am	10:10 am	Nonstop	2h 10m	Details Seats	Not available	\$201 Select 2 tickets left at this price	\$387 Select	Not available
7:30 am	10:40 am	Nonstop	2h 10m	Details Seats	\$130 Select	\$155 Select 2 tickets left at this price	\$387 Select	\$436 Select 1 ticket left at this price

- **Why:** Seamless experience
- **Where:** United.com search
- **How:** Collaborative Filtering

Personalized Destinations



UNITED

MileagePlus # XXXXX501 Christine, celebrate low fares.

Bring everyone together this season

Say hello to big savings when you book by December 15, 2016.

This holiday season, visit your loved ones for less. Travel with United® and save on flights to a wide range of destinations across the U.S.

Book your journey by December 15, 2016, for travel between January 3, 2017, and May 8, 2017, and start celebrating with friends and family.

Fares as low as \$130* each way

From: Chicago, IL
Destination:

[Book now >](#)



Explore San Francisco now at prices starting from:

\$149

[Book your flight >](#)

- **Why:** Inspire travel
- **Where:** Homepage, United.com search, email, online advertising
- **How:** Collaborative Filtering

Personalized Ancillaries

Thu, Jul 19 2:40 pm Chicago, IL, US (ORD - O'Hare) → Fri, Jul 20 5:55 am Frankfurt, DE (FRA) Nonstop 8h 15m total

UA 944 Boeing 777-200

Non-Member

Bundle offer 1	Bundle offer 2
1. Economy Plus®	1. Economy Plus® 2. Premier Access®
+ \$205 per person	+ \$255 per person
Select	Select

Former Elite

Select Offer	Choice Offer
1. Economy Plus®	1. Economy Plus® 2. Extra checked bag
+ \$205 per person	+ \$290 per person
Select	Select

- **Why:** Simplify choice
- **Where:** United.com and mobile app booking path
- **How:** Bayesian Model, GBM

Conclusion

- Machine learning is becoming a fundamental tool at United
- Personalization is helping us improve the customer experience and drive incremental revenue



AIRLINE Passenger Sales

Sales is an integral part of a Commercial group and represents one of several levers to influence the acquisition of revenues.

The Passenger Sales organization in most airlines is charged with the responsibility of acquiring revenue by managing the business to business (B2B) relationships with third party sellers, resellers, and buyers of airline seats.

Buyers are traditionally defined as Corporate Managed Accounts (Banks, Telecom, Government, etc.).

Resellers are wholesalers, leisure and group accounts where contractual commitments are made to purchase airline seats.

Sellers are defined as travel agents, Online Travel Agents (OTA) any other distributor who actively sells airline seats directly to consumers.

Revenue acquisition directly with consumers is normally held within the commercial group under e-commerce, direct marketing, and loyalty programs, Call Center, and City Ticket Offices (CTO).

Sales Data in Channel Management

Marlene M. Garcia

June 20, 2018

Berlin, Germany

My Profile

39 years
in the airline industry

33 years
of Sales experience and responsibility

United Airlines

Our success depends on 87,000 people working together for one cause



13,000 Pilots



25,000 Flight Attendants



10,000 Technicians



28,000 Airport Personnel



10,000 Management



We fly more than 150 million people every year

The equivalent of ten Tokyo's



Coming from 56 countries



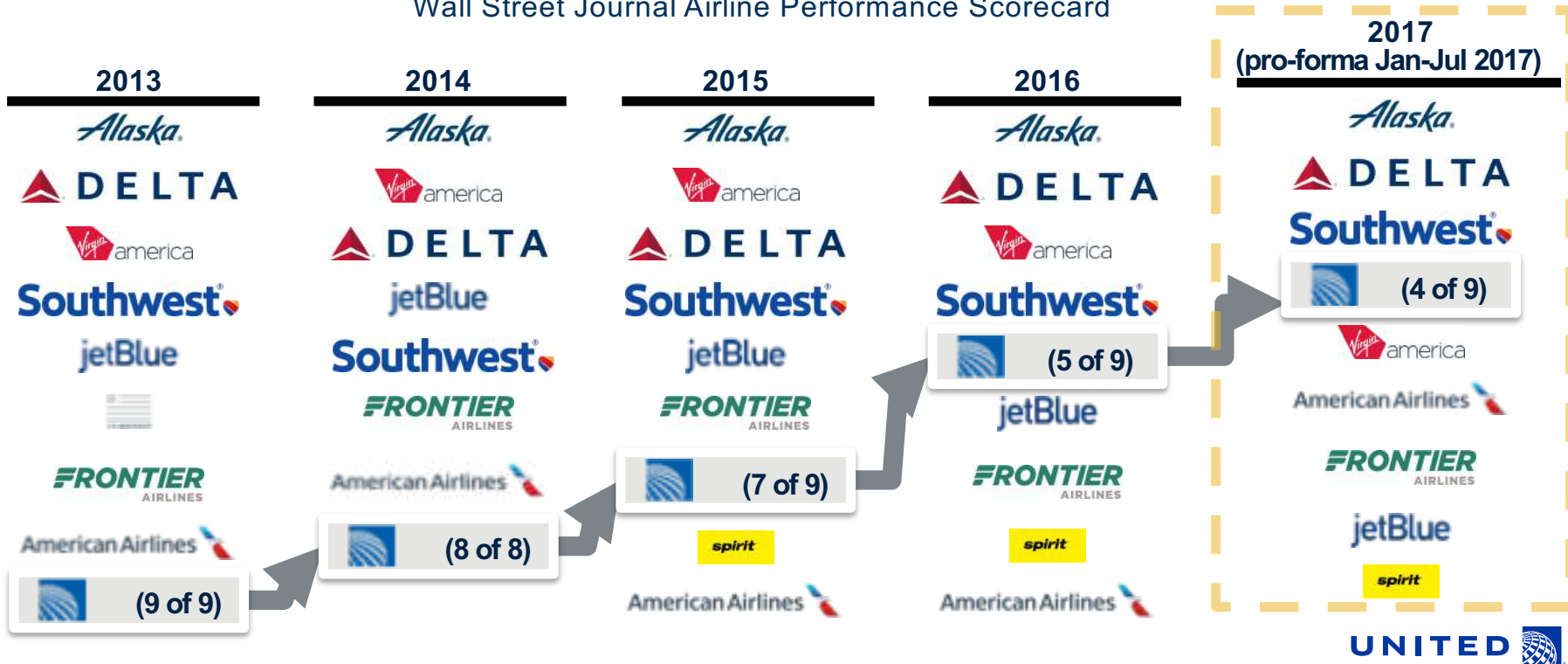
Flying 46 billion miles



Enough to fly a volleyball team to Pluto and back

We are making rapid progress toward our goal of being the best airline for operational reliability

Wall Street Journal Airline Performance Scorecard

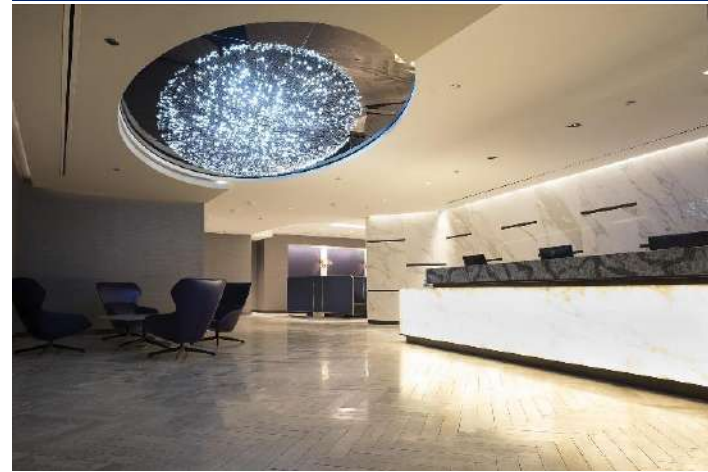


We are pioneering new products for our customers

In the air...



