





# Passenger Distribution and Sales





# Welcome & Introduction

**Aleks Popovich**

SVP Financial Distribution Services, IATA

**Mike Premo**

President & CEO, ARC





# The Journey of Airlines Passenger Distribution and Sales Data

**Brett Berman**

Managing Director

Sales Operations, American Airlines



# Breaking down my journey

Career



U·S AIRWAYS



American Airlines

DCA → PHX → DFW

Departments

## Sales Operations

Sales Planning & Analysis

US Airways Vacations

Distribution Strategy

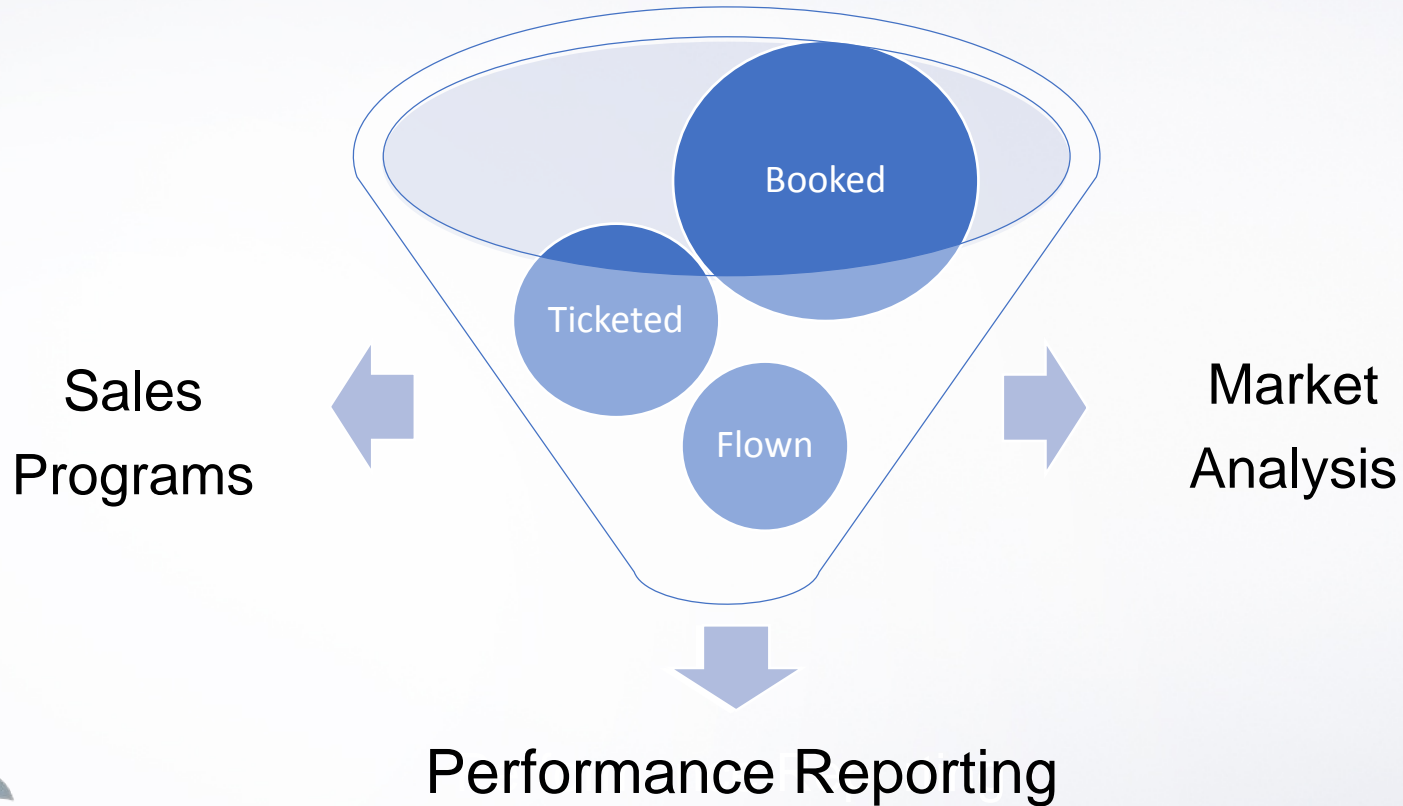
Revenue Management

Finance

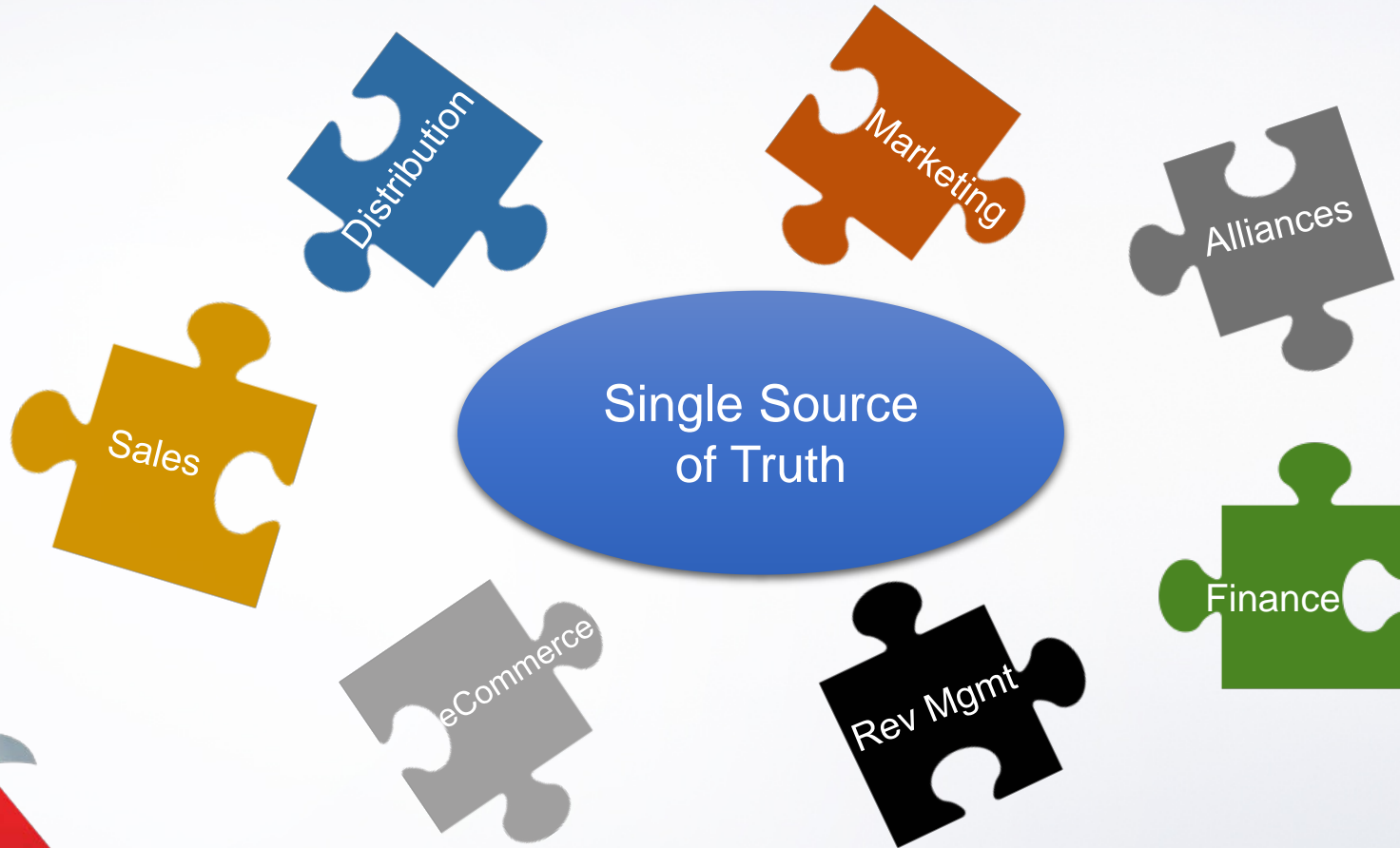
Hometown: Pittsburgh, PA



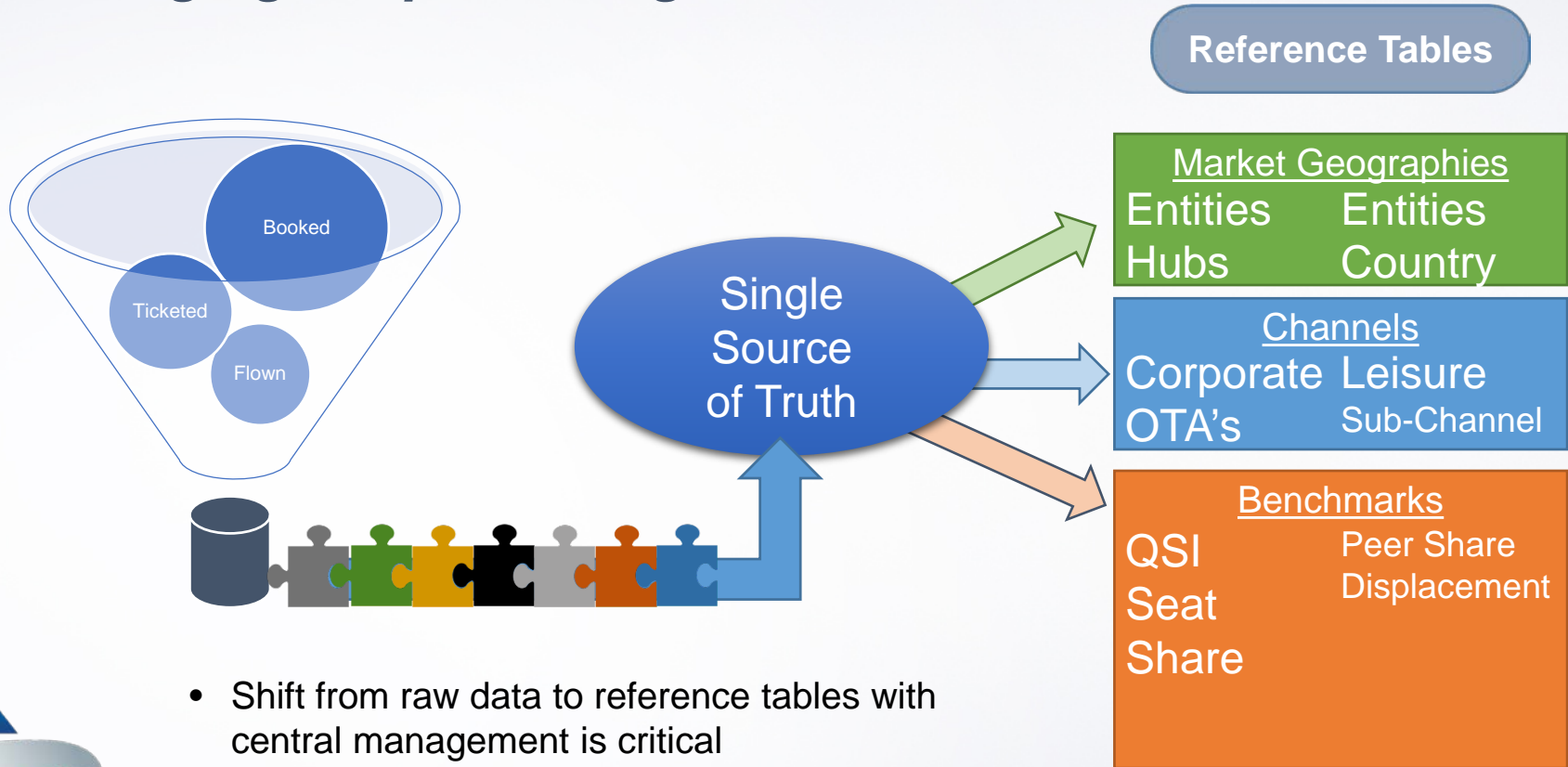
## *How Sales uses data*



# *Combining data sources to form a single source of truth*



# Bringing the pieces together



- Shift from raw data to reference tables with central management is critical
- No longer dependent on one person's query to categorize information



