



# Aviation Data Symposium



19–20 June 2018  
Berlin, Germany

21 June — Special Day on Artificial Intelligence and Machine Learning

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# Opening Plenary

Tuesday, 19 June 2018

09:00 - 12:30

09:00 - 09:05

## Opening Remarks by IATA

- \* **Aleksander Popovich**, SVP Financial Distribution Services, IATA

09:05 - 09:10

## IATA Legal Brief

- \* **Marie Claude Simard**, Assistant General Counsel, IATA

09:10 - 09:25

## IATA Strategic Roadmap - Aviation Data, the Opportunities and Challenges

- \* **Brian Pearce**, Chief Economist, IATA

09:25 - 09:50

## Data Driven Innovation in a Digital Economy - Are We Moving in the Right Direction, and Fast Enough?

Lufthansa Group is at the cutting edge of digital innovation and is moving fast to become truly data driven. Learn why it is critical to remain on the cutting edge, get the insight on what a major airline strategic roadmap look like, and... find out what road bumps to expect along the way.

- \* **Christian Langer**, Chief Digital Officer, Lufthansa Group

09:50 - 10:15

## Customer expectations are changing. Information on demand, services at finger tips and personalization are the new imperatives.

Digitalization has become much more integral to passenger experience. The airline industry has to evolve with the new norm, in product and service development, no less in thinking and processes. Airline alliances stand at a unique intersection in delivering a seamless digital customer experience.

- \* **Jeffrey Goh**, CEO, Star Alliance

## 10:15 - 11:15 Networking Coffee Break

11:15 - 11:35

## Big Data and the Rise of Customer Centricity in Airlines

- \* **Dr. John Carney**, Chief Data Scientist, OpenJaw

11:35 - 12:20

## Fire Chat with Industry Leaders

Get first hand information on how Industry leaders are driving the digital transformation within their organizations.

### Moderated by,

- \* **Tanya Beckett**, Presenter, BBC News

### Industry Leaders

- \* **Bernard Gustin**, former CEO of Brussels Airlines
- \* **Angela Marano**, Senior Director, Data Science and Continuous Improvement, Southwest
- \* **Frederic Sutter**, Digital Transformation Leader, Airbus

### Challenger:

- \* **Nawal Taneja**, Airline Business Strategist, Published Airline Business Author, The Ohio State University

12:20 - 12:30

## Industry Data and ADS Highlights

- \* **Charles de Gheldere**, Director Business Intelligence, IATA

## 12:30 - 14:00 Networking Lunch

12:30 - 14:00 Data Protection - Key Principles and International Framework Part 1

12:30 - 14:00 Airline Industry Data Model (AIDM) Workshop



# Specialized Tracks

Tuesday, 19 June 2018

14:00 - 15:30

## Passenger Distribution and Sales

## Airfreight Data - Air freight data: How the industry is re-shaping leveraging data-driven technologies

## Safety and Operations

## CIO Forum/Technology

14:00 - 14:10

### Introduction and Opening Remarks

- \* **Aleks Popovich**, SVP Financial Distribution Services, IATA and **Mike Premo**, CEO, ARC

Track facilitated by:

- \* **Bryan Wilson**, former British Airways Director of Information Management and IATA CIO & Director of Industry Architecture

14:10 - 14:35

### Transforming business through data-driven personalization

Lufthansa will share with us how they are upgrading a program using data analytics and mobile apps to customize passengers' experiences depending on whether they are leisure or business travelers. Under SMILE, a leisure traveler might see a Lufthansa web site that looks like a travel brochure, with suggested destinations and prices, while a frequent business traveler could be offered a site that looks more like a planning tool, with information on airport lounges. SMILE is already being used at Lufthansa and will be rolled out soon to group carrier Swiss International Air Lines.

- \* **Marcel Kling**, Senior Director and Program Lead SMILE Personalization Program, Lufthansa

14:35 - 15:00

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

The traditional travel retail model is under threat. Airlines have a wealth of valuable data, but are often unable to act on it alone. Through strong partnerships and collaboration with other players in the travel space, airlines, together with their partners (ie airports and retailers) can be more effective in using their data and data from other sources to significantly improve their ability to personalize to the customer across the ecosystem. This creates a win-win-win for airlines, their partners, and ultimately the customer. Listen to the company that launched a digital revolution in travel retail with its data driven Omnichannel None-Aviation Revenue Digitalization Platform, on the future of digital commerce in travel retail and a seamless customer experience pre-, during and after flying.

- \* **Kian T. Gould**, CEO and Founder, AOE

15:00 - 15:30

### 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.

- \* **Brandon Meyers**, Chief Revenue Officer, ADARA

14:00 - 14:05

### Opening Remarks

- \* **Jean-Christophe Rossand**, Product Manager, Cargo IS, IATA

14:05 - 14:35

### Key notes on the air freight digitalization journey

The industry has started getting digital but needs to do more. The business case is strong, this is a matter of winning or losing! A leading shipper and airline will present their analysis of the current state of the industry and share their vision for the digitalization of air freight.