...and on the ground

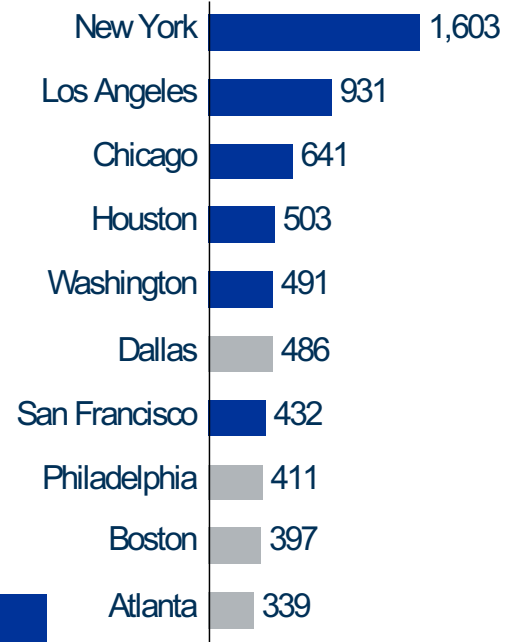


We serve our customers through our strategic hub locations

United Airlines' Hubs

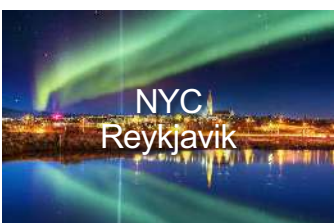
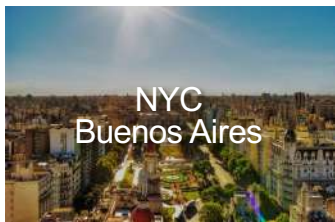
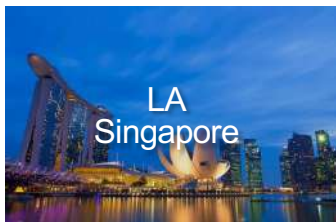
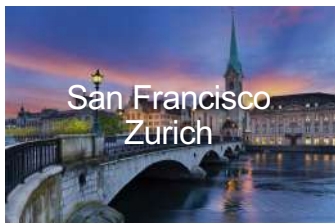
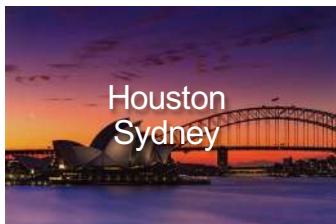


Top Metro Areas by GDP



But we're not resting on our laurels: we're investing in new planes, new markets, and a world class product

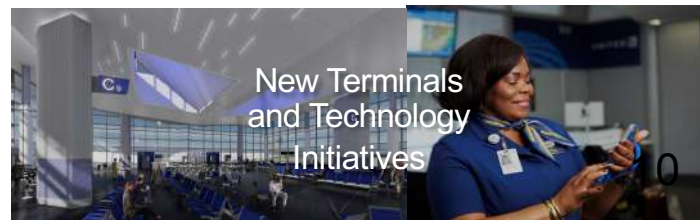
New Markets



New Planes



New Products

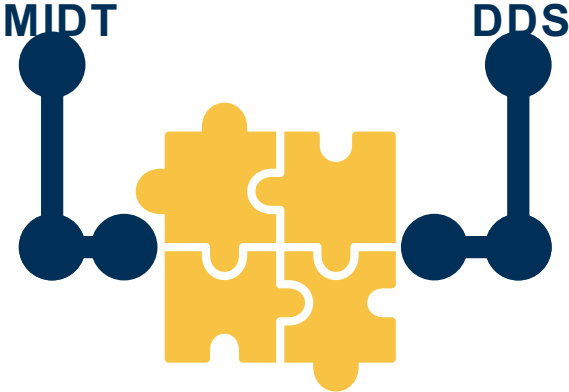


Sales Industry Data & Challenges

Most Used Sales Airline Industry Data Sources



TCN



QSI



Flown Revenue

Data Challenges and Gaps

Booking vs. Ticketed

Data Gap

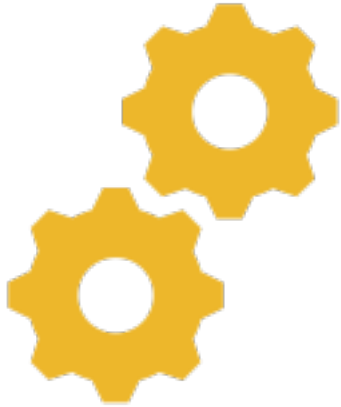
Monetized Value

Cost

O&D – Marketing/ Operating vs. Issue

Robust Data

Data Processing



Airline enterprise business intelligence



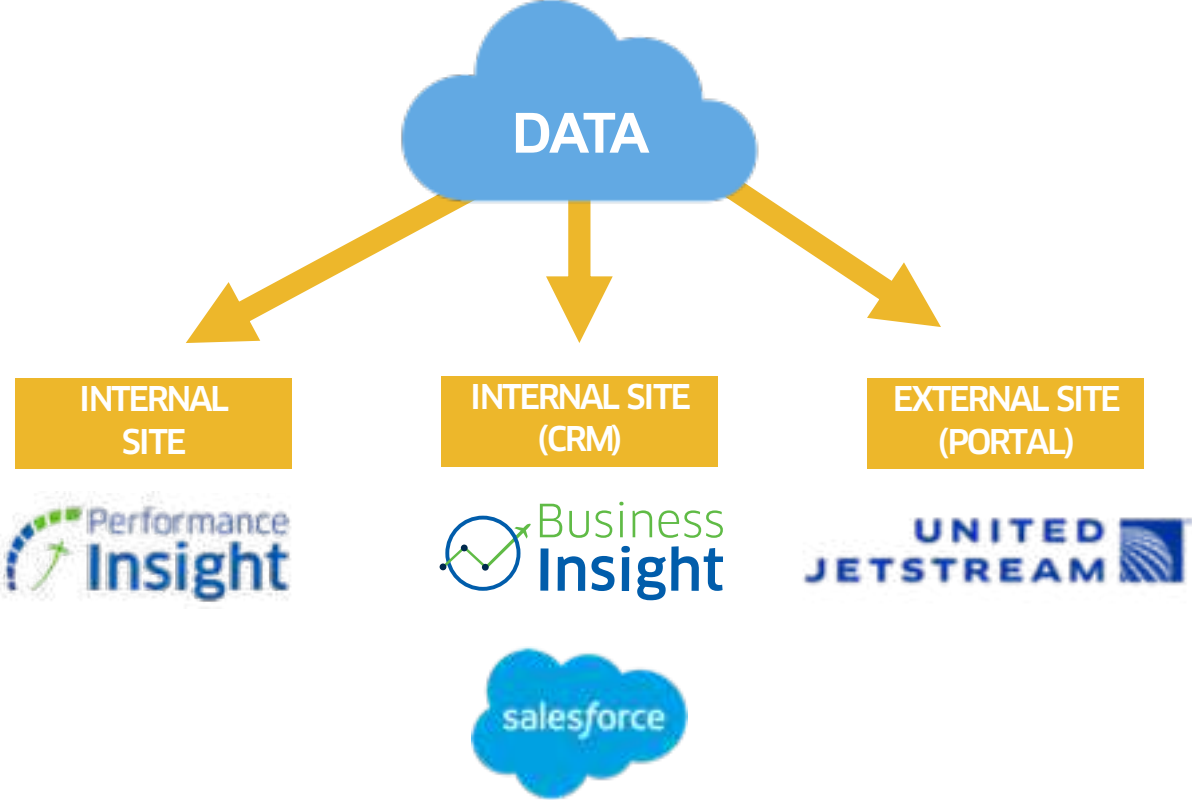
Business Intelligence

Sales engagement has changed

THEN



Solution tools





Performance Insight **UNITED**

Overview Analysis My Corporate Accounts My TMC Accounts



Welcome to Performance Insight

WANT TO SEE HOW YOUR COLLEAGUES ARE USING PI?
Here are a few ways your fellow sales colleagues have been using the new PI tool to assist them in their job. Have any great tips you would like to share on how PI saves you time and/or has helped you in your tactics?