# *Sales reporting used to be straightforward*



**Booking and  
Ticketing**



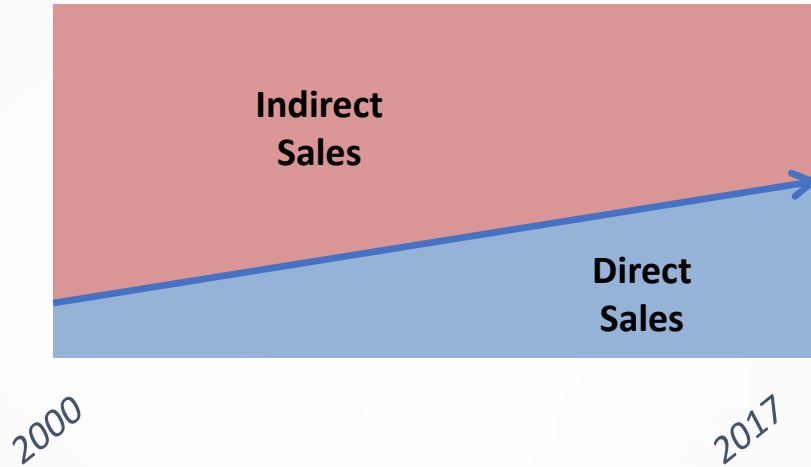
**Flown  
Performance**



**Sales  
Reports**

# Early disruptions to Industry data

## Distribution Fragmentation



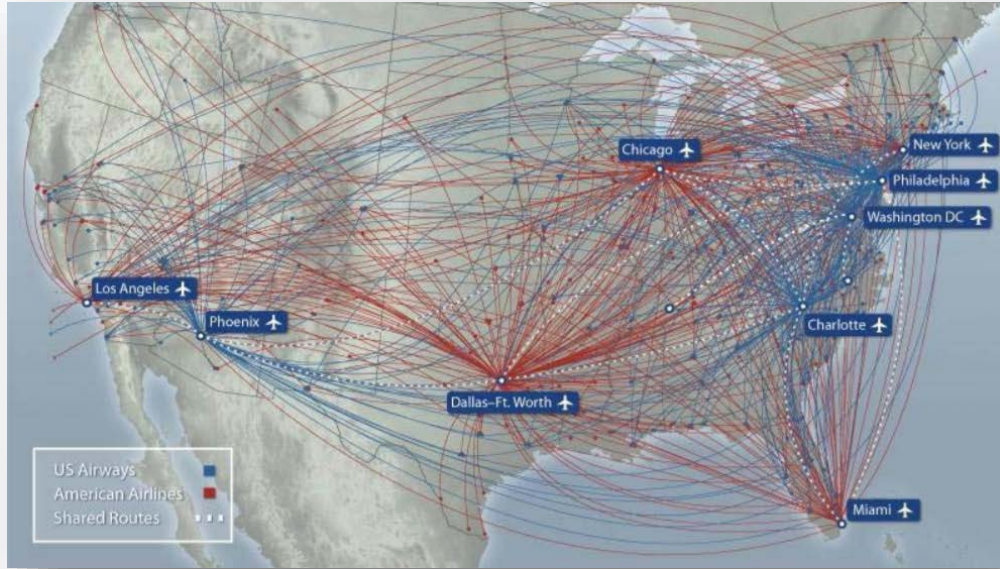
## Low-Cost and Ultra-Low Cost Carrier Growth



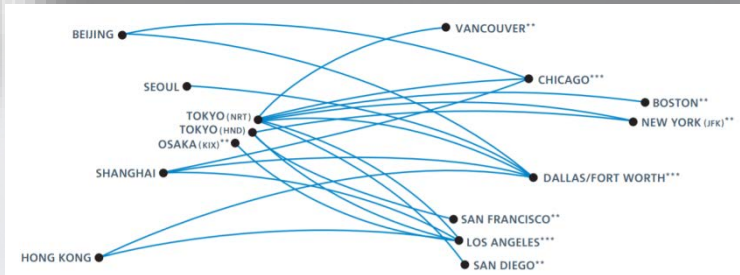
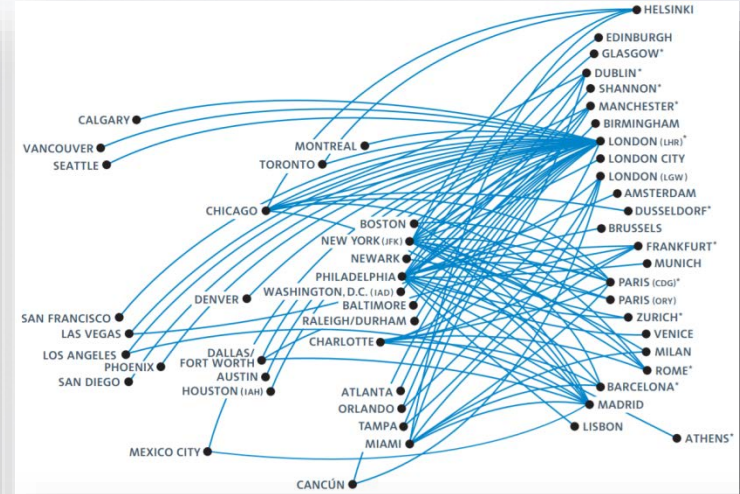
- Stimulated the need for new data sources, including carrier-contributed data

# Expanding networks increase complexity

## Mergers



## Joint Businesses



# *Industry volatility forced changes to product and data*



**Trend of Oil Prices (\$USD)**

# *Evolving reporting demands requires better data*



Booking and Ticketing



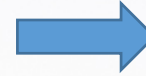
Airport Services



Baggage Details



In-flight Services



Flown Performance



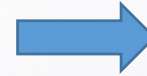
Personalized On-time Stats



Elite Status



Status Challenges



Sales Reports

# New ways to tell the story

Year	MMM	AA/b Rev (k)	Industry Rev (k)	AA/b Rev Shr	AA/b OSI	RSG	AA/b ATV
2017	Jan	\$59,665	\$209,097	28.5%	26.3%	2.3	\$306
	Feb	\$65,322	\$219,847	29.7%	27.4%	2.3	\$307
	Mar	\$76,889	\$265,181	29.1%	26.7%	2.4	\$328
	Apr	\$71,338	\$240,939	29.7%	26.9%	2.8	\$331
	May	\$76,831	\$255,375	30.1%	26.9%	3.2	\$335
	Jun	\$78,878	\$268,121	29.4%	26.3%	3.1	\$357
2017 Total		\$478,923	\$1,456,560	29.3%	26.7%	2.7	\$328
2016	Jan	\$60,705	\$217,748	27.9%	25.8%	2.1	\$308
	Feb	\$69,148	\$229,725	30.1%	27.9%	2.2	\$306
	Mar	\$71,233	\$246,050	29.0%	27.1%	1.8	\$323
	Apr	\$73,744	\$250,114	29.5%	27.1%	2.3	\$319
	May	\$72,544	\$246,585	29.4%	27.1%	2.3	\$317
	Jun	\$73,466	\$249,632	29.4%	26.9%	2.5	\$335
2016 Total		\$420,841	\$1,439,853	29.2%	27.0%	2.2	\$318



Descriptive  
(Past)



Predictive  
(Present)

# Yesterday's \$1,000 ≠ Tomorrow's \$1,000



## Past

- \$1,000 Fare
- Economy
- Point of Sale

## Present

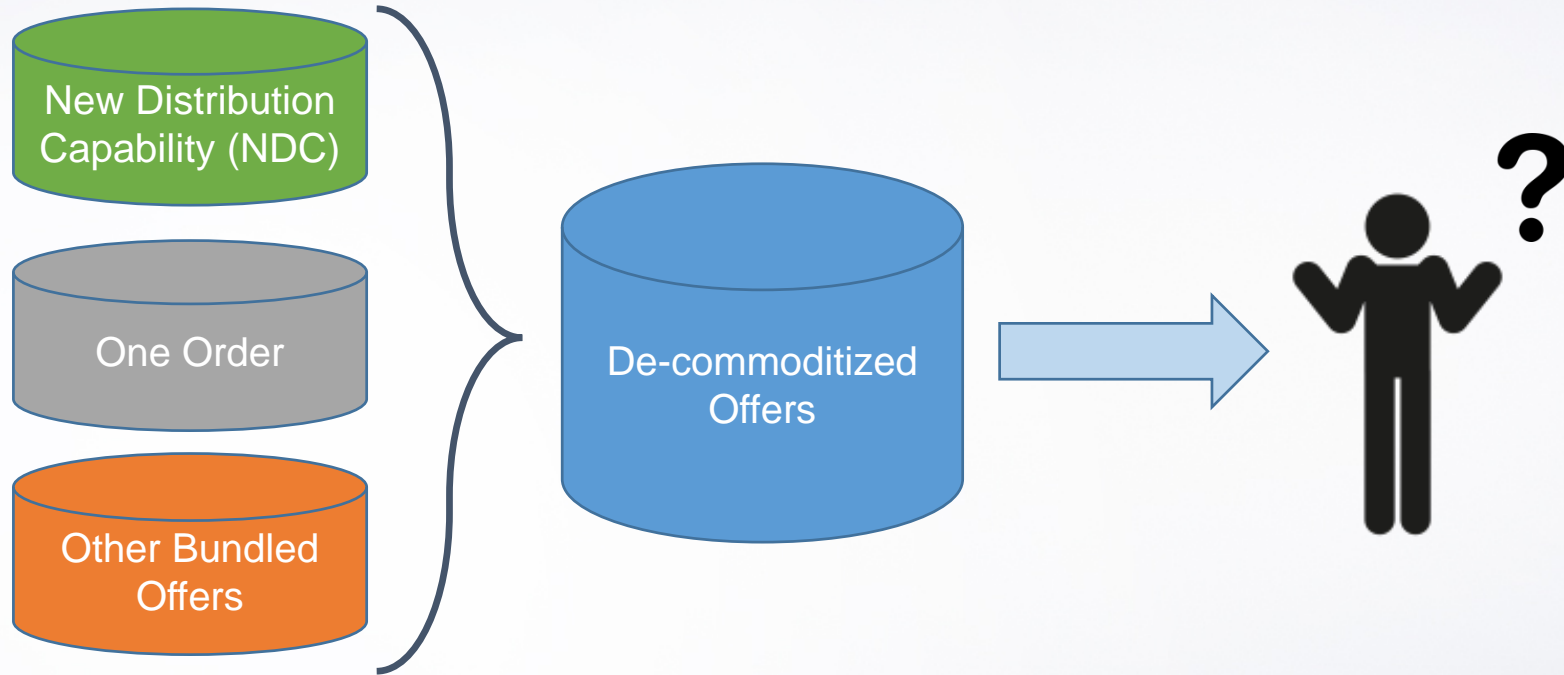
- \$1,000 Fare
- Premium Economy
- Point of Sale
- Bag Fee
- Admirals Club
- Wifi
- Flight Change Flexibility
- Priority Boarding