#### Key notes 1: The point of view of a shipper and its consignee community

**Thomas van Bunningen**, Head Business Development Logistics Solutions, Ericsson

#### Key notes 2: The point of view of a major airline

**Boris Hueske**, Sr. Director Digital Transformation, Lufthansa Cargo

14:35 - 14:50

### Automating the flight rebooking for air cargo shipments: An application use case for artificial intelligence.

During this session, we will investigate how reinforced learning can be leveraged to develop new algorithms to automate the booking and routing of air cargo shipments taking into account multiple business parameters. The challenges of using past data in this context will be discussed as well as potential methods to address them. Note: This use case will be further explored during the Artificial Intelligence lab on Th. 21st June, during which its implementation will be presented in further details.

- \* **Wail Benfatma**, Artificial Intelligence Program Manager, Air France KLM

14:50 - 15:30

### Achieving excellence in shipment management leveraging data

The air cargo industry developed a strong expertise in analyzing what happened during a shipment, and why. But are we able to predict what will happen and to take proactive actions? Moving from hindsight to insight and foresight is a key challenge for the industry.

Our panelists will investigate what data sources can be leveraged to achieve excellence in shipment management, both commercially and operationally: From demand estimation, booking, shipment planning and re-planning during the actual transportation (event management), proactive customer notification to the continuous performance improvement and the creation of new commercial products.

- \* **Lothar Moehle**, Director AVSEC + Governance DB Schenker AG
- \* **Christine Klemmer**, Senior Manager Process- and Corporate Quality Management, Lufthansa Cargo
- \* **Ariane Zimmerman**, Executive Director, Cargo IQ

This session will assess as well the value of predictive analytics to support these business processes.

14:00 - 14:25

### Opening Remarks and The Possibilities with Good Data

There are numerous data sources, some mandatory, some voluntary, but all valuable. What are some quick tips to see your data differently, for the purpose of increasing operational efficiency and improved safety performance? This session sets the stage for the Safety and Flight Operations track.

- \* **Nancy Rockbrune**, Head, Safety Management Systems, IATA

14:25 - 15:30

### Multi-Stakeholder Data Programs

The aviation community is working collaboratively at the system level to address and implement appropriate safety measures to mitigate risks and even prevent safety hazards through safety predictive analytics. Hear from people involved in such initiatives to understand how your organization may leverage these findings, or even become involved. Three different initiatives, linked to this same purpose will be presented and then discussed. They will highlight their respective visions, what has been achieved to date, what stakeholders have been involved, the challenges and successes, next steps and how they are inter-related.

ICAO will explain how they, together with the Member States they support are getting into the big data realm.

- \* **Manoosh Valipour**, Management Systems Analysis Officer, ICAO

Data for Safety, or D4S is a European program that aims to collect and gather all data that may support the management of aviation safety risks at the European level. Currently in its initial phase, this voluntary program will support a Performance-based Environment and set up a more predictive system, by developing the capability to discover vulnerabilities in the aviation system across terabytes of data.

- \* **Erick Ferrandez**, Acting Head of Safety Intelligence and Performance Department, and Data4Safety Programme Manager, EASA

The Aviation Safety Information Analysis and Sharing program, or ASIAS is another Regional collaborative program with an aim to manage aviation safety risks at the system level for the United States. ASIAS brings together data from across the government and industry, including voluntarily provided safety data, the program works closely with the Commercial Aviation Safety Team (CAST) and the General Aviation Joint Steering Committee (GAJSC) to monitor known risk, evaluate the effectiveness of deployed mitigations, and detect emerging risk. Hear how this program continues to evolve and advance aviation safety.

- \* **Michael J. Quiello**, Vice President, Corporate Safety, United Airlines and Industry Co-Chair CAST

**Session Host: Olena Vasylychenko**, Head, Centers of Excellence, IATA

14:00 - 14:05

### Welcome and introduction

- \* **Tim Grosser**, Head, Digital Transformation, IATA

14:05 - 14:25

### Everyday People

**Can we improve our operational performance if we know more about the people on our planes?**

Southwest Airlines is continuing to build upon a rich, integrated set of data about their aircraft turn. At the 2017 IATA Data Symposium Sr. Director, Angela Marano, spoke to us about how they have been building this rich data set to identify improvement opportunities within the daily operation. Since this time they have been working to connect individual Customer behavior attributes into this data set to predict the likelihood of an on time turnaround.