Corporate Portfolio Summary



TMC Portfolio Summary



Performance Insight **UNITED** Member Center

Overview Analysis My Corporate Accounts My TMC Accounts TMC Contracts & Memberships

Select corporate account

256 Days to Contract Expiration

Performance Compliance Travel Patterns Account Profile Market Details



Building relationships. Sharing knowledge.

ENGAGING WITH OUR CUSTOMERS ON SOCIAL MEDIA



BUILD

Building a professional online presence. Be present, be visible, be found.



RESEARCH

Learning about our industry, our customers, and more via social channels.



ENGAGE

Engaging with our customers and industry experts to broaden and grow relationships.



SHARE

Creating and sharing relevant and engaging content to inform and inspire our followers.



Boeing 787 Dreamliner

About me



Moscow University Math Department
Russian Presidential Academy
London Business School



Finance
Online travel agency
Ecommerce chain
Aeroflot Russian Airlines



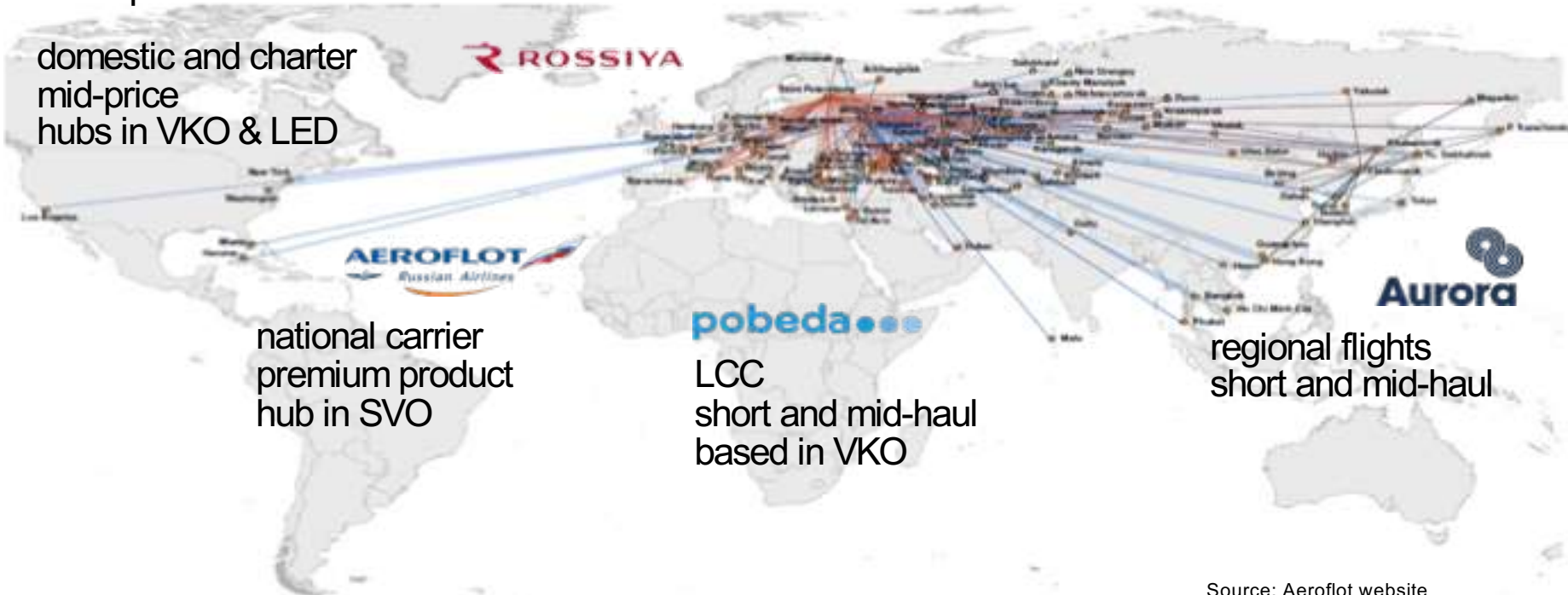
Aeroflot Group 2017 results&overview

50.1 mln passengers (+15.4% y-o-y)

130 222 mln RPK (+16.2% y-o-y)

158 unique destinations in **52** countries

domestic and charter
mid-price
hubs in VKO & LED



national carrier
premium product
hub in SVO

LCC
short and mid-haul
based in VKO

regional flights
short and mid-haul

Source: Aeroflot website

Definition for mathematicians:

“orthogonality is the generalization of the notion of perpendicularity to the linear algebra of bilinear forms”

Definition for business:

“new data that can be linked to already existing data set to improve understanding of the underlying processes and make better informed decisions”