## Future

- \$1,000 Fare
- Premium Economy
- Point of Sale
- Bag Fee
- Club Access
- Wifi
- Flight Change Flexibility
- Priority Boarding
- *New Distribution Capability (NDC)*
- *One Order*
- *Airline Bundles*

# Challenges Ahead – the next disruptors

---



- Future initiatives potentially turn airline data opaque and messy
- Will create both new challenges and opportunities for aggregating industry data
- Coordinated efforts by industry leaders will be critical to frame future data



# Thank You



**Brett Berman**

Managing Director Sales Operations

American Airlines

Brett.Berman@aa.com





# Master Your Own Data and Jump in the Driver's Seat

Rogier van Enk

VP Distribution, Commercial Excellence & Data Science  
Finnair





IATA Aviation Data Symposium:

# The mistakes we made while building a world-class analytics team

Rogier van Enk

VP Distribution, Commercial Excellence & Data  
Science





**ABOUT  
ME**





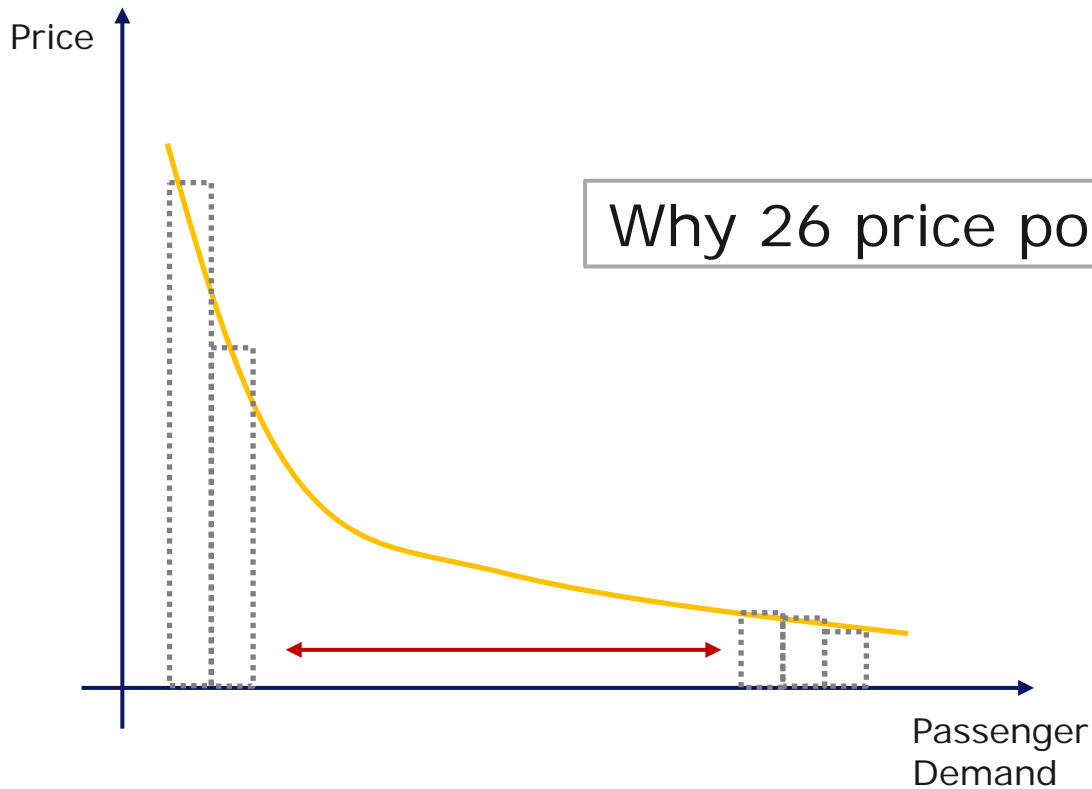
# Three important things about our industry





1

# The airline industry is rooted in history



2

# The airline industry is complicated



Our network:

7000 origin destinations

50 points of sale

26 price points

2x corporate products

2x codeshare choices

8x agent types

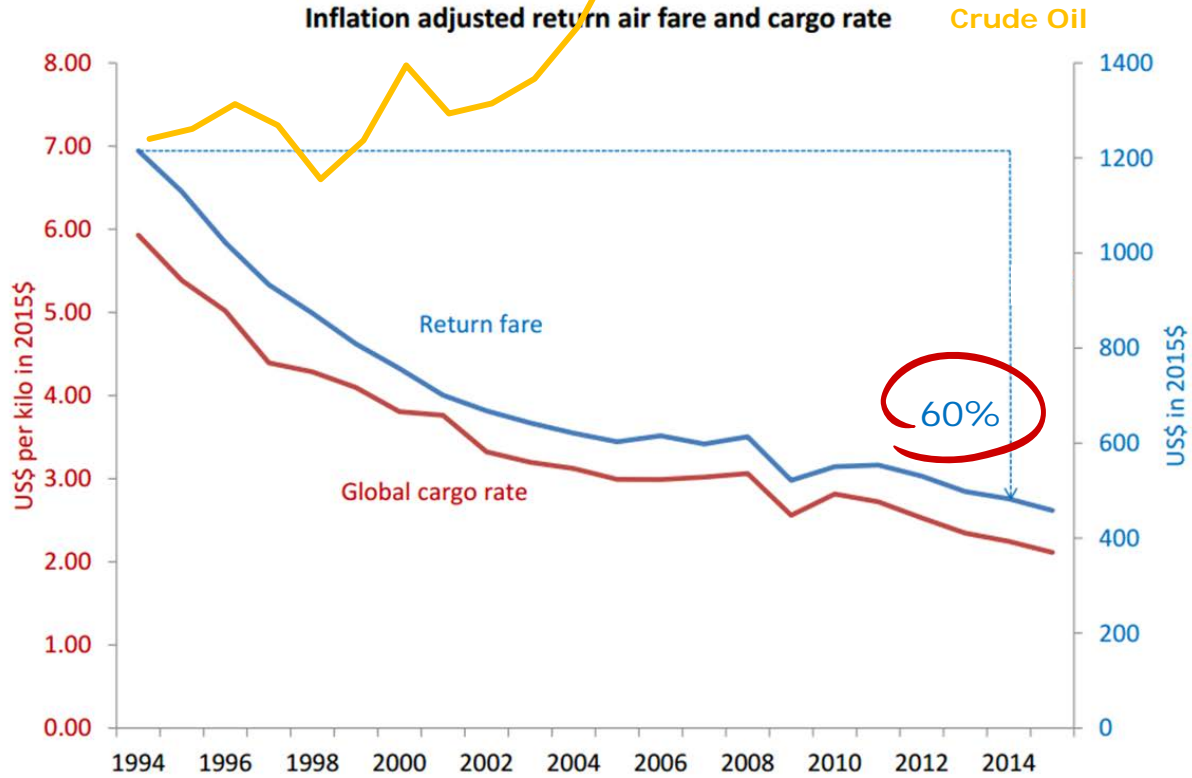
7x payment types

13x distribution systems

**~ 46 billion combinations**

# 3

## Traveling by air is cheaper than ever



Source: IATA

SOURCE CRUDE OIL PRICE: US Dept of Energy



We need to be smart in order to  
**WIN**



So let's invest in "analytics" and "data science"



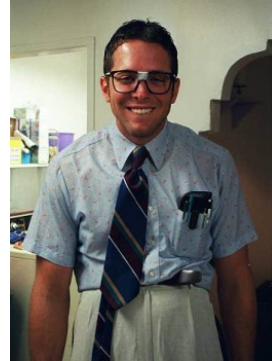
1.

FOR US, DECENTRALIZING WORKED



### **IT and DW Development**

Ensure availability and  
quality of data



### **Analytics**

Drive complex decisions  
Speak business and IT



### **Salesmen/women**

Basic self-service  
Implement  
recommendations

IT  
Knowledge



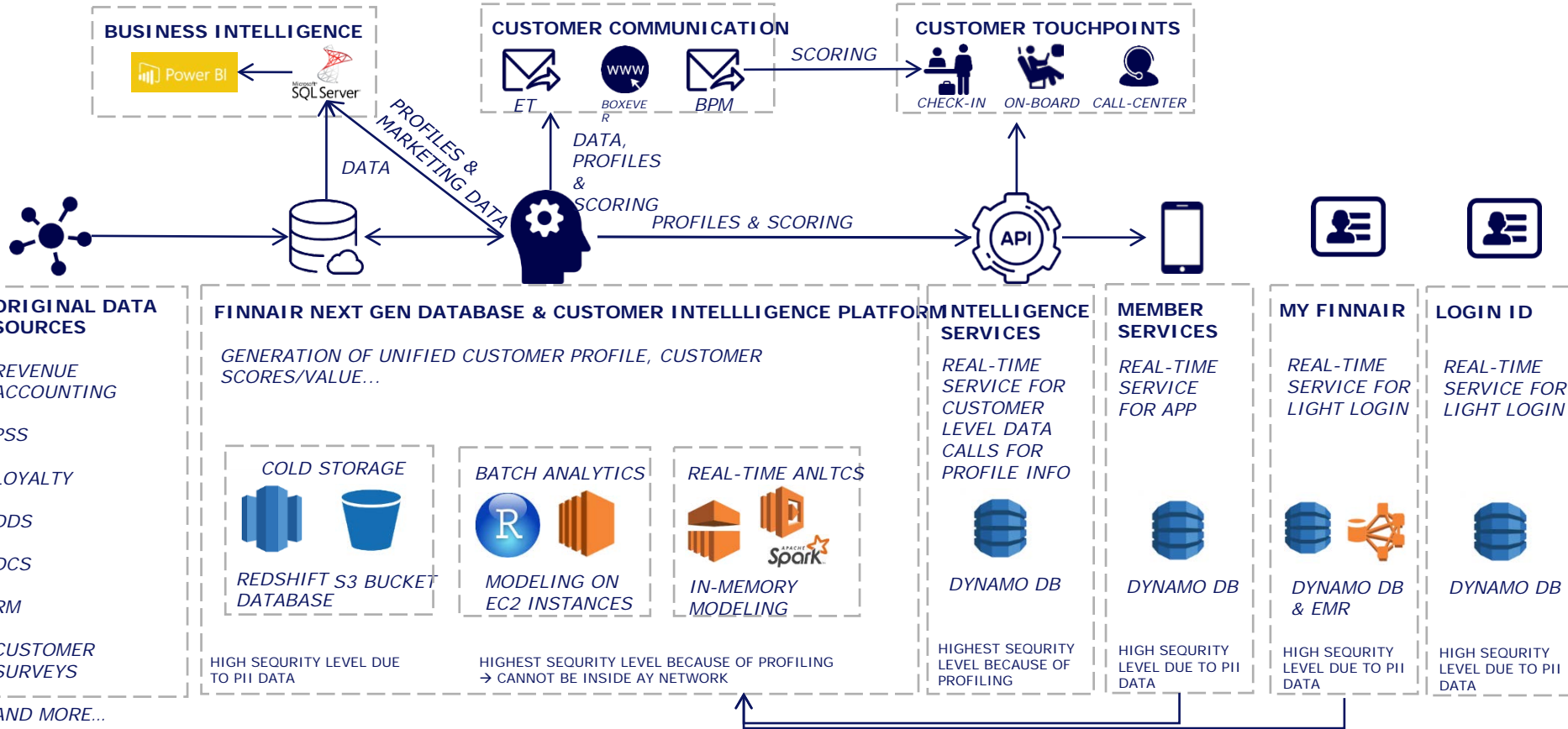
Business  
Knowledge



2.