- \* **Angela Marano**, Sr. Director, Corporate Strategy Data Science and Continuous Improvement, Southwest Airlines

14:25 - 14:45

What is the next big technology trend? Who is investing in what? Which technologies are gaining momentum... How can we know these answers? Just look at the patents being filed. Hear from PatSnap who mine this source to understand what is the next big thing in aviation.

- \* **Jordan Wray**, Industry 4.0 Innovation Consultant, PatSnap

14:45 - 15:05

### Exploring Digital Data Marketplaces

Airlines increasingly own large volumes of data that could be shared to achieve benefits no single airline could achieve on its own. A Digital Data Marketplace is a concept that is being researched as a way to achieve fair and economic data sharing whilst organizing the required trust, and where Open Data Exchanges facilitate such sharing in a similar way Internet Exchanges facilitate the data flows between providers of the current Internet.

- \* **Leon Gommans**, Science Officer/ Researcher, Air France KLM

15:05 - 15:20

- \* **Dr. Rachad Nassar**, Business Development and Marketing Manager - Transport sector, Huawei Enterprise

15:20 - 15:30

### Using Big Data for Financial Engineering at Turkish

Turkish Airlines have invested significantly in digital transformation and big data. Understand their financial return on investment within their financial engineering from a legacy system to an open system

- \* **Cuneyt Bahadir**, Manager - Revenue Accounting & Reporting, Turkish Airlines

15:30 - 16:15 Networking Coffee Break



# Specialized Tracks

Tuesday, 19 June 2018

16:15 - 18:00

## Passenger Distribution and Sales



## Airfreight Data - Air freight data: How the industry is re-shaping leveraging data-driven technologies

## Safety and Operations

## CIO Forum/Technology

16:15 - 16:35

### Personalization through Machine Learning—United Airlines Journey

In this talk, Michael Shores will share an overview of United Airlines data driven analytics and machine learning roadmap with a focus on a machine learning driven personalization use case to help enhance customer experience.

- \* **Michael Shores**, Senior Manager, Machine Learning, United Airlines

16:35 - 17:20

### Sales Data Usage in Effective Channel Management

Indirect global distribution channels will remain key for most airlines. Using these channels is clearly an intelligent and far reaching strategy for the industry. However, getting accurate, timely and complete data, and, even more importantly, making efficient use of it could be challenging. And running channels strategy with poor visibility can lead to costly mistakes. As we continue to advance in technologies, and collect, process and consume more and more data, what is the future of channel management? And are we at the stage where already have enough data for automated channel management decision making?

Hear a major airline sharing its views, and then join the debate with other major industry players

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

#### Panelists:

- \* **Konstantin V. Demanov**, Deputy Director of Sales, Aeroflot Russian Airlines
- \* **Marlene M. Garcia**, Director Sales Information Systems, Sales, United
- \* **Emre Pekesen**, SVP Sales and Network Planning, Pegasus Airlines

17:20 - 17:40

### The Future of Sales Channel Management and Effective Data Usage.

- \* **Emmanuel de Lassagne**, Head, Sales & Incentive Solutions, Accelya

17:40 - 18:00

### Pains and Gains in Data Analysis - Are you Seeing the Full Picture?

Today we already collect tons of data, and will continue to collect more and more... But call it *big* or *huge* data, regardless of what we are doing, some data points cannot be captured from real life. Just a few examples in the airline industry are:

- Bookings without revenue management?
- On time performance with another block time calculation?
- Maintenance cost with a preventive maintenance plan?

Until this day, to answer these questions the common approach is to use real life tests. But is it really satisfying? Or worst, misleading?

Today, however, these can be addressed with the creation of artificial data for simulation purposes to take more possible parameters into account. Statistic estimators with likelihood of parameter setting deliver result. Hear from Opremic Solutions managing director how this can be done efficiently.

- \* **Dr. Michael Frank**, CEO & Founder, Opremic Solutions

16:15 - 16:30

### Next steps in service management for air cargo

This session aims to (collectively) push the boundaries of existing thinking in the important area of service management. It acknowledges current challenges in the business and then demonstrates how data driven technologies can be systematically assembled and orchestrated to improve the overall service competence of air cargo in the new era.

- \* **James Fernandez**, EVP, Commercial, Cargo and Logistics Solutions, Accelya

16:30 - 17:50

### Connecting the air freight industry to increase its value proposition

The air cargo industry is complex and fragmented. This makes the business case for digitalization more challenging. Yet shippers require a digital ecosystem enabling an end-to-end digital supply chain in which data is efficiently exchanged and where companies can easily connect.

Agreed standards and connectivity are key to success, and several initiatives demonstrate that such ecosystem can be implemented when air cargo stakeholders collaborate. Several use cases will be presented, highlighting what has been achieved business wise, what technologies were leveraged, the pitfalls and key success criteria, and the next steps.

- \* **Moderator: Henk Mulder**, Digital Cargo, IATA

Use case 1: Leveraging Blockchain technology with smart contracts for facilitating trade and automating workflow.