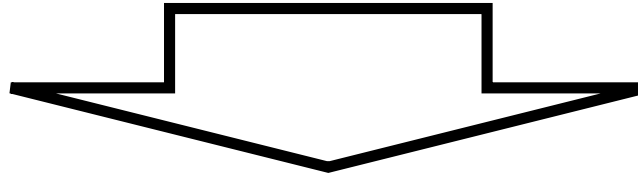
Data sources

PNRs
DCS
SAP
DDS IATA

VS

Channels

Direct online
Direct offline & callcenter
Agencies online
Agencies offline
TMC



Metrics

Periodic reporting & KPI
AdHoc reports

Data sources

PNRs
DCS
SAP
DDS IATA
Loyalty data

Channels

Direct online
Direct offline & callcenter
Agencies online
Agencies offline
TMC

VS

Channel Performance

New routes planning

O&D profitability

Cost of distribution

Competition response

Disruption plans

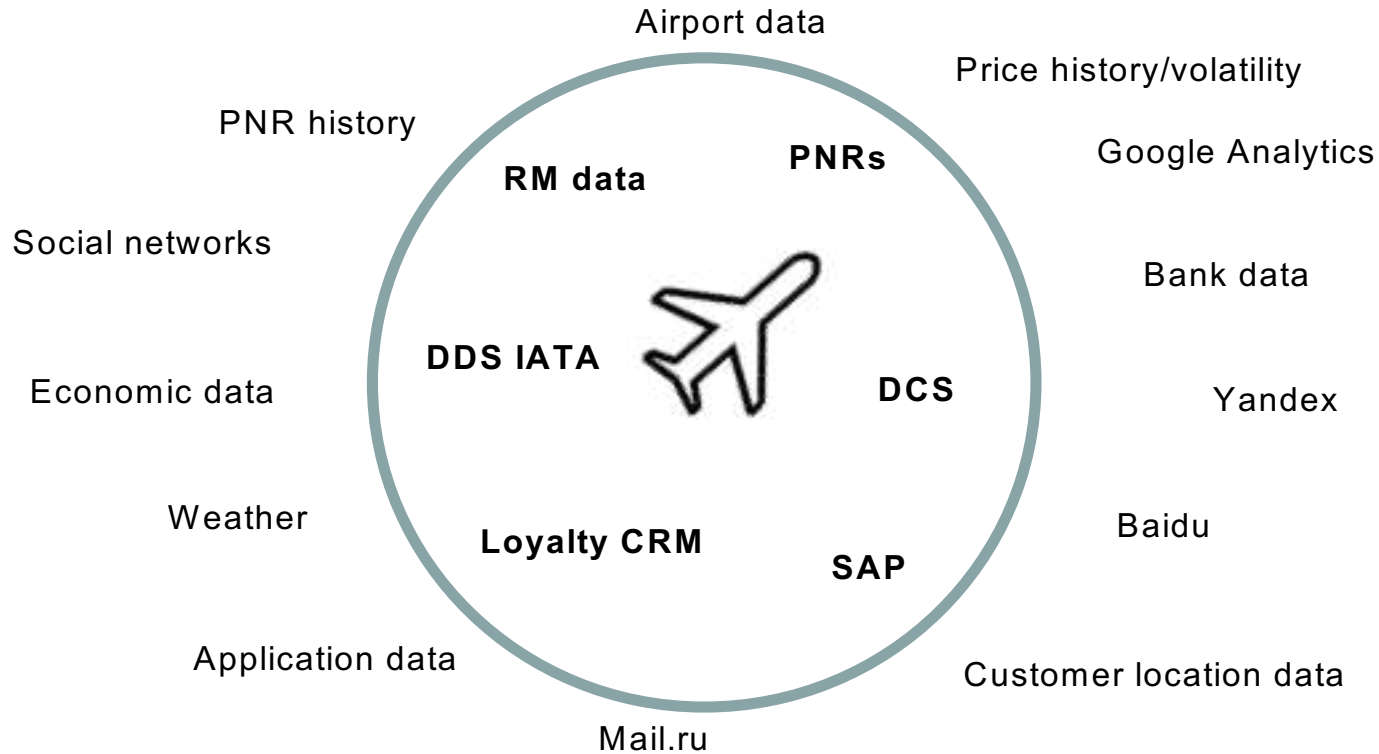


What new data do we need to make better decisions?

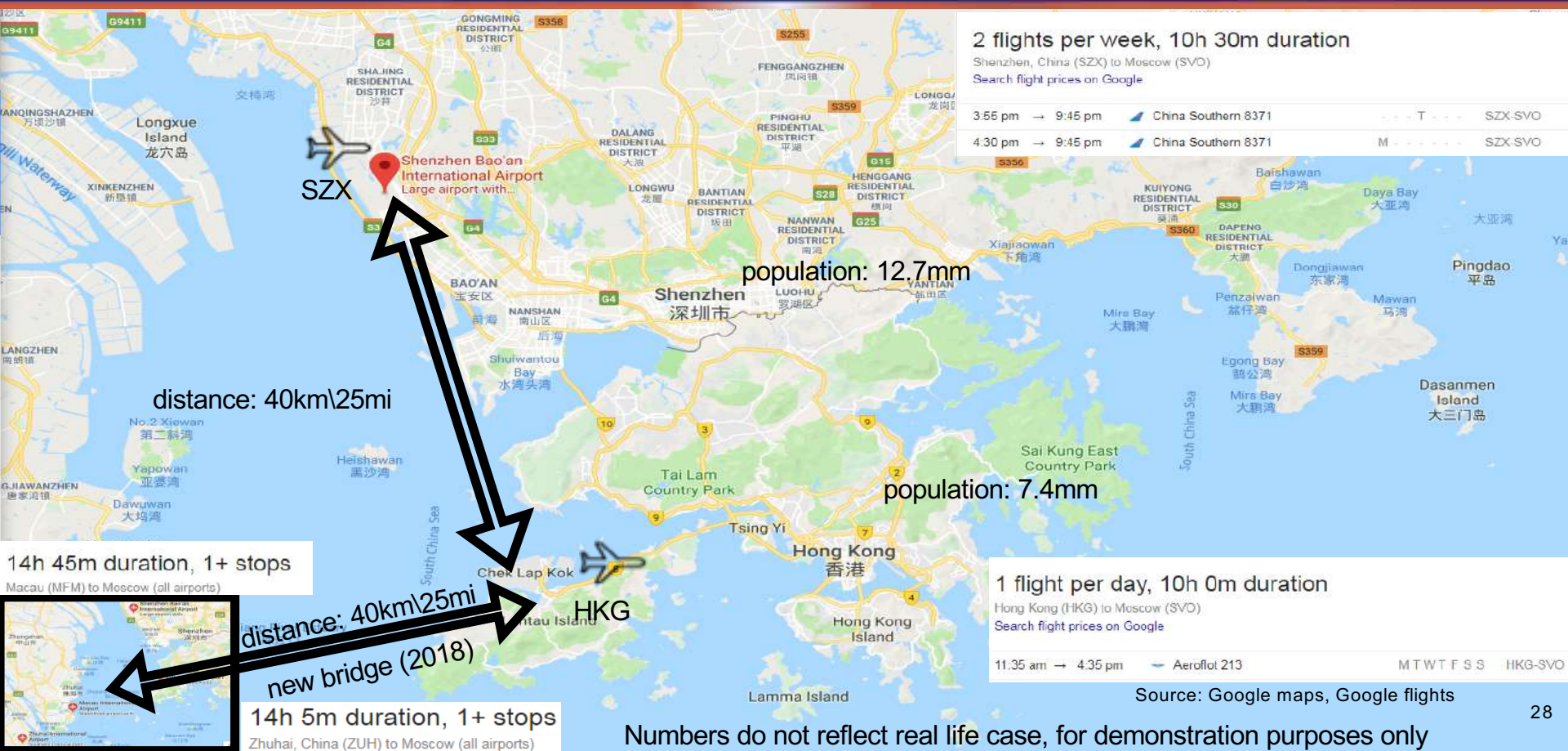
You are here



The galaxy of orthogonal data

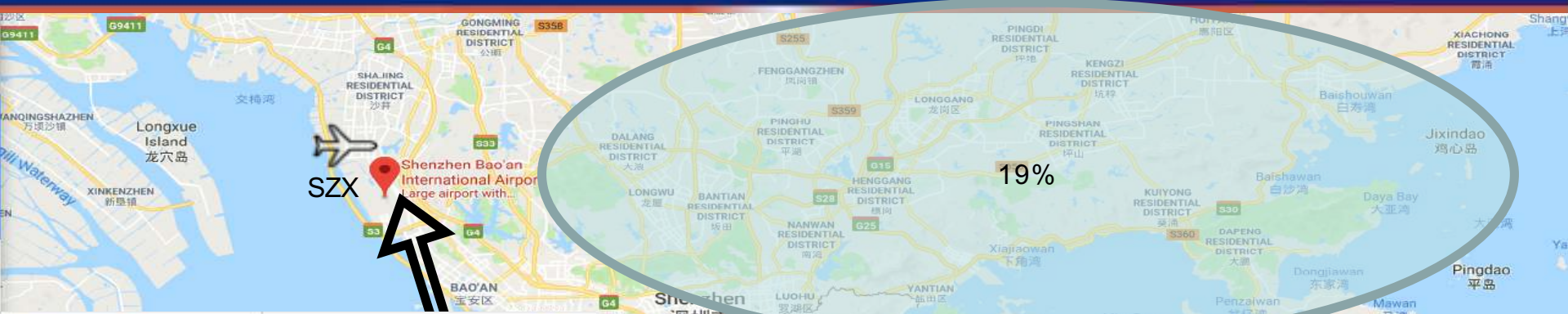


New office example with orthogonal data



Numbers do not reflect real life case, for demonstration purposes only

New office example with orthogonal data



Hong Kong	3 179
Shenzhen	786
Macau	205



Source: Google maps, Aeroflot

BEFORE bridge

Numbers do not reflect real life case, for demonstration purposes only

GDS history



AMERICAN AIRLINES
SABRE
Reservation System by **IBM**



Reservisor
American Airlines



Galileo™

Google

1939 1952 1962 1964 1971 1972 1985 1987 1990 1998

Sell and report
American Airlines

AXESS

Japan Airlines

ReserVec
Air Canada



amadeus

worldspan.