FIX YOUR DATA/REPORTING FIRST

# Fixing your data is a lot of work...



## ORIGINAL DATA SOURCES

REVENUE ACCOUNTING

PSS

LOYALTY

DDS

DCS

RM

CUSTOMER SURVEYS

AND MORE...

## FINNAIR NEXT GEN DATABASE & CUSTOMER INTELLIGENCE PLATFORM

GENERATION OF UNIFIED CUSTOMER PROFILE, CUSTOMER SCORES/VALUE...

### COLD STORAGE



REDSHIFT S3 BUCKET DATABASE

HIGH SECURITY LEVEL DUE TO PII DATA

### BATCH ANALYTICS



MODELING ON EC2 INSTANCES

HIGHEST SECURITY LEVEL BECAUSE OF PROFILING → CANNOT BE INSIDE ANY NETWORK

### REAL-TIME ANALYTICS



IN-MEMORY MODELING

## INTELLIGENCE SERVICES

REAL-TIME SERVICE FOR CUSTOMER LEVEL DATA CALLS FOR PROFILE INFO



DYNAMO DB

HIGHEST SECURITY LEVEL BECAUSE OF PROFILING

## MEMBER SERVICES

REAL-TIME SERVICE FOR APP



DYNAMO DB

HIGH SECURITY LEVEL DUE TO PII DATA

## MY FINNAIR

REAL-TIME SERVICE FOR LIGHT LOGIN



DYNAMO DB & EMR

HIGH SECURITY LEVEL DUE TO PII DATA

## LOGIN ID

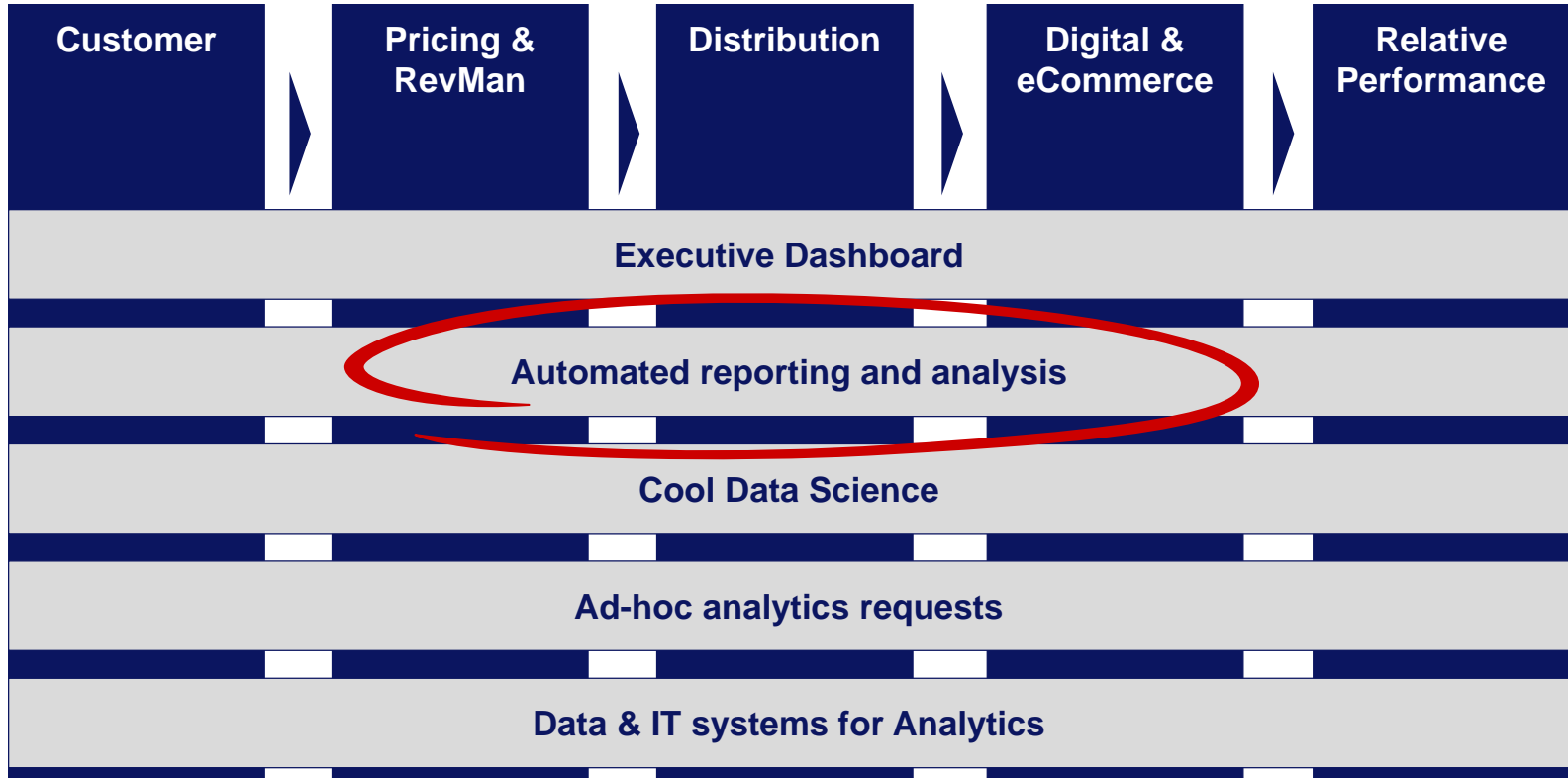
REAL-TIME SERVICE FOR LIGHT LOGIN



DYNAMO DB

HIGH SECURITY LEVEL DUE TO PII DATA

# Introducing "clusters" of analytics

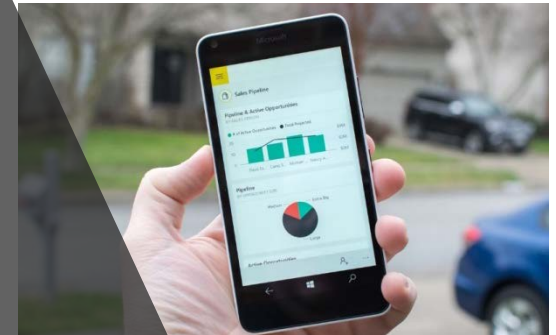


# Our first step towards advanced analytics



	<b>Product &amp; Customer</b>	<b>Pricing</b>	<b>Distribution</b>	<b>eCommerce</b>	<b>Network &amp; Relative Performance</b>
<b>DAILY</b> (some on TV Screens)	Market News	Yesterday's Performance	Yesterday's Sales	Yesterday's Performance	Yesterday's Performance
		Flight Report			
<b>WEEKLY</b>	Summarized Market News	Route KPI Report	Sales Channel KPI & POS KPI	Network KPI	Summarized Performance
		Flight Report		Revenue Speed	
<b>MONTHLY</b>	Relative Performance Monthly	Route Results & Outlook	Sales Channel and POS Results & Outlook	Network Results & Outlook	Results & Outlook
<b>QUARTERLY</b>	Fair Share Monitoring	Fair Share Tracking & Monitoring	Fair Share Monitoring	Fair Share Monitoring	

# Next Gen: Moving towards real-time, mobile-first, touch-based analytics







3.

FINLAND IS THE SMARTEST  
COUNTRY IN THE WORLD



Subscribe | Sign In



S&P Strips Exxon of Triple-A Credit Rating



BP Results Still Hurt by Gulf Spill



PERSONAL JOURNAL

# What Makes Finnish Kids So Smart?

Finland's teens score extraordinarily high on an international test. American educators are trying to figure out why.

By ELLEN GAMERMAN

Updated Feb. 29, 2008 12:01 a.m. ET

*Helsinki, Finland*

High school students here rarely get more than a half hour of homework a

yle UUTISSET KIRJAUDU

Uutiset + Urheilu + Osallistu Sää + Tuoreimmat

UUTISSET > NEWS

News 20.2.2015 11:59 | updated 20.2.2015 11:59

## Coding soon to be part of Finnish schoolchildren's core curriculum

Finland is set to introduce a course of study in computer programming to its comprehensive school core curriculum beginning in 2016. The Ministry of Education has had to rely on private sector expertise to help prepare its teaching programme, as many of Finland's current teachers are not yet adequately equipped to teach coding as required.

**f Recommend** 2,458 people recommend this. Be the first of your friends.



### Headlines

News 20:18  
**Finnish Navy unveils details of Baltic summer war games**



A press conference arranged by the Finnish Navy on Tuesday sparked a small demonstration outside its headquarters in the south-western city of Turku. A small group of protesters from the Finnish Peace Committee expressed concern over the impending arrival of US Marines in Finnish territorial waters.

News 19:07  
**UPM posts positive surprise, shares climb**

The Finnish pulp and paper maker unveiled better-than-expected profits from the first three months of the year,



4.

BUT HIRE OUTSIDERS



# Introducing the two backbones of the Commercial Strategy and Data Science team



Both roles can be described as “Socially Talented Nerds”

# Employing the best...



- **MSc. in a relevant technical field**
- Analytical with strong numerical capability
- **Strong project management skills**
- Capable of translating complicated trends and data into useful conclusions and recommendations
- **Ability to make and communicate fact-based and structured decisions in a hectic environment**
- Speaks business and IT
- Goal and fact oriented

# Employing the best...



- **Ph.D. in Natural Sciences, Engineering, Econometrics or similar**
- **Highly analytical with strong numerical capability**
- Capable of translating complicated trends and data into useful conclusions and recommendations
- **Strong background in numerical simulation and data science**
- Speaks business and IT
- Goal and fact oriented



5.