- \* **Mario Louca**, Executive Director, Global Industry Leader Europe, IBM Global Travel & Transportation Industry

Use case 2: Leveraging Blockchain technology to optimize traceability in the (fresh food) industry.

- \* **Nicolas Kozakiewicz**, Head of Research & Development and Innovation, Worldline

Use case 3: How can live monitoring be applied to valuable and vulnerable shipments that are both time and temperature sensitive? Two case studies will highlight how the ability to react swiftly to service failures through IoT connectivity can prevent not only severe supply chain disruptions but a complete product loss.

- \* **Marcus Stoneham**, Director - Security Health & Safety; Europe, Expeditors and Cargo Signal

The session will end with an interactive session with the audience to reflect on the various initiatives presented and how the full industry can benefit from these.

17:50 - 18:00

### Closing Remarks

- \* **Frederic Leger**, Director, Airport, Passenger, Cargo and Security Products, IATA

16:15 - 16:35

### The "Intelligent" Engine

Is it possible for an aircraft engine to think?... feel?... heal itself? Rolls Royce believes so, and they are pioneering the development of the Intelligent Engine. One that is "connected", "contextually aware" and "comprehending". Gain insight into this cutting-edge vision of Rolls Royce that airlines may see in production in the very near future.

- \* **Nick Ward**, Head, Product Management, Servitisation & User Experience, R2 Data Labs, Rolls-Royce

16:35 - 17:15

### Skywise and the Aviation Data Revolution

At the 2017 Paris Airshow, AIRBUS, together with Palantir Technologies, launched Skywise, a new digital aviation data platform to allow for the use and analysis of the primarily untapped wealth of aviation data available.

Quickly gaining momentum, with over 1,000 aircraft already committed to be connected, Skywise is aiming to become the platform of reference used by all major aviation players to improve their respective operational performance and business results, while also supporting their digital transformation, without the need for additional infrastructure investments.

Hear from experts and early adopters of Skywise describe this new initiative and insights into the resulting value today and in the future.

- \* **Stephen Roebuck**, Digital Transformation Office, AIRBUS

- \* **Yuanbo Liu**, Business Development, Palantir

17:15 - 18:00

### Beyond Sensors and Big Data

Much attention is placed on the data coming from an aircraft, however, there is a wealth of ancillary data that must also be considered. Hear how prognostics on airline operations and maintenance can be strengthened through the capture and use of the "dark data" hidden within an organization.

- \* **Mark Roboff**, Vice President, Aerospace & Automotive, sparkcognition

16:15 - 16:35

### Blockchain - are we ready

Winding Tree is a blockchain-based decentralized open-source travel distribution platform. Hear from Maksim on the role blockchain can play in the future of the aviation network

- \* **Maksim Izmaylov**, CEO, Winding Tree

16:35 - 17:00

### Airbus and data revolution

See how Airbus enables aviation players to improve their operational performance and business results and to support their own digital transformation deeper in-service data insights. By looking at work orders, spares consumption, components data, aircraft / fleet configuration, on-board sensor data and flight schedules Airbus brings together multiple sources across the industry into one secure cloud-based platform.

- \* **Frederic Sutter**, Digital Transformation Leader, Airbus

17:00 - 17:20

### Imagining the impact of artificial intelligence on travel

The incredibly large amount of data, combined with new machine learning algorithms, unlocks a realm of possibilities for airlines, airports, travel agencies...and of course the travelers. AI will serve mainly to simplify the travel journey. In a nutshell, people will spend much less time arranging travel and much more time enjoying the travel experience. AI will also help the different actors of the industry, such as airlines and airports, not only to be more efficient but also to be able to offer new kinds of products and services to travelers. During this presentation we review some of these new use cases of AI currently being explored in our research teams.

- \* **Rodrigo Acuna**, Head of AI Research, Amadeus IT Group

17:20 - 17:40

### The future of digital messaging

What is the new normal in regard to digital messaging. We have seen many significant changes of late: the issues related to the recent Facebook/Cambridge Analytica privacy concerns; The practice of engaging in commerce and other sensitive transactions over social (even private social) channels; and The assurance of robust digital messaging infrastructure in what is fast-becoming a mission-critical application.