Source: companies websites

When did we start collecting or using data?



Collecting – from the very beginning.

At least last 10years of data available.

Are we using it? Is it in our DNA? How much data do we have?

From sharing to buying data?

What data should we buy?

What data do we need?

Have you asked your agents\TMCs about data?

Identify new data source

Acquire new data

Clean, check and link

Use new data

Share and benefit

Retire\recycle data source

Other things to consider

NDC

One order

GDPR

IATA Airline Data Model

Oracle Industry Data Model

Thank you!



Konstantin Demanov
Deputy Sales Director
Aeroflot Russian Airlines
kdemanov@aeroflot.ru



Passenger Distribution & Sales Panel:

Sales Data Usage in Effective Channel Management

Moderator:

➤ **Marc Rosenberg**, President, STRATACONNEX and retired Air Canada VP Sales and Distribution

Panelists:

➤ **Marlene M. Garcia**, Director Sales Information Systems, Sales, United Airlines

➤ **Konstantin V. Demanov**, Deputy Director of Sales, Aeroflot Russian Airlines

➤ **Emre Pekesen**, SVP Sales and Network Planning, Pegasus Airlines

Accelya

Effective data usage in sales channel management, and future of channel management

Berlin, 19th of June 2018

accelya

Last Century.....

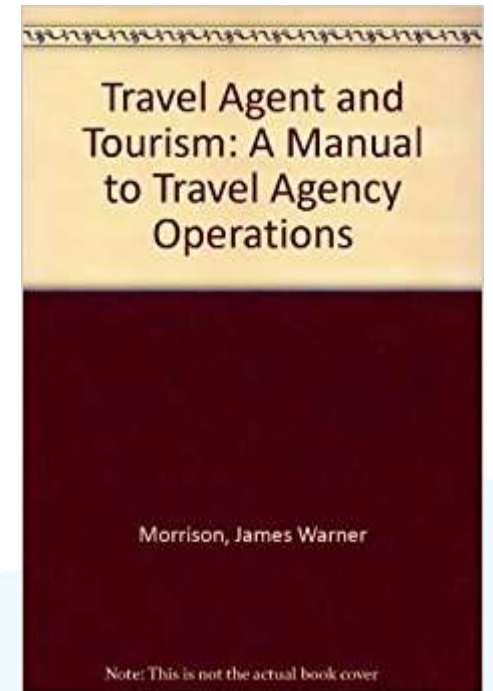


accelya

A world of Legacy Carriers



And Traditional Travel Agencies...



And no less traditional travellers....



Beginning of the new Century until now...



Legacy Carriers still...



But some guys have joined the party....



TMC, Travel Agents, OTAs, Airline.com



HRG™



BCD travel



accelya



BLUEBIZ

Some figures...



80+ Million pax per annum



130+ Million pax per annum



50+ Million pax per annum



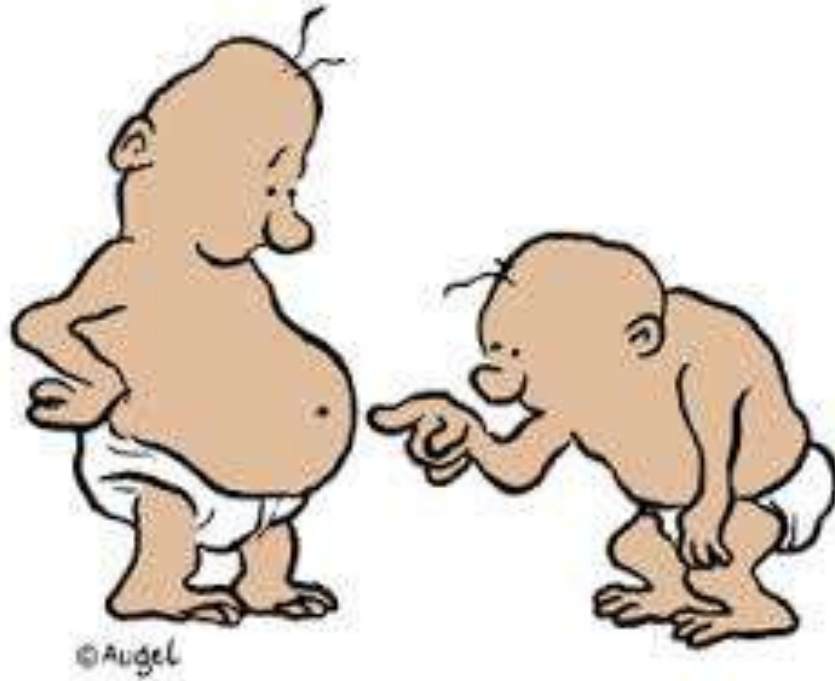
50+ Million pax per annum




40+ Million pax per annum

What happened?

Data Analysis....



A photograph of a desert landscape. A paved road with two yellow lines runs from the bottom center towards the horizon. The road is flanked by sandy dunes and sparse, low-lying desert vegetation. The sky is a clear, bright blue. A large, semi-transparent red rectangular box is overlaid on the middle of the image, containing white text.

Wherever I see people doing something the way it's always been done, the way it's 'supposed' to be done, following the same old trends, well, that's just a big red flag to me to go look somewhere else.

Mark Cuban

quotation

Looking to the future...



accelya

Oups... sorry...wrong slide..



Are We In Continuous Evolution Or Beginning Of Revolution



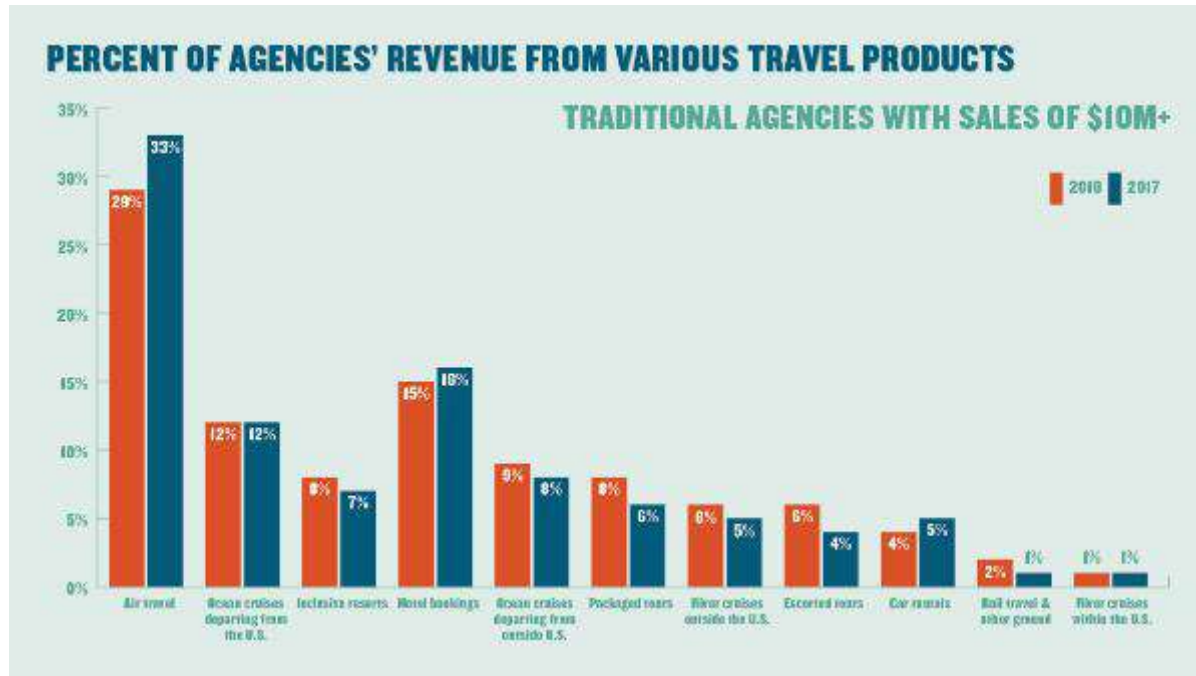
A few questions

Are the Travel Air Bookings declining on Travel Agents Sales?