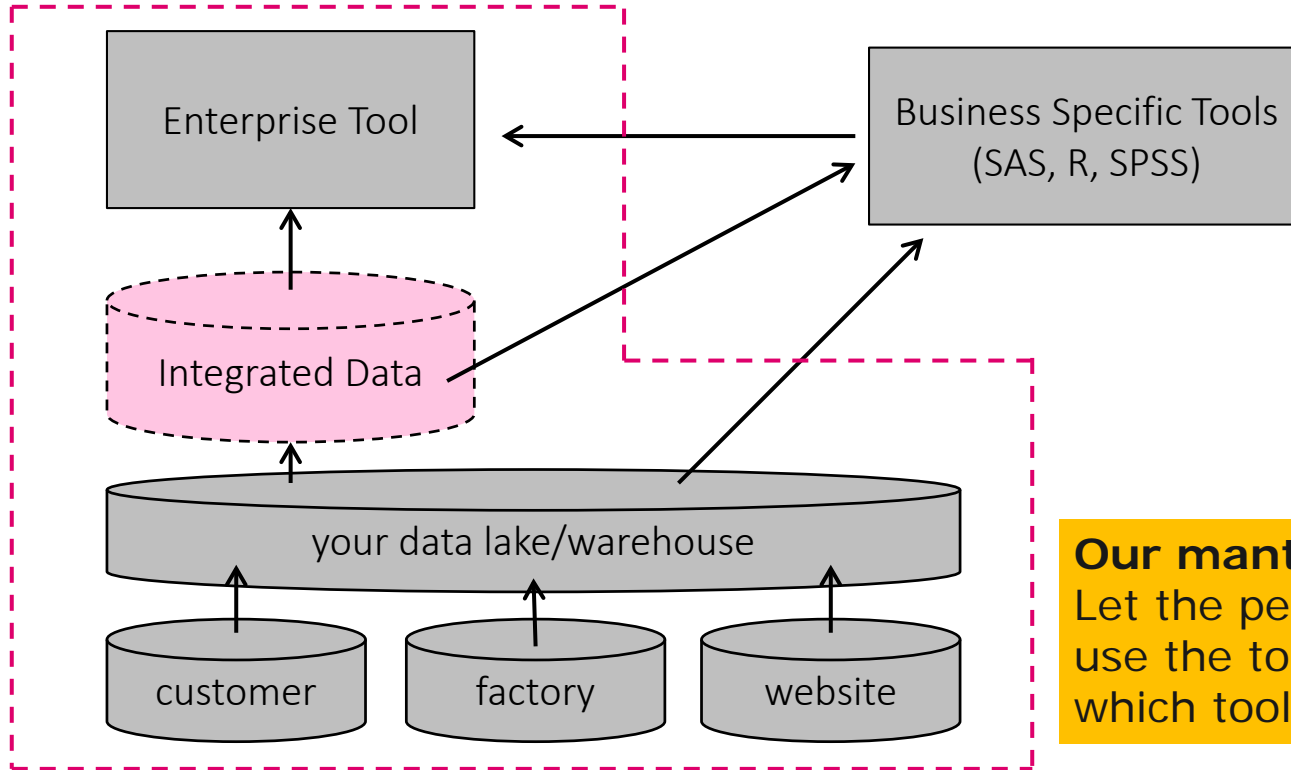
USERS SHOULD CHOOSE THE TOOLS





# Simple view of BI

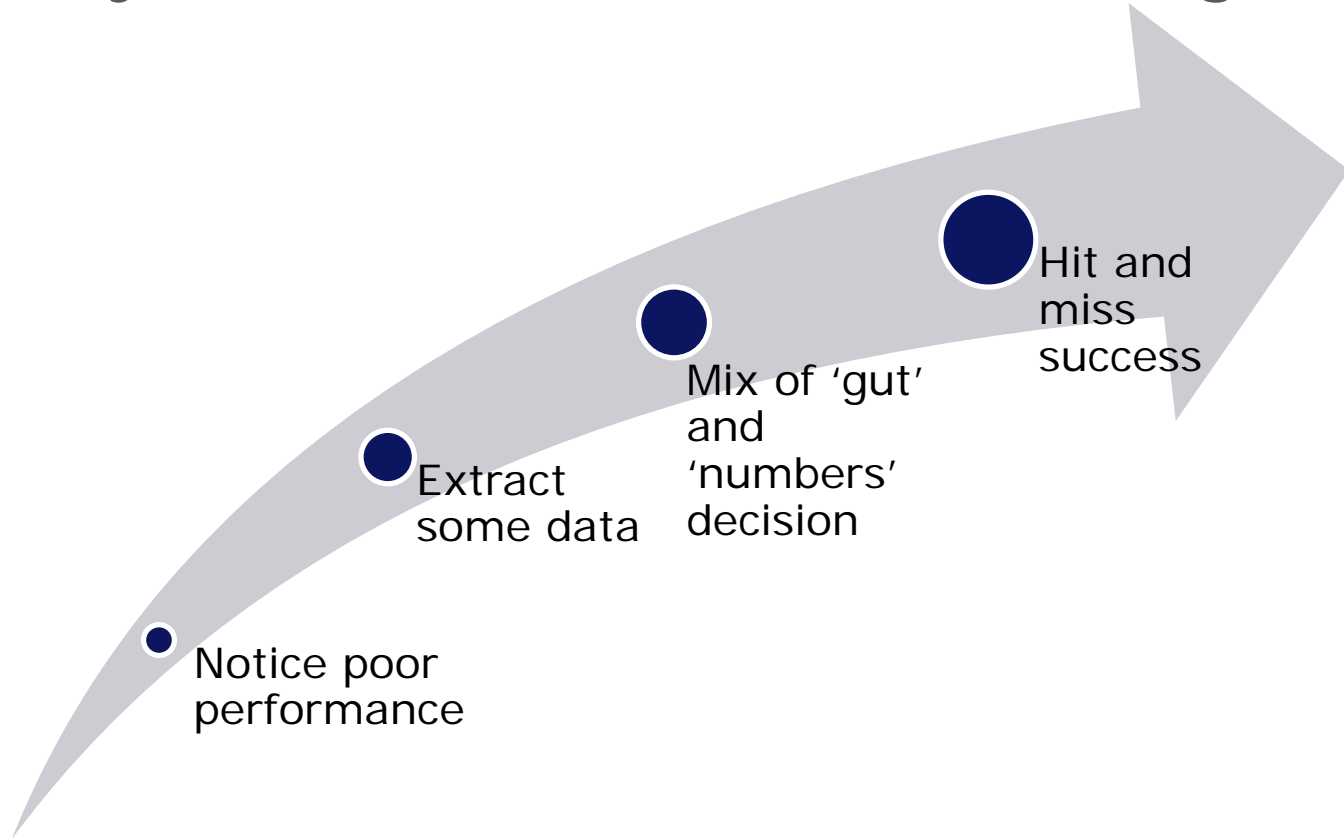
Centralized



**Our mantra:**  
Let the people that use the tools decide which tools to use

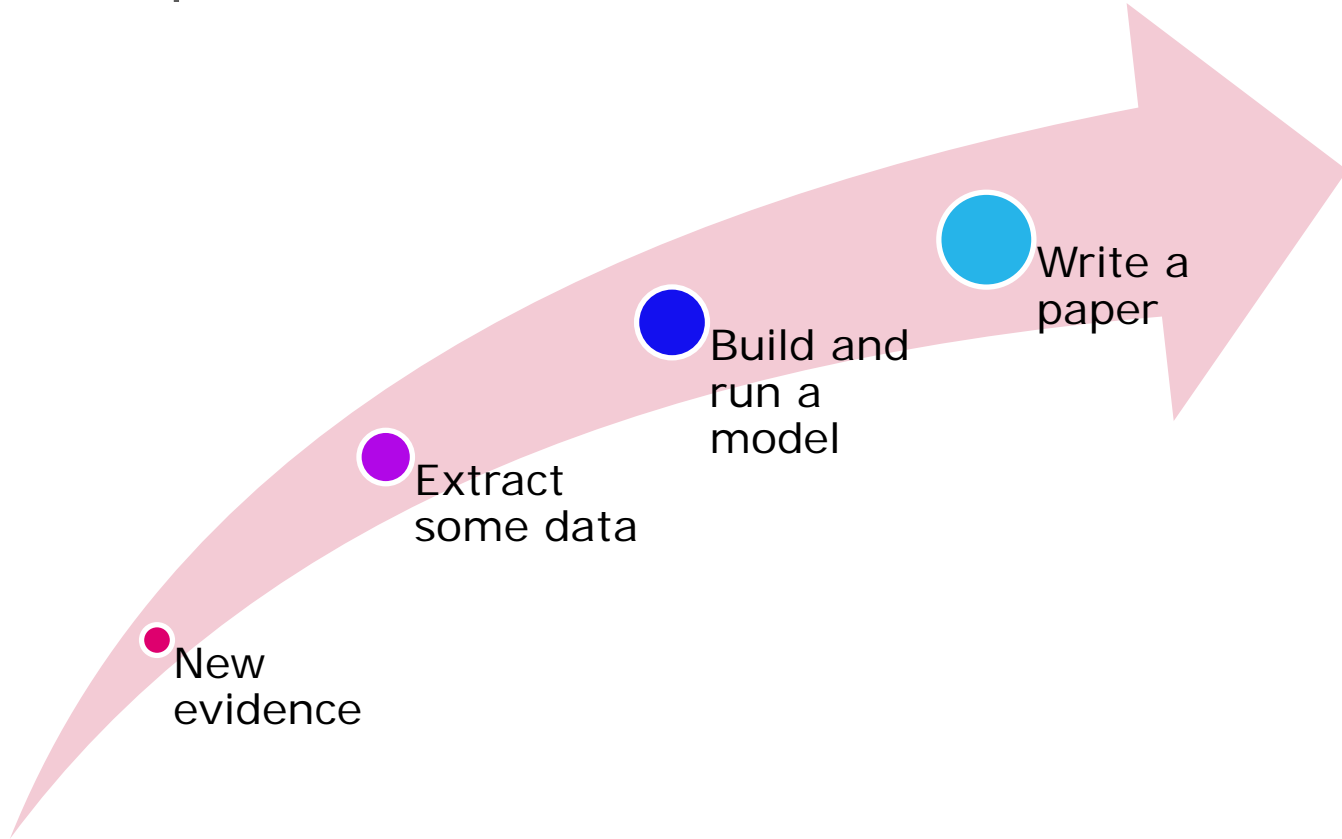


# Non-analytical business decision making



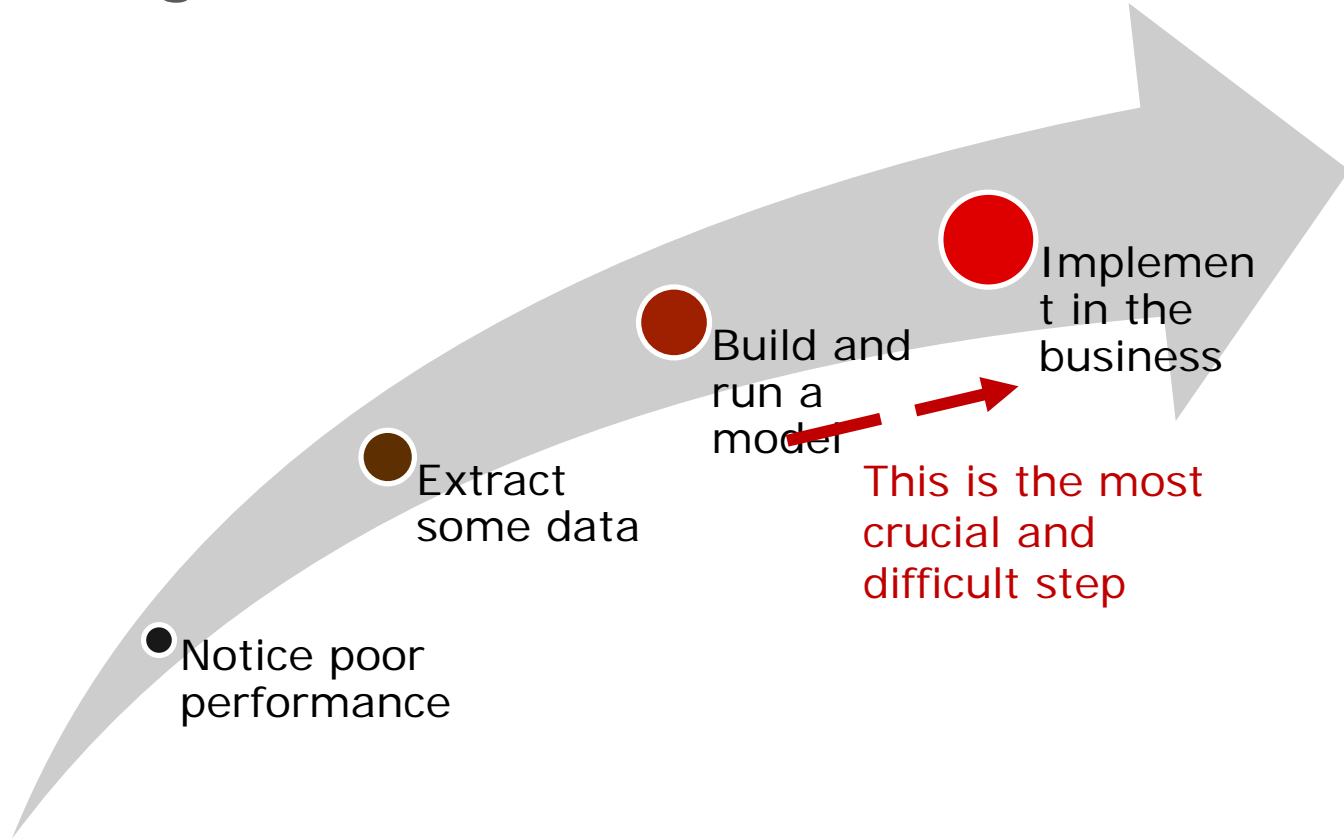


# Academic process





# Completing the chain





6.