- \* **Dave Evans**, VP, Social Strategy, Lithium Technologies

17:40 - 18:00

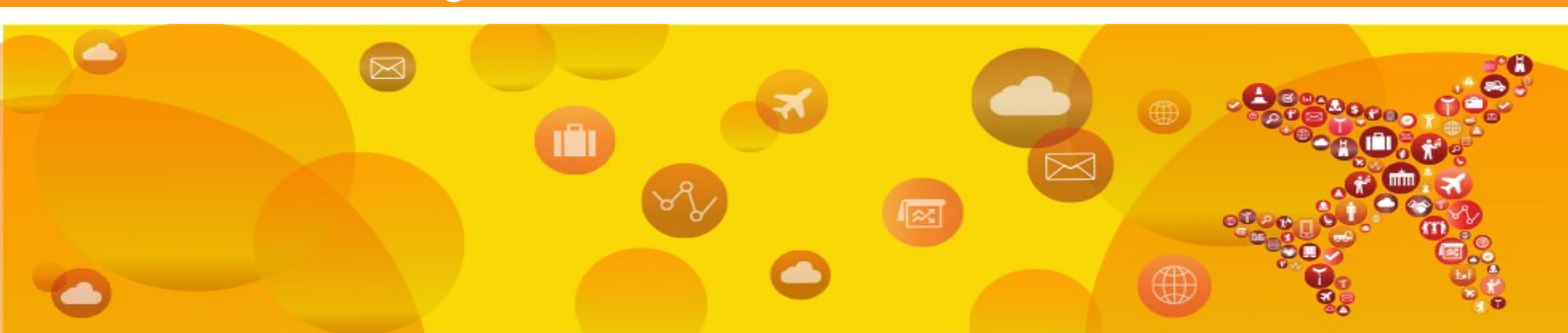
### Design Thinking for Corporate innovation

Can design thinking be the tool of choice to enable corporate Technology departments to innovate with speed. Is it only limited to technology teams, how do I get started

- \* **David Vaury**, Transport Lead for Continental Europe, PA Consulting Group

19:00 - 22:30

## Networking Dinner





## Specialized Tracks

Wednesday, 20 June 2018

09:00 - 10:30

### Passenger Distribution and Sales Traveler Day



Track facilitated by:

**Bryan Wilson**, former British Airways Director of Information Management and IATA CIO & Director of Industry Architecture

**09:00 - 09:20**

#### APIs... Every One is Talking About it, but What is Really Out There in Aviation Beyond the Buzz Words?

APIs are commonly used in today's digital society, whether it is checking the sports scores, train timetables or buying tickets for cultural events. Airlines already identified many practical implementations too. A recent IATA survey of 54 airlines found that more than half of the respondents already use APIs to distribute flight offers, schedules, seat maps and flight status information. Clearly, APIs are fundamental to modern airline digital enterprise as a critical tool to share data with business partners, employees and staff alike. So how do airlines actually use the API technology to deliver innovative solutions in customer service and to enable seamless data interchange between parties? Last year, the audience at the Aviation Data Symposium discussed technology visions and possibilities, this year a leading airline technologist will share practical hands on experiences and insights about using those modern technologies

- \* **Marcus Wagner**, IT Architect, Lufthansa
- \* **Aylin Ceylan, Jr.** Venture Development Manager, Lufthansa Innovation Hub

**09:20 - 09:45**

#### Market Price Alerts Enabling Airlines Dynamic Pricing

As the travel industry evolves, more and more airlines are moving towards dynamic pricing to stay relevant. But proper dynamic pricing is no child's play; airlines need to have access and process tons of real-time price data to respond timely to market changes.

Hear from Infare's Chief Data Scientist, how two buzz words, such as Big Data and Machine Learning actually work, helping to solve this immense challenge. Real-time data access and processing design is a must and ensures airlines make the right pricing decisions at the right time (.. with a little help of machine learning).

- \* **Josef Habdank**, Chief Data Scientist, Infare

**09:45 - 10:30**

#### GDPR is Here.. And There is a Lot of Talk Around it in Every Corner...

It is, however, just one of the components in the global privacy protection and data security regulatory framework. And while GDPR is naturally high on the books, there is a lot more to keep in mind when dealing with regulatory compliance data challenges.

Learn from North American and European experts in aviation business and legal aspects to understand what it means for you, and how to sleep better at night.

**Moderator:** Gary Doernhoefer, Former IATA and Orbitz General Counsel

**Panelists:**

- \* **Bart Biggers**, Partner, Winstead (US)
- \* **Charlotte Thijssen**, Attorney-at-Law, Kennedys (Belgium)
- \* **Kevin Iverson**, CTO, Journera

### Safety and Operations

**09:00 - 09:05**

#### Opening Remarks

- \* **Nancy Rockbrune**, Head, Safety Management Systems, IATA

**09:05 - 09:45**

#### Improving Runway Safety through Data Driven Decision Making

Artificial Intelligence (AI) is a promising technique expected to provide prediction capabilities to improve runway capacity while ensuring safety. Powered by machine learning (ML) models, computers can learn over large historical datasets of aircraft data, weather data, traffic information, aircraft ground movements. Building these tools presents important governance and technical challenges, as large quantities of confidential data needs to be ingested, cleaned, stored and fused and made available for the ML models to be trained. This requires approvals of data releases from several stakeholders, including airports and airlines, providing aircraft data.