NO?

YES?

Answer



“Travel agency air bookings up 6.3% for Amadeus”

Thursday, March 1, 2018

Posted by Travelweek Group

A few questions

What is the % of Online Travel bookings in the US?



Answer

30%

Article “The Relationship Between Airlines and Online Travel Agencies (OTAs)”, Yieldr, Ryan D'Souza

A few questions

What is the % of Online Travel bookings in China?



Answer

“Distribution in China Is Almost Entirely Through OTAs”

77,5%

Article “The Relationship Between Airlines and Online Travel Agencies (OTAs)”, Yieldr, Ryan D'Souza

A few questions

How many Millennials intend to use the services of a Travel Agent in the next two years?

More%?

17%?

18%?



Answer

**“Millennials Are Relying on Travel Agents
in Record Numbers”**

33%

TRAVEL+LEISURE
Christopher Tkaczyk August 29, 2017

A few questions

What is the % of Bleisure Travel in Business Travel?

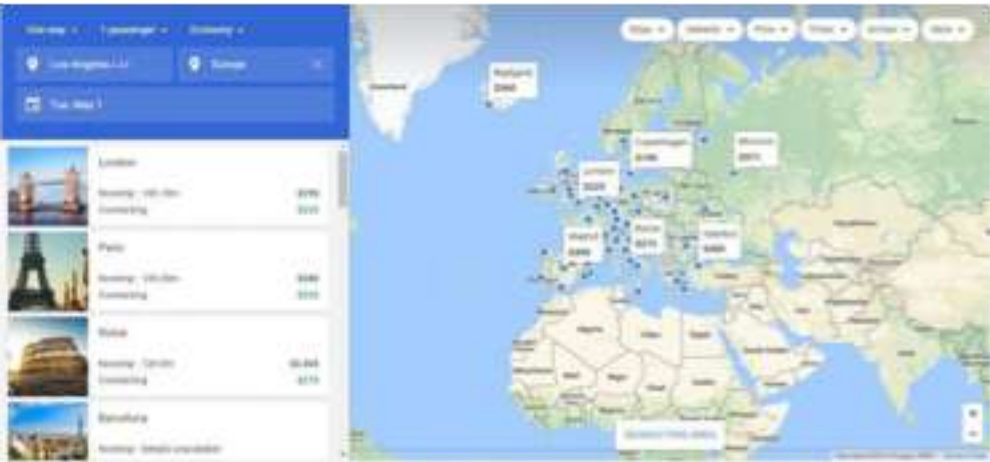


Answer

49%

According to Booking.com, 49% of business travellers have extended their business trips to further enjoy their destination

What the future holds....



ONE Order

Last questions....

What does it mean for Airlines?

What does it mean for TMCs?

What does it mean for OTAs

New Business Relationships



New offer



New Technology



Thank you for your time



Data analysis - getting the full picture with simulation

Pains and gains in data analysis - Are you seeing the full picture?

Dr. Michael Frank, Opremic solutions GmbH

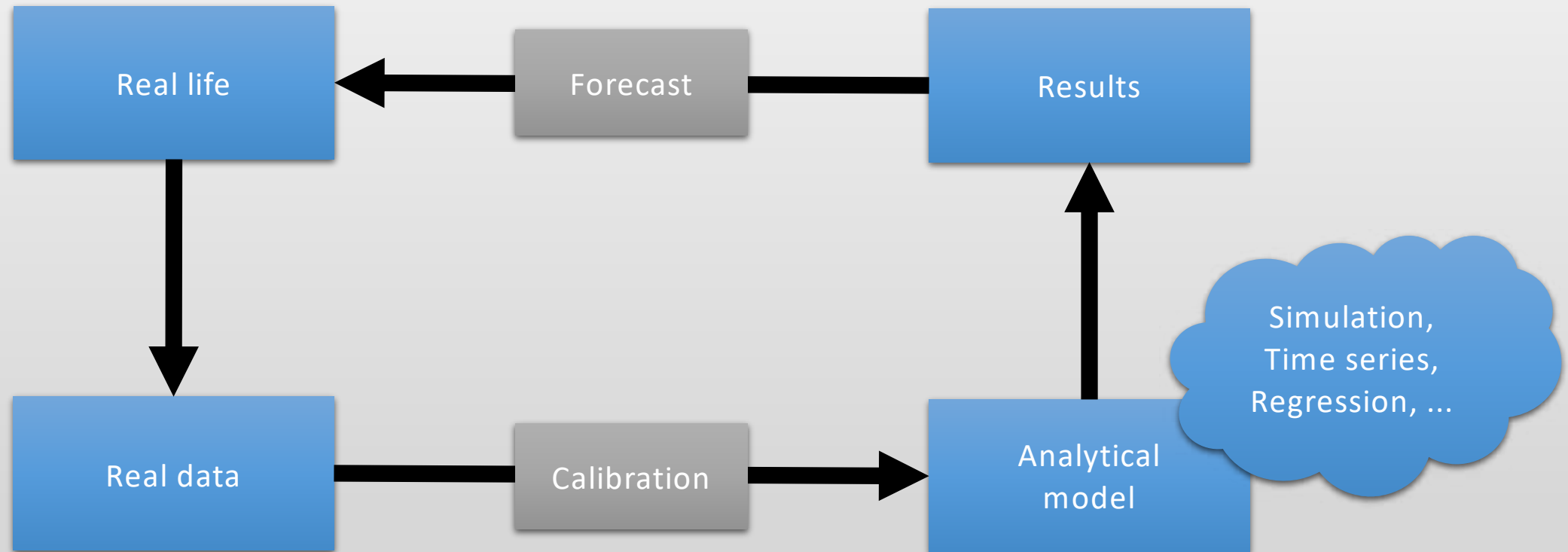
We cannot get the full picture from data alone