KEEP STAKEHOLDERS HAPPY



# Build a service oriented culture

- Regular stake holder meetings – **understand our customer**
- **Resource the team** so that we don't have to excessively choose/prioritize
- **“Pairing up”** – form **lethal** data scientist/strategy consultant **pairs** that **destroy** analytical and strategic projects
- Use **free, open-source** tools everywhere **except for the visualization and interaction layer**



...and finally....

7.

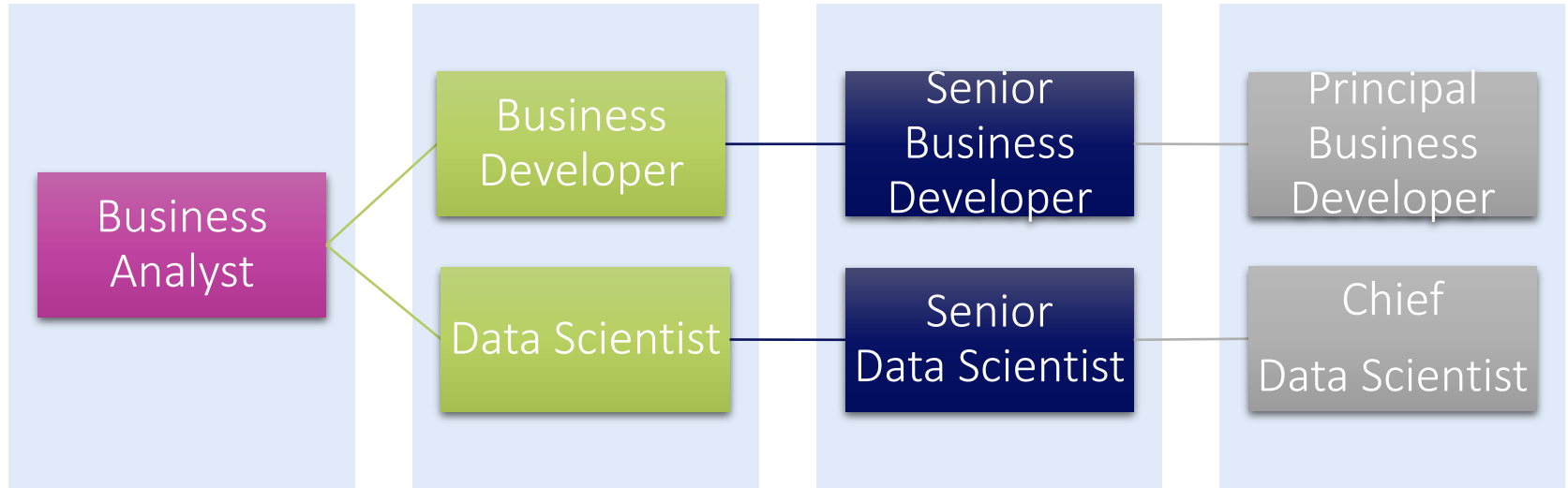
FINNAIR'S GOT TALENT!

# The advantages of nurturing talent in strategy and data science teams

- Excellent analysts and project managers who know Finnair data and our tools
- Well rounded individuals
- Understand airline jargon and lingo
- Less expensive



# Rewarding quality and career paths...



•Two year maximum

•Practiced system user  
•Added value track-record in several clusters

•Mastered most systems  
•Proven significant (scientific) added value in several clusters

•Key resource for the company  
•Leads our most important projects  
•Provides ground-breaking scientific advances



Thank you!

[rogier.vanenk@finnair.com](mailto:rogier.vanenk@finnair.com)

<https://www.linkedin.com/in/rogiervanenk/>





# The Cycle of a Passenger Transaction: The Hidden Value within the Value Chain

## Moderator

- **Bryan Wilson**, Former BA Director of Information Management and Former IATA CIO & Director of Industry Architecture

## Panelists

- **Jonathan Boffey**, SVP, Business Development, Triometric
- **Mark Drusch**, VP, Aviation Commercial Advisory, ICF
- **Rogier van Enk**, VP Distribution, Commercial Excellence & Data Science, Finnair
- **Eric Nordling**, COO, RMS An Accelya Group Company





# Networking Coffee Break

Thank you to our Sponsor





# Just a Passenger or a Holistic End-to-End Customer View?

**Joerg Hochapfel**

Lead, Analytics Center of Excellence  
Lufthansa





**Lufthansa Group**

# How Digitalization is Re-Defining the Customer Experience in the Connected-Age

Jörg Hochapfel, Deutsche Lufthansa AG

Analytics Lead Customer Data Asset

# Lufthansa Group



## Business Units



# What are the Key Drivers for this Change?

Understand  
Customer Needs

Success of other  
Digital Players

Commoditization



# SURPASS MY INDIVIDUAL LUFTHANSA EXPERIENCE

smile



## OUR MISSION

## OUR OBJECTIVES

By understanding our customer, we drive the organization. SMILE connects the dots.

“

”

- 1 Personalize customer experiences along the journey
- 2 Develop an insights driven organization
- 3 Create new revenue opportunities

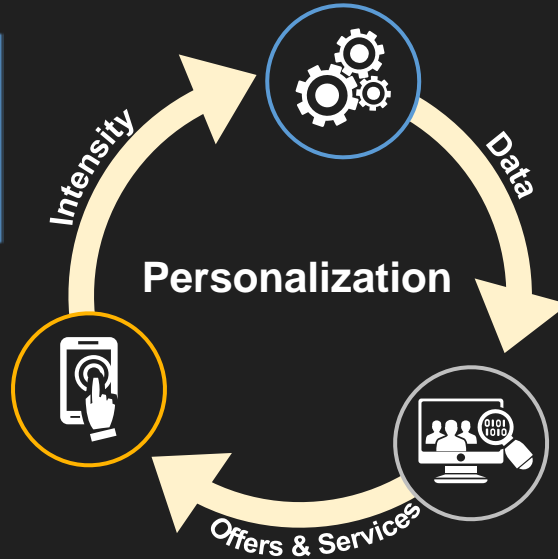
# SMILE core disciplines

## Data Management

*“Setup customer data management and provide IT foundations for Analytics.”*

## Customer Experiences

*“Provide personalized products, communication and services along different touchpoints.”*



## Analytics & Insights

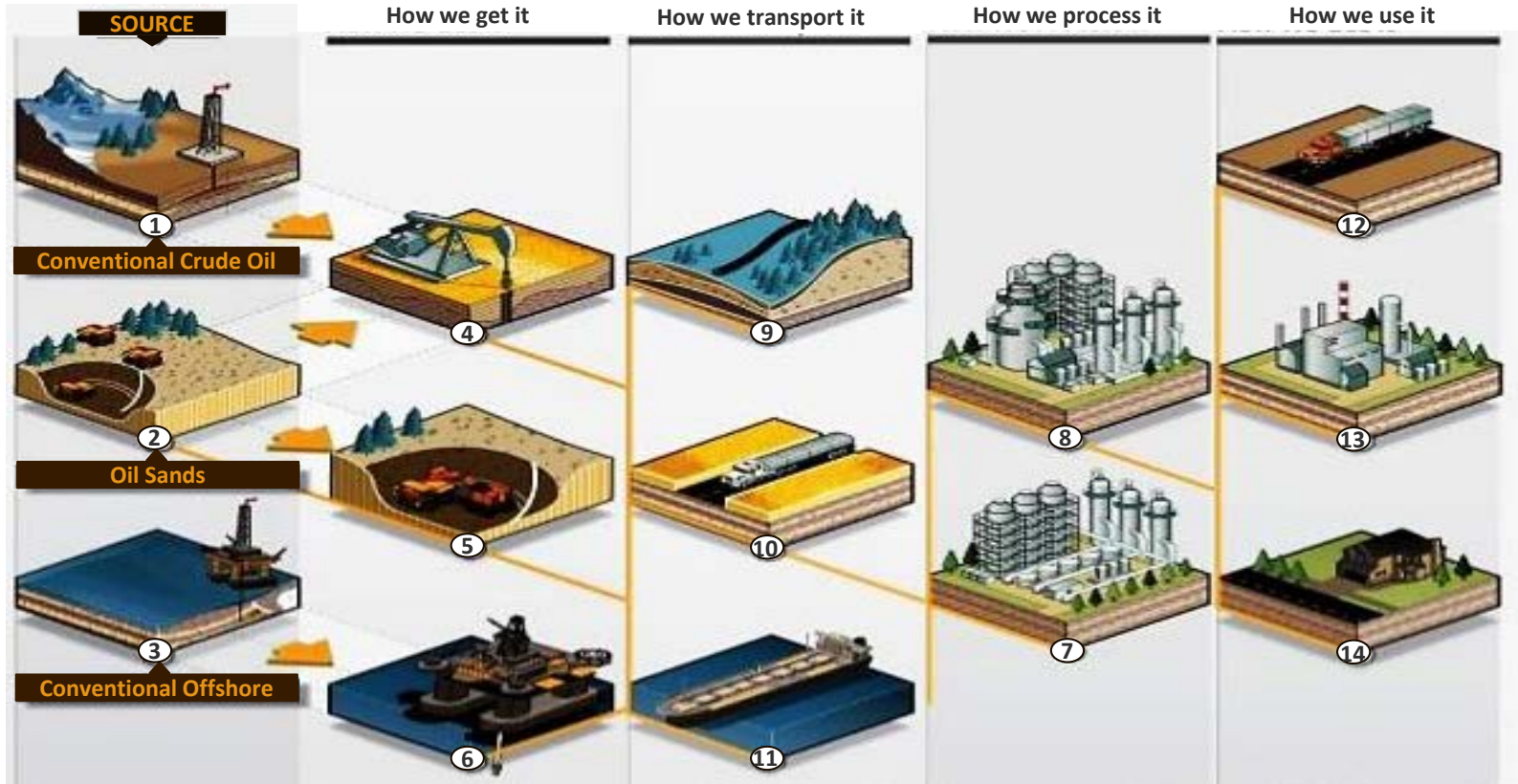
*“Build up analytical capabilities (methods, models, operating model and talent).”*

Data is the new oil.

Wow. But who in this room ever used crude oil?