Eurocontrol and Tadorea have been working with a number of European airlines on DataBeacon, an AI platform that allows data models to be developed, trained and tested, while respecting data confidentiality across airlines and airports. Securing and managing safety research using DataBeacon on a Runway Safety use case highlights the approach and the potential benefits from big data and machine learning to the aviation community.

- \* **David Perez**, CEO, Co-Founder and Managing Director, Tadorea
- \* **Bob Graham**, Head, Airport Research, Eurocontrol

**09:45-10:10**

#### Actionable Use of Data – An Airlines experience

The edifices for collecting aviation data have been developed for many years, however, the actionable utilization of data has been slow to progress. In order to take advantage of these robust data collection capabilities, we must change the scope from traditional score keeping of perceived threats to risk based modeling that will be backed by years of collected data. To achieve this new vision, new methods need to be researched and applied, expanding the view from aviation knowledge alone to that of computer science and scientific analysis. New challenges will emerge that need to be overcome, both technically and culturally, only then will the true value of this data be able to propel our industry forward.

- \* **Andrew Dunbeck**, General Manager, Flight Safety, Delta Air Lines
- \* **Josh Alber**, Project Manager, Data Modeling, Delta Air Lines

**10:10-10:30**

#### Data Communications with Frontline Personnel

Information must be communicated effectively to be useful. Hear how one airline is building mechanisms to provide their front-line personnel with the information they need to better perform their day-to-day jobs.

- \* **Slawko Borys**, Director Safety, Security & Regulatory Affairs, Air Canada rouge
- \* **Jason Langerhorst**, Manager of Safety Services, Air Canada rouge

10:30 - 11:15 Networking Coffee Break

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## Specialized Tracks

Wednesday, 20 June 2018

11:15 - 12:30

### Passenger Distribution and Sales



11:15 - 11:35

#### Customer Centricity and Enriched Systems with New Intelligence

Over time, legacy systems and processes have left airlines with a pervasive data problem: disparate data sets, siloed applications, and functional systems are at the core of many airlines' operations today. This session will then explore how airlines can solve the data divide to capture more revenue, drive customer centricity, and enrich operational systems with new intelligence.

- \* **Rodrigo Ramos**, Managing Director, Sabre Iceland & Product Head of Intelligence Exchange, Sabre

11:35 - 12:00

#### Customer Triggered Personalized Interactions

How Next Best Action (NBA) enables personalized customer actions. Learn why you cannot achieve personalization with current marketing campaigns and how you can add new automated customer triggered personalized interactions using NBA. Understand how NBA adds new capabilities to your existing marketing and customer engagement techniques and is not disruptive to what is being done today. The need for an arbitration layer that determines whether a customer should receive a segment based marketing campaign or a customer triggered personalized NBA action.

#### Customer Expectations

Why do you need to establish a long term nurturing interactive relationship with each customer at numerous touchpoints in their relationship and journey with a company.

#### What is NBA?

Why is NBA fundamentally different than existing marketing campaigns? How will NBA supplement your current marketing?

#### How Does NBA Function?

How NBA accomplishes customer triggered one to one relationships that are triggered by customer expectations

#### Applying Personalization

Across a customer's interactions with a company in a revenue management controlled booking process

- \* **Steve Pinchuk**, Worldwide Lead, Customer Intelligence, IBM

12:00 - 12:20

#### Do you Have Enough Data Already? Yes, and More Than you Think!

You already have at your disposal billions of airline prices, what products are being shopped, and which are purchased, the issue is not that we as an industry do not have enough data, but rather the industry lacks the ability to turn the billions of data records into usable information to answer key questions. One such question is what is the passengers conditional willingness to pay? This is a key piece of intelligence for the industry to improve their dynamic pricing and deliver personal NDC offers that resonate to the customers. ATPCO has found that the challenge is not having enough data, but rather how to get all the robust data that does exist into format that answers questions. ATPCO will share some use cases on how turning unstructured data to structure data and turning raw data into informative APIs, will be two key techniques that will unlock the value that exists in the data we have today.

- \* **Tom Gregorson**, VP Products and Solutions, ATPCO

12:20 - 12:30

#### Track Closing Remarks - Wrap up

- \* **Charles de Gheldere**, Director Business Intelligence, IATA

12:30 - 14:00 Networking Lunch

12:30 - 14:00 Data Protection - Key Principles and International Framework Part 2

### Safety and Operations

11:15 - 11:45

#### Data Driven Tools to Empower Employee Decision Making

Operations Decision Support is a new department aimed at making KLM the most data-driven airline in the world. Through the adoption of design thinking and data science methodologies, this department develops innovative solutions, products and services to improve efficiency, customer service and innovation within KLM's operations. Hear how this department is leading an organizational-wide cultural change through the development of data driven tools and solutions to empower employee decision making.