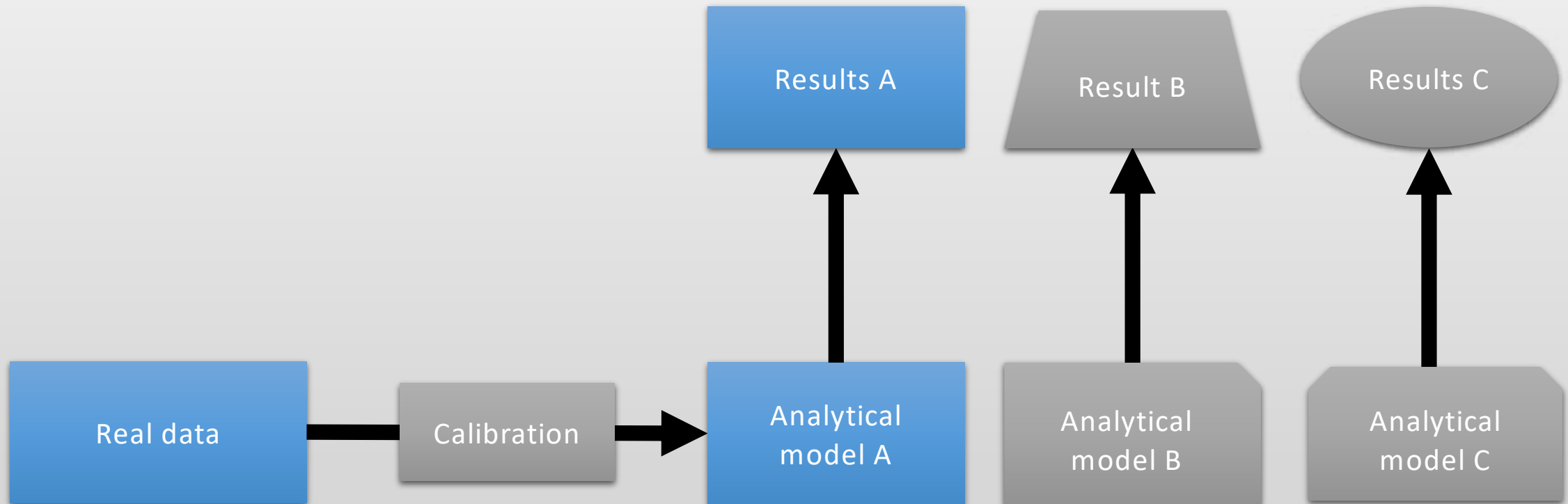
A test case is usually a very bad idea ...



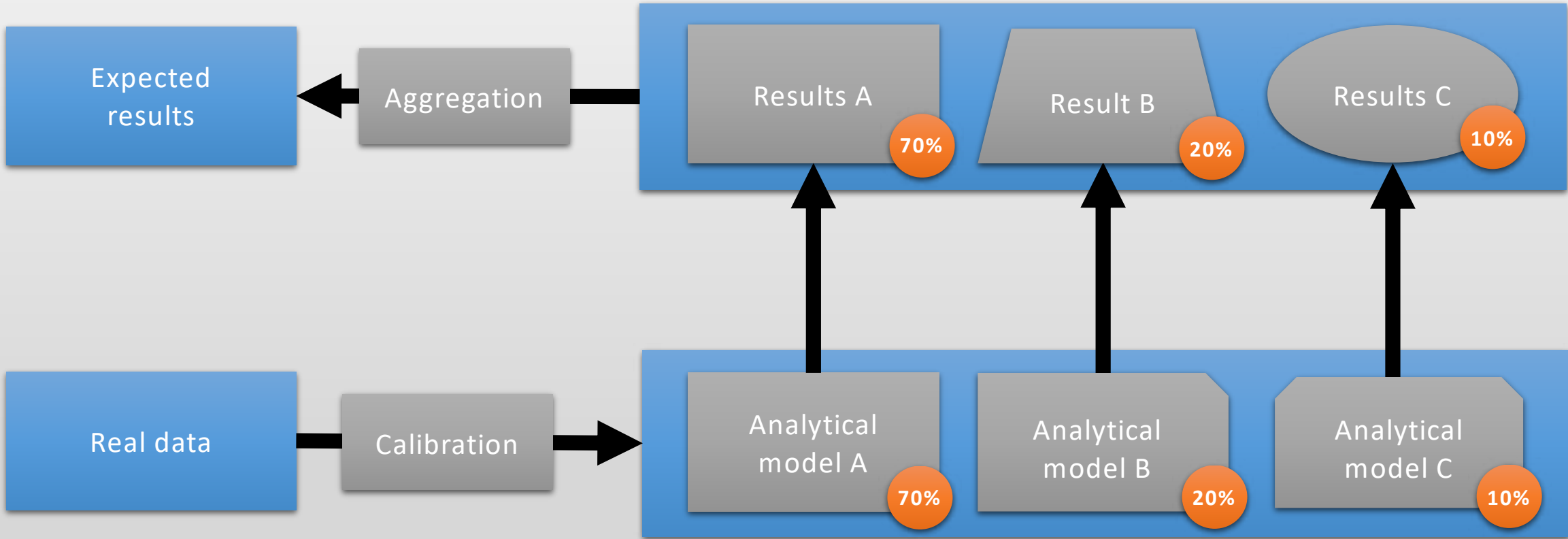
A classic analytical approach



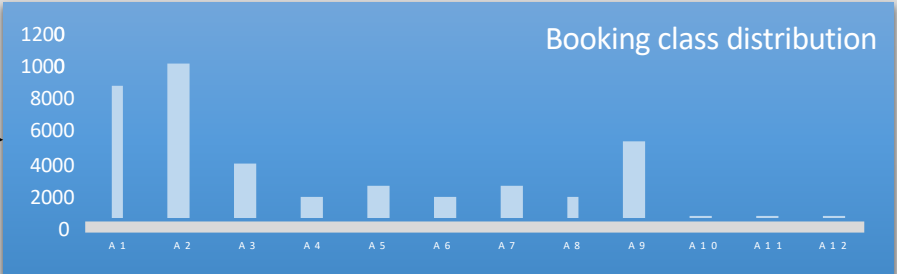
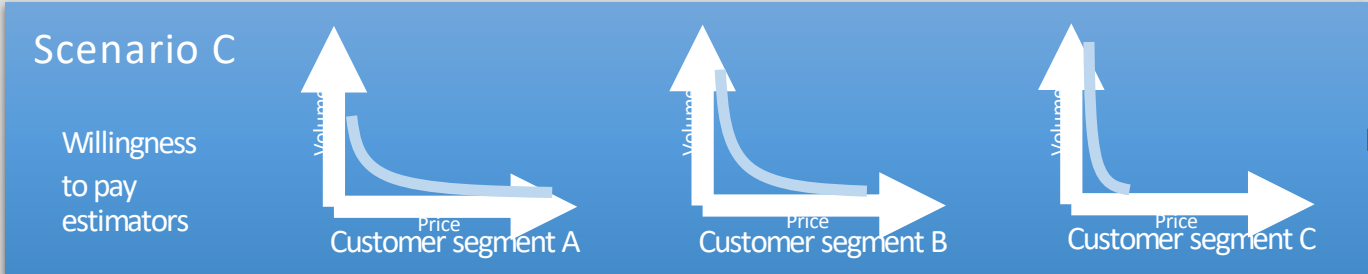
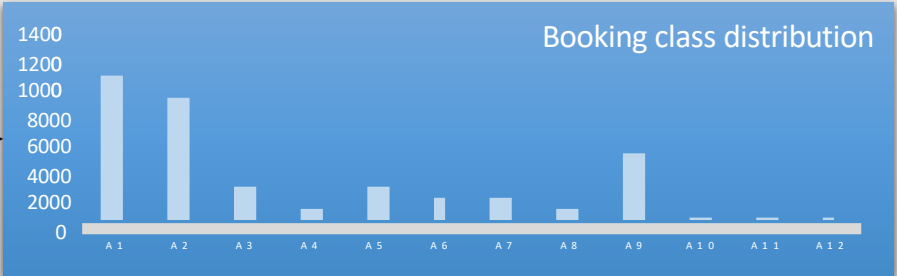
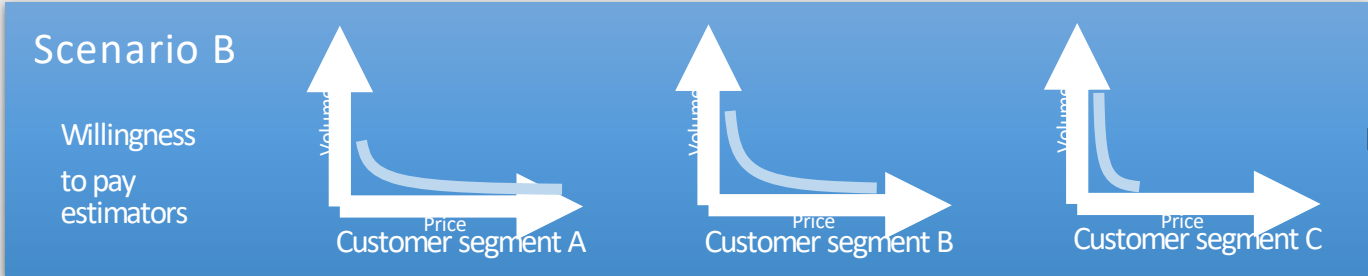
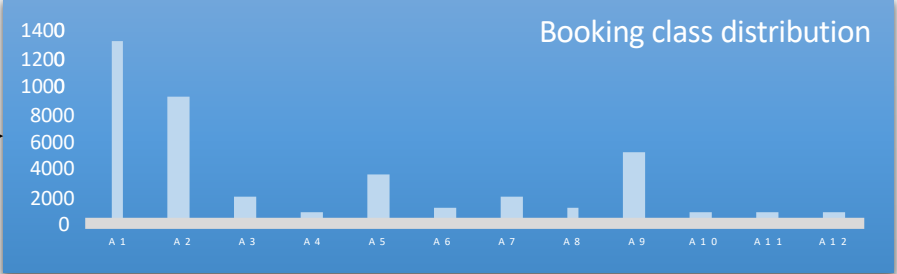
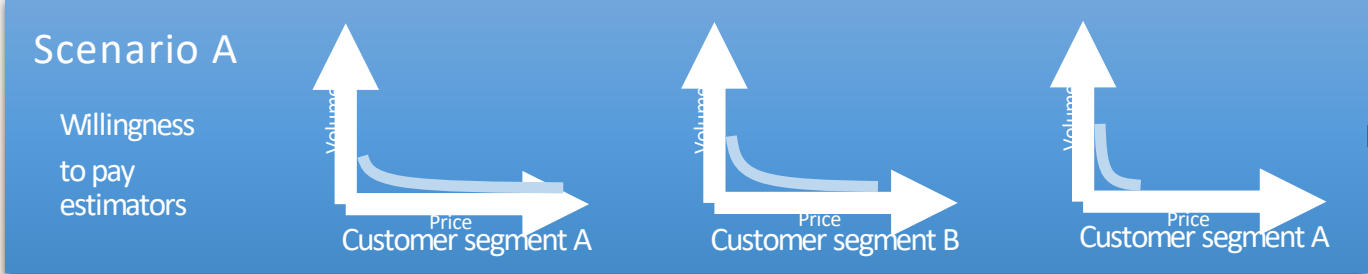
What is the problem with this approach?