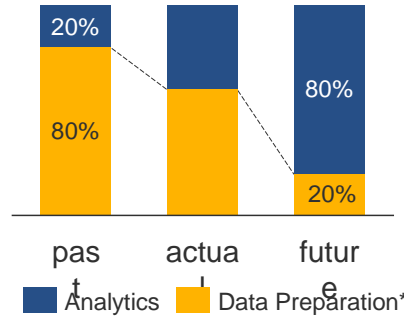
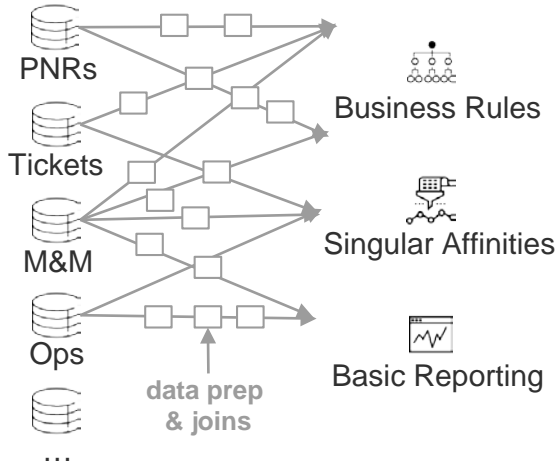
# ...so we need the whole data value chain in order to act effectively



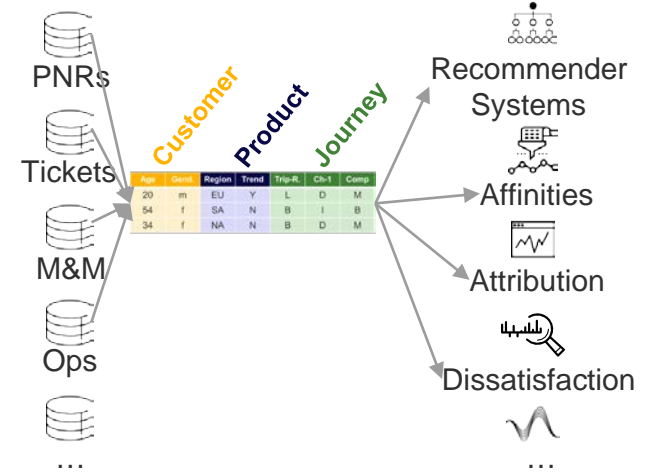
# Data is building the foundation to focus on advanced analytics

Standardized tables reduce effort for data preparation significantly

## Historically Dispersed Data Sets

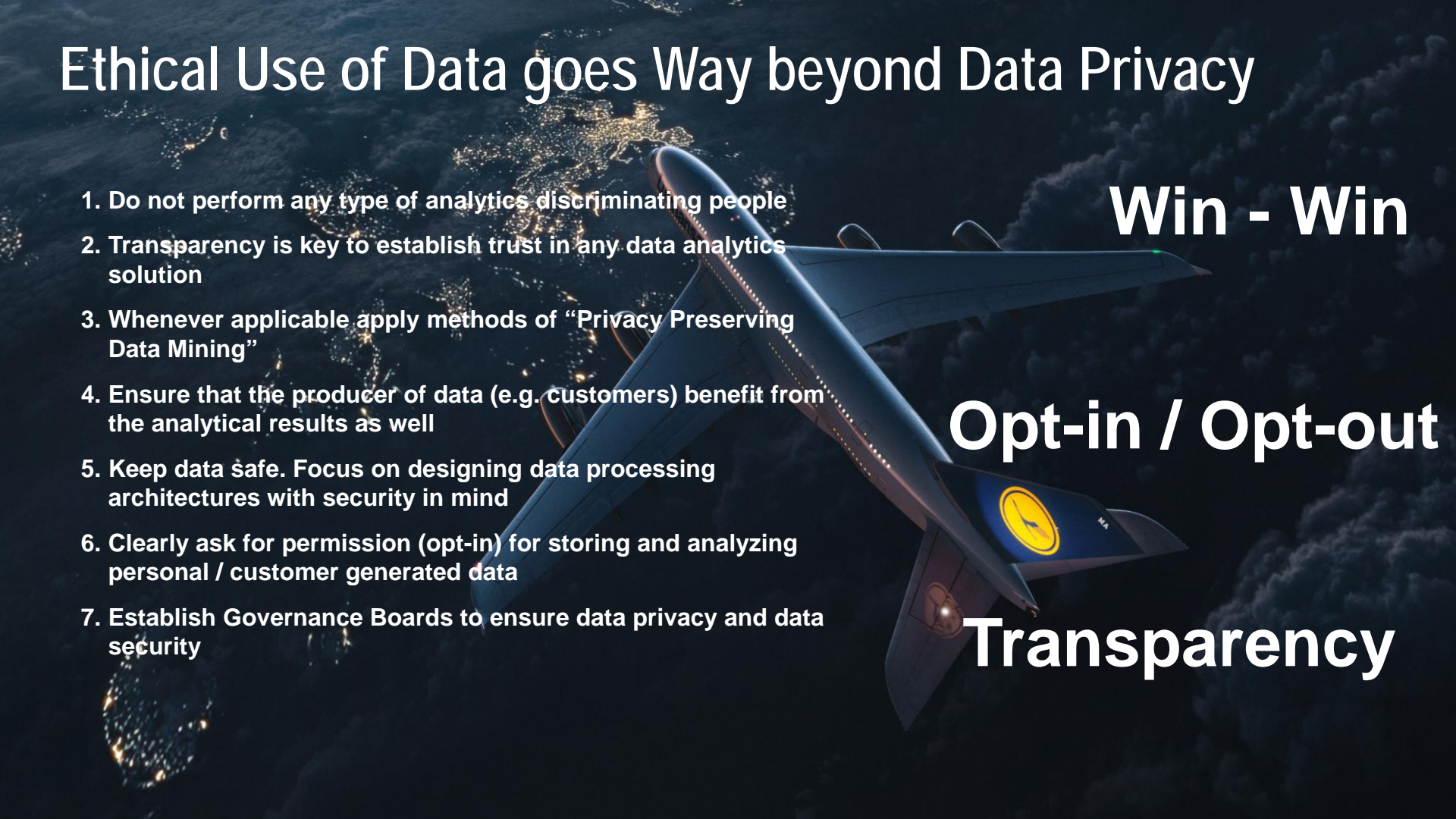


## Centrally Integrated and Clean Datasets



\* Forbes 2016: "Data preparation accounts for about 80% of the work of data scientists"

# Ethical Use of Data goes Way beyond Data Privacy



1. Do not perform any type of analytics discriminating people
2. Transparency is key to establish trust in any data analytics solution
3. Whenever applicable apply methods of “Privacy Preserving Data Mining”
4. Ensure that the producer of data (e.g. customers) benefit from the analytical results as well
5. Keep data safe. Focus on designing data processing architectures with security in mind
6. Clearly ask for permission (opt-in) for storing and analyzing personal / customer generated data
7. Establish Governance Boards to ensure data privacy and data security