- \* **Laurie Robben**, Product Manager Decision Support, KLM

11:45 - 12:15

#### FAA Hazard Library

The objective of the Hazard Library is to provide centralized access to information regarding commercial aviation hazards, including hazard descriptions, event data, mitigations, and related data products. The Hazard Library uses MediaWiki to encourage a community of users to easily add their safety information to the Wiki, breaking down silos, and using existing work to create a repository of safety information that would otherwise be time-consuming to collect. The hazards in this library can then be used throughout the safety risk management process.

- \* **Jake Streeter**, Safety Data and Analysis Team Manager, Federal Aviation Administration

12:15 - 12:30

#### Track Closing Remarks

- \* **Nancy Rockbrune**, Head, Safety Management Systems, IATA

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**14:00 - 14:10**

#### Introduction: Innovation Jam Session

IATA is no stranger to leading innovation in the industry. With a number of major industry transformational projects well underway, many more are in a pipeline. And it is of no surprise that many of them are centered around using cutting edge technologies to make use of vast amounts of data in the industry. IATA's head of innovation will discuss what IATA is doing, where is it going, and how does it help the industry.

- \* **Andrei Grintchenko**, Head, Travel Intelligence Projects, IATA
- \* **Juan Ivan**, Head, Innovation, IATA

**14:10 - 14:35**

#### Freedom to the Innovators! A Success Story of Lufthansa Innovation Hub

Why does it make sense to give innovators full freedom to try and fail? Because it ultimately results in success! But don't take our word for it, and hear from a major airline Innovation Hub leader.

- \* **Reinhard Lanegger**, Senior Venture Development Manager, Lufthansa Innovation Hub

**14:35 - 14:50**

#### The Airline Data Driven Digital Revolution: Best and Next Practices

- Meaningful Insights
- Dynamic Pricing
- Physical and Digital Worlds Merger
- Shopping with Robots and without Banks
- Fast Service Delivery

- \* **Nawal Taneja**, Airline Business Strategist, Published Airline Business Author, The Ohio State University

**14:50 - 15:15**

#### IATA Hackathons - Innovation in Action

You spend a weekend in Kochi, India with your laptop, internet connection and access to multiple cool data sets... You then trown in plenty of local snacks, unlimited pizza, pop and sleepless nights? What is the result? Well.. depends on who you are with! Join this session to learn about hacking away in India and meet the winning team from **RMS, An Accelya Group Company**.

- \* **Juan Oliver**, Manager, Travel Intelligence Projects, IATA
- \* **Ursula Silling**, CEO, XXL Solutions & India Hackathon Jury Member



The winning team was faced with a challenge to increase conversation rates in a modern environment, where the amount of flight options is increasing, travelers are being offered a variety of services that may not be fit to them, and are generally presented with too many irrelevant choices. Learn how the winning team produced a solution to improve sales conversion rates while enhance traveler's by analyzing massive amount of data, and employing AI to enable profile recognition and effective micro-segmentation.

#### The winning RMS team

- \* **Michael Peters**, VP, Product Management
- \* **Fabian Widyadri**, Software Engineer

**15:15 - 15:45**

#### The Twelve Labors of Mastering Big Data

5 years later... after the creation of the Big Data Unit of Amadeus, what was the journey? Here we look at some of the road blocks faced in a fun comparison with the 12 labors of Hercules. Going into the Big Data world is crucial, but sometimes complicated. Have a look at what it means in the real world.

- \* **Pascal Clement**, Head of Airline Data Unit, Amadeus

#### How Airlines can harness and leverage big data

- \* **Rodrigo Ramos**, Managing Director, Sabre Iceland & Product Head of Intelligence Exchange, Sabre

**15:45 - 16:00**

#### Key Takeaways and Closing Remarks

- \* **Aleks Popovich**, SVP Financial Distribution Services, IATA

**16:00 - 17:00** Networking Coffee





09:00 - 09:05

### Opening Remarks

- \* **Henk Mulder**, Head, Digital Cargo, IATA

09:05 - 09:30

### The Data Excellence Science and Artificial Intelligence - Business Excellence Automation and the Human-Computer Dialogue "Automate Business Excellence and "Govern by Value"

- The story of the data excellence science
  - The challenge of the digital era
  - The paradigm shift in the value creation ecosystem
  - What type of intelligence is required to win the digital era
  - A collaborative framework and system to reconcile humans and computers for the creation of a society of excellence and to "govern by value"
- \* **Dr. Walid El Abed**, Founder and CEO, Global Data Excellence

09:30 - 09:50

### An Overview of Air France-KLM Artificial Intelligence Journey Roadmap

- \* **Wail Benfatma**, Program Manager, Artificial Intelligence, Air France-KLM

09:50 - 10:10

### Artificial Intelligence in Airlines Customer Service

Customer Service is often seen as a cost, but using AI, airlines can actually increase revenue, reduce cost and deliver superior customer service. AI expert and Cognitive Engineer, Brian Lewis will explain how to use Artificial Intelligence to create value for all customer service engagements.