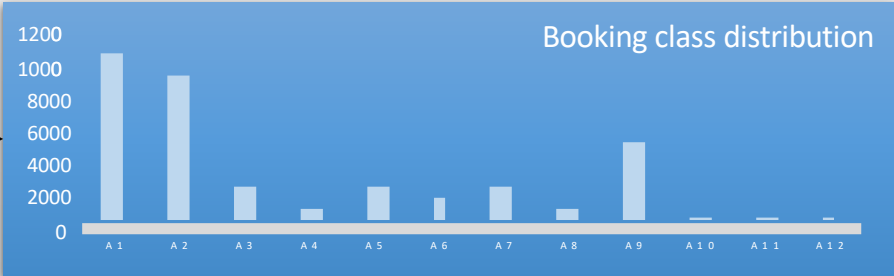
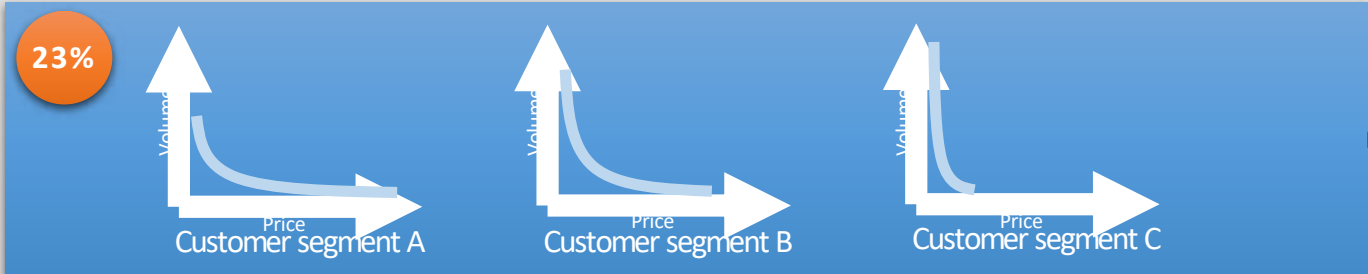
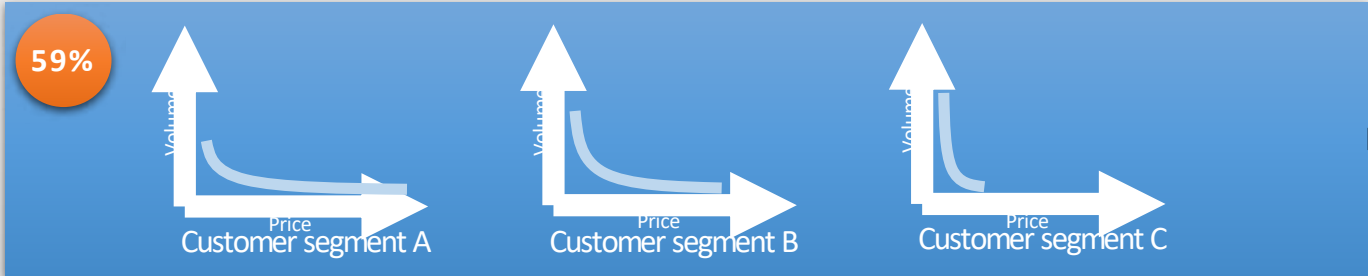
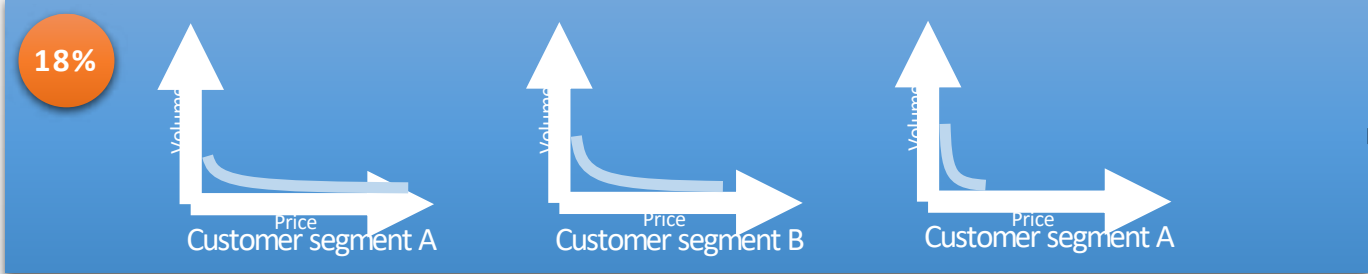
Take them all!



Example – analysing new pricing structure



Example – analysing new pricing structure



Summary

- Not every question can be answered with historical data. What-if questions are typical examples.
- Test cases do not deliver statistically valid results.
- In order to answer questions analytical models are necessary.
- These models are calibrated to find one parameter set. Parameters with a less accurate fitting are in most cases ignored.
- Modern hardware and big data methods enable to use more parameter settings for evaluation.
- Outcome of different models can be aggregated based on probability theory.
- Result is an analysis with a far more accurate picture about effects.