**Win - Win**

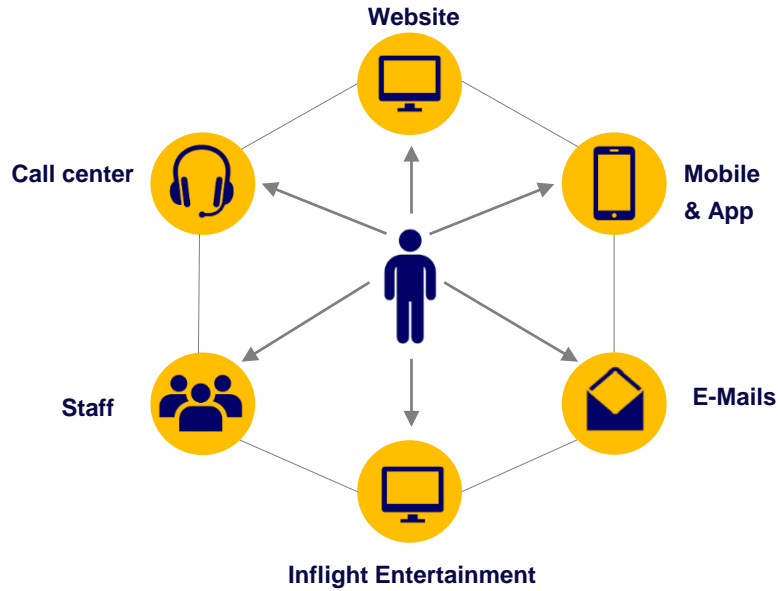
**Opt-in / Opt-out**

**Transparency**

# Recommendations along the customer journey...



# ...and at different touchpoints

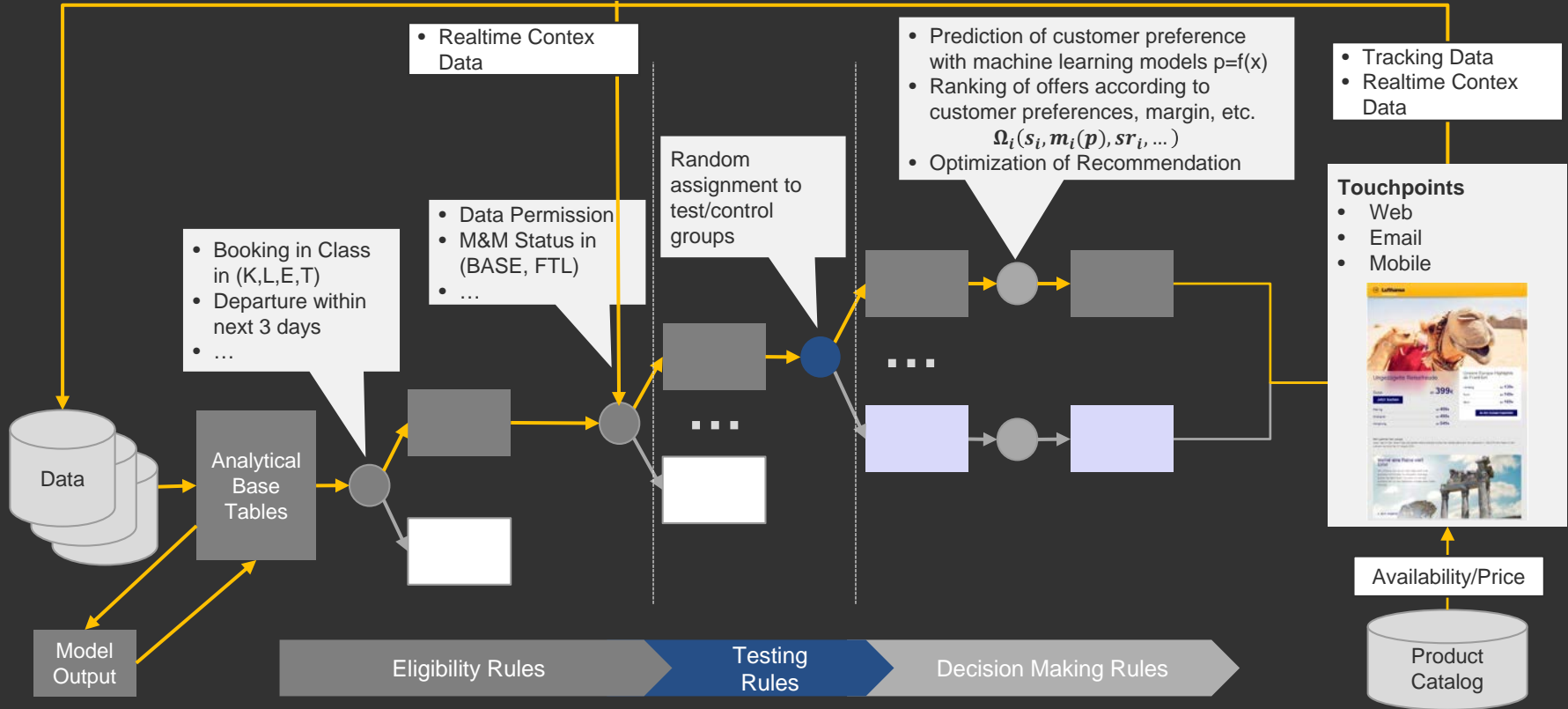




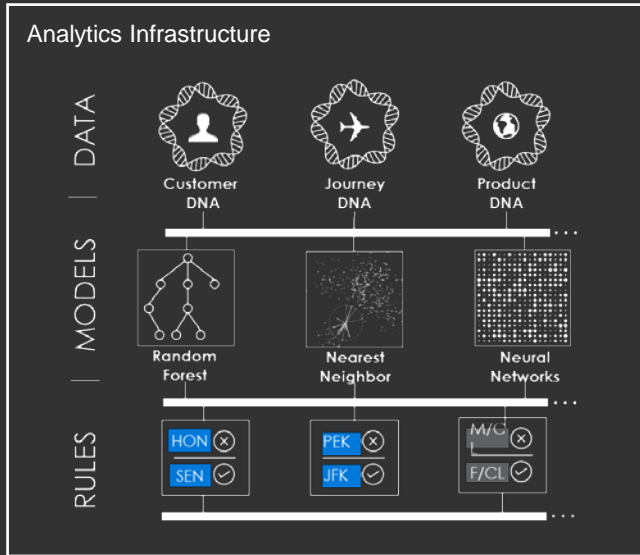


The SMILE Approach: "Decision as a Service"

# The tough bit: Decision Making



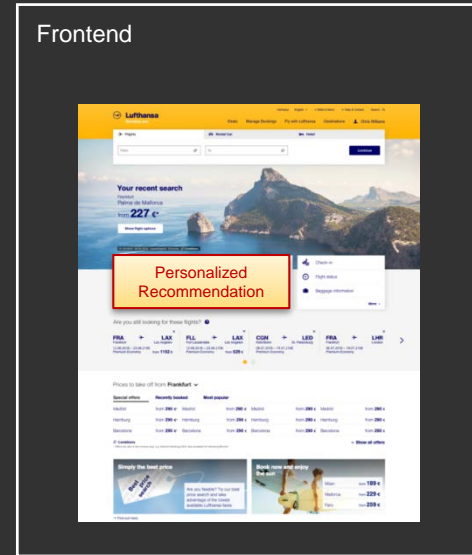
# The SMILE Approach: “Decision as a Service”



Recommendation



Request



# Analytics Masterplan // Stone by stone

CREATE LASTING  
BUSINESS IMPACT

ENGAGING  
DATA STORYTELLING

ACCESSIBLE  
ANALYTICS

PRIVACY,  
PERMISSIONS &  
REACH

EXPERIENCE  
ARTIFICIAL  
INTELLIGENCE

PUSH  
DATA DRIVEN DECISIONS

ESTABLISH AN  
OPERATING MODEL

DEVELOPING THE  
CUSTOMER DATA  
ASSET

DELIVER ANALYTICS  
AT INDUSTRY GRADE

LEVERAGE  
SMART SOURCING  
AND TALENT

smile





# Just a Passenger or a Holistic End-to-End Customer View?

**Chris Bruce**

VP Corporate Development  
Journera





# Who wins in a data-driven world?

Chris Bruce  
VP, Commercial



# The goals of airlines

## Revenue generation

- Acquire customers
- Inspire loyalty
- Improve ancillaries offerings

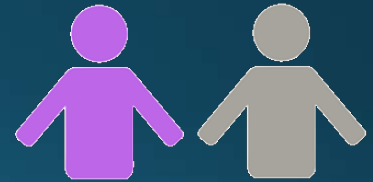


# How do you achieve those goals?

The answer of the day – personalization

And how do you personalize?

- Delivery mechanisms (NDC, direct channels)
- More (and better) data
- Capability to use the data



# The big picture

Who wins in an world where data is the differentiator?

- Airlines have a lot of data
- Others have more...

Google



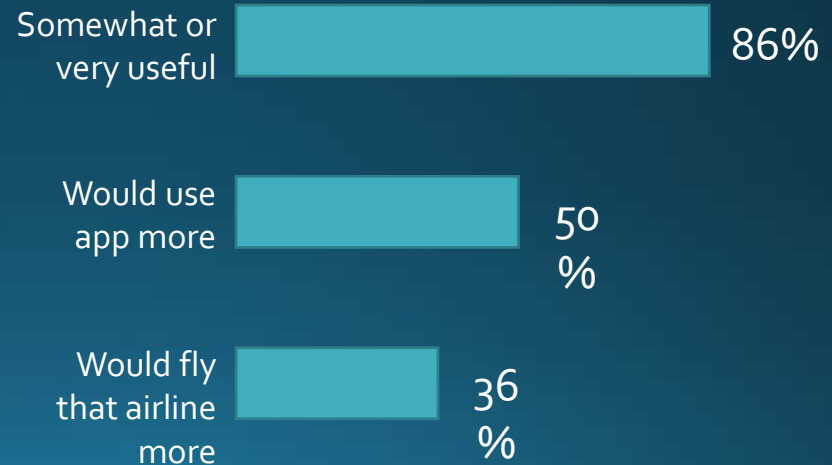
amazon



# The consumer perspective

- Journeys, not flights
- Desire seamless experiences
- Desire new innovations

Automatically changing hotel  
+ car when flight changes



# So what do you do?

- Seek more data
- Build out your data capabilities
- Take the traveler perspective (experiences), not the airline perspective (transactions)
- Find your opportunities for innovation



# Just a Passenger or a Holistic End-to-End Customer View?

**Philippe Garnier**

VP Distribution and Partnerships  
Hilton



# THE HOTEL INDUSTRY IS FRAGMENTED... AND SO IS ITS DATA

November 2017

Hilton



# 5000 HOTELS AND COUNTING



**MORE THAN ONE IN FIVE  
HOTEL ROOMS UNDER  
CONSTRUCTION GLOBALLY  
DESTINED FOR HILTON BRANDS**



# WE PROVIDE LEADING BRANDS ACROSS CATEGORIES

Luxury & Lifestyle	Full Service	All Suites	Focused Service
 WALDORF ASTORIA <sup>®</sup> HOTELS & RESORTS	 Hilton HOTELS & RESORTS	 EMBASSY SUITES — by Hilton —	
 CONRAD HOTELS & RESORTS <sup>®</sup>	 CURIO A COLLECTION BY HILTON <sup>®</sup>	 HOMWOOD SUITES BY HILTON <sup>®</sup>	
 canopy BY HILTON	 DOUBLETREE BY HILTON <sup>®</sup>	 HOME2 SUITES BY HILTON	 tru By HILTON <sup>®</sup>
	 TAPESTRY COLLECTION BY HILTON <sup>®</sup>		



# A FEW KEY NUMBERS



# WHO SAID DISTRIBUTION IS EASY?

GUEST



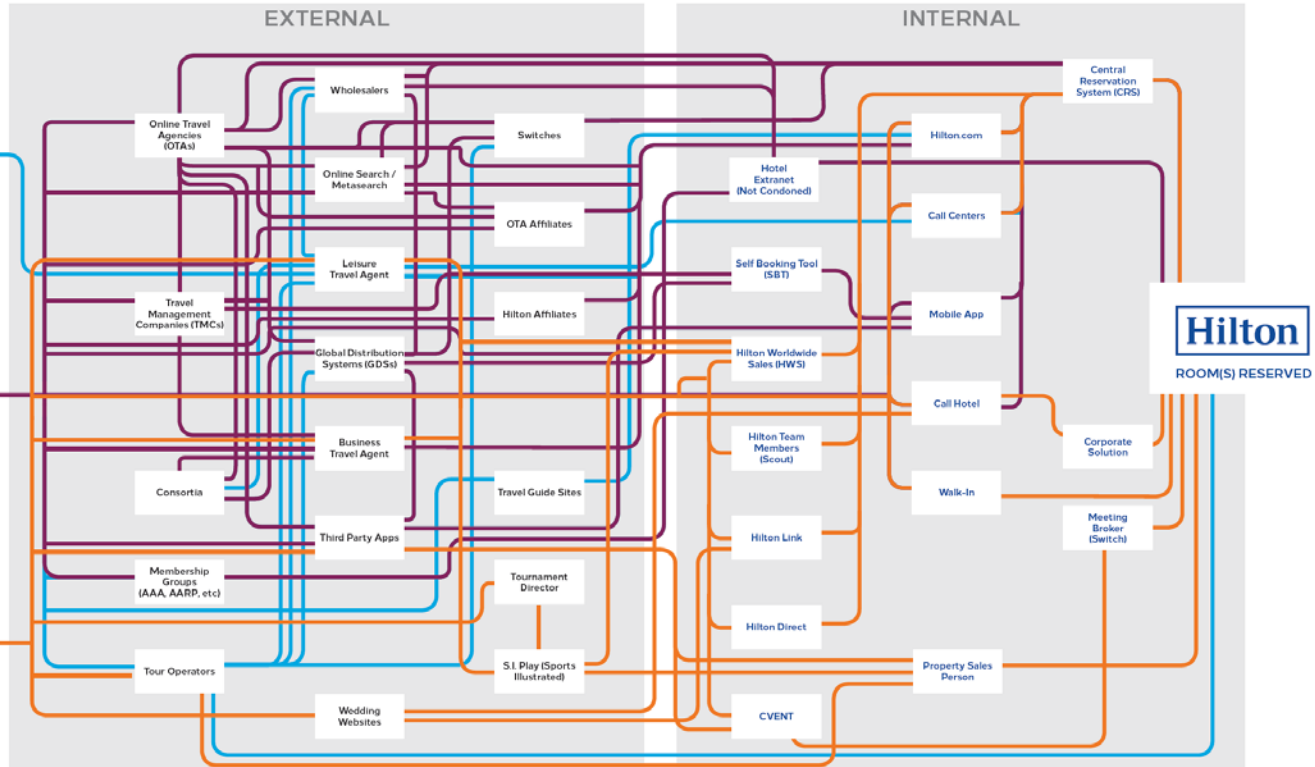
LEISURE



CORPORATE



GROUPS



# 3 KEY TRENDS

- Servicing: We'll be happy to make sense of our current data first
- Collaboration: Key topic is channel mix
- Opportunity: Greater data is about increasing efficiency





# Sharing is Caring: A Case for Value Chain Collaboration

**Slido.com #ADSPAX**

## Moderator

➤ **Paul Tilstone**, Managing Partner, FESTIVE ROAD

## Panelists

- **Joerg Hochapfel**, Lead, Analytics Center of Excellence, Lufthansa
- **Chris Bruce**, VP Corporate Development, Journera
- **Elisa Henry**, Partner, McMillan
- **Philippe Garnier**, VP Distribution and Partnerships, Hilton
- **Charlie Kimes**, Director of Data Products and Insight, American Express
- **Rock Blanco**, SVP Product Innovation, Cornerstone Information Systems