- \* **Brian Lewis**, CTO, OpenJaw

10:10 - 10:30

### A journey from data to insights: the Machine Learning practitioner perspective

Data science and artificial intelligence are shaping the way we travel. In order to make this possible, one of the main challenges for a data science team is to have actionable data ready to be consumed. Doing this is not a trivial task as we are talking about huge amounts of data from various sources and formats that have to be processed with rapidly evolving technologies.

We will present a few examples on how we went from legacy EDIFACT messages to reconciled sources of reservation, ticketing or schedule data, and how this is processed in a scalable manner.

Having a solid knowledge of the data and its limitations is key in order to obtain meaningful results from advanced analytics techniques. As a data science team, we can only accept decisions based on data if we know the significance of our results. As an example, customer segmentation has traditionally been implemented based on business rules. Today we use machine learning algorithms to let the data reveal the customer segments to us. But in order to implement those results in production and to apply them to business processes, it is key to have a solid interpretation of the results make sure that they are statistically robust.

- \* **Daniel Perez**, AI and Data Engineer, Amadeus

## 10:30 - 11:00 Networking Coffee Break

11:00- 11:25

### How data and machine learning can improve your customer experience

Airlines are learning to leverage managed services to ingest, process, analyze and predict using data collected from all corners of the organization. In this session we will follow Johnny's all too common journey and see how data collected and analyzed, combined with machine learning on the cloud can improve customer experience.

- \* **Massimo Morin**, Head, Worldwide Business Development, Travel and Tourism, AWS

11:25 - 11:50

### How to Leverage Big Data & Machine Learning to Personalize User Experience. Learn from two practical models and learn about the process, data & algorithms used to implement them.

- **Best Offer** - improve marketing emails by predicting the most likely destination of one's next journey. Case: European online travel agency
- **Best Results** - improve booking engine conversion by tailoring search results to each user. Case: App in the Air

- \* **Bayram Annakov**, Founder and CEO, Appintheair

11:50 - 12:10

### AI in Revenue Management. Is it Really New? AI has always been used in revenue management, we just did not call it that back in the days. But what with the technological advancements, what are the new opportunities in RM, and will we still need humans?

- \* **Laurent Lebard**, CEO, YieldIn

12:10 - 13:30 Networking Lunch





**13:30 - 13:55**

**AI is hard at work, simplifying the industry already.**

Listen to IBMs overview of AI use case in aviation with focus on Watson Air Cargo Compliance, and see how AI technology is used to determine air cargo compliance by performing real time cargo declaration checks safely and securely based on industry rules & regulations manuals, carrier policies and local import/export legislation knowledge.

\* **Mario Louca**, Executive Director, Global Industry Leader Europe, IBM Global Travel & Transportation Industry

**13:55 - 14:20**

**Privacy and AI in the age of GDPR, or who are those masked customers?**

Many discussions related to AI center on it as a threat to privacy. In this talk we will look at it from the opposite perspective - how AI can help us better secure customer privacy!

\* **Kevin Iverson**, CTO, Journera

**14:20 - 14:45**

**“Moving the needle” in the Airline Front Office: How AI can help airlines leverage new data sources to improve planning, forecasting, and revenue management.**

In this talk, SparkCognition will discuss new ways to utilize AI to further improve and refine planning, forecasting, and revenue management for both cargo and passenger operations. We'll look at how AI can connect new and fast evolving sources of data to traditional models, and how deep learning can uncover new features to further enhance capacity planning and demand prediction. We'll also consider how AI can find new patterns in existing data and we'll cover some fun examples showing surprising results.

\* **Mark Roboff**, VP, Aerospace & Automotive, SparkCognition

**14:45 - 15:10**

**Discover SITA's secret cookbook of an AI project for baggage!**

Through this talk you will learn how to select the right ingredients, plan them in the right quantities; what cookware to use and what are the best preparation methods. And once you have the basics we'll go through a few delicious recipes to avoid baggage mishandling; baggage tracking and drop... brought to perfection with a dash of our very special Artificial Intelligence spice.

**Caroline Camilli-Gay**, Program Manager, SITA Labs

**15:10- 15:30**

**Artificial Intelligence in Aviation**

In this session Houman will share the results of IATA research and development activities on AI in collaboration with the airlines and a wider value chain members. He will also unveil the findings reported in **AI in Aviation White Paper** recently published by IATA and available for a free download.

\* **Houman Goudarzi**, Manager, Innovation, IATA

**15:30 - 17:00 Networking Drinks**

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