

Travel Communication



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Contents

1. Executive Summary	4
2. Background	5
3. Concept	7
4. Scope	8
5. High Level Industry issues	9
6. Passenger Journey Scenarios / Use Cases.....	10
<i>Main points of the journey</i>	10
<i>Off- Airport</i>	10
.....	11
<i>Off- Airport (Cont'd)</i>	11
<i>Advanced processing at the Airport/Airport Journey (Arriving at Airport facilities)</i>	12
<i>In-Flight Connectivity</i>	13
Connection Airport:	13
<i>Arrival Airport/ Destination</i>	14
7. Messaging	15
8. Simplify and Improve the Current Process	16
9. Shared benefits	17
10. Benefits for the airlines:.....	17
<i>Cost avoidance:</i>	17
<i>Ancillary fee opportunities:</i>	18
<i>Better on time performance:</i>	18
<i>Better Passenger Loyalty Program:</i>	19
11. Benefits for Customers.....	19
12. Legal Consideration	20
13. Conclusion	20

1. Executive Summary

With the current strong air travel growth and with the expectation that global passenger traffic will double within the next two decades, airport infrastructure in many regions are already or will soon be capacity-challenged. Airport infrastructure will not be able to cope with this passenger growth from both a physical and a financial perspective. Technology is on its way to revolutionize how passengers live, work and communicate with the travel industry.

Air transport is no longer just about the flight, it's about the complete passenger journey, starting from home to the end destination.

The concept of Travel Communication and Personalization introduces the possibility to personalize the passengers' travel experience by enabling multiple industry stakeholders to communicate with them across all touch points of their journey with up-to-date and accurate information that is provided through a trusted source. Empowering passengers with trusted and reliable information, will allow them to experience a more seamless, secure and efficient journey. Further allowing passengers to shape and manage their own travel experience according to their wants and needs will enhance their journey and benefit both themselves and the airlines.



The vision is to use Open Application Programming Interfaces (APIs) to allow airlines and airports to communicate with passengers and publish up-to-date and accurate relevant data. Moreover, the aim is to ensure the data exposed from individual API platforms is consistent in terms of definition, format and the way the data is accessed or exposed to passengers.

Passengers will have the possibility of selecting the application of their choice, allowing them to customize their travel experience throughout their entire journey, while strengthening the right for individuals' data protection and privacy.

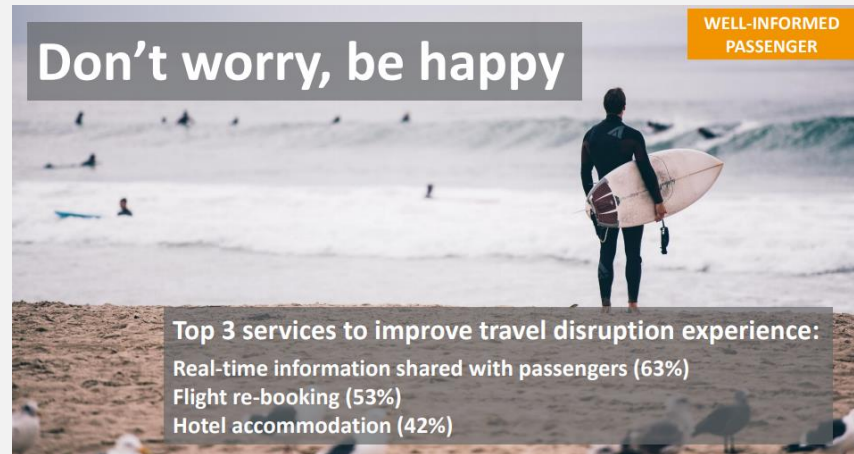
2. Background

Airports will have to change dramatically over the next 20 years, if they are to meet the expected passenger growth and airline requirements.

As passengers travel more often and more regularly, they are seeking for an effective and efficient approach, one which will offer more ready-to-fly options. These ready-to-fly options would enable them to cross all current physical/digital touch points at an airport without having to arrive 3 hours prior to their departure time.

According to the [2017 Global Passenger Survey highlights](#), of 10675 respondents across 153 countries, 85% of travelers want to be able to check the status of

their flight and 54% want to track their bag throughout their trip. Providing more real-time information is also identified by 63% of passengers as the key to improving their experience during travel disruptions.



In general, passengers who participated in the survey considered any queueing time at the airport above 10 minutes as unacceptable. IATA has proposed a number of initiatives in that direction, identifying the 14 steps of the passenger process and introducing the following technological improvements standards using a customer centric value-added approach in 3 key focus areas:

- **Self-Services off-airport :**

- Identity Management and Travel Authorization: **One ID**
- Booking and Shopping: **NDC** and **One Order**
- Travel Communication/Personalization



- **Advanced processing at the airport:**

- Baggage Drop Off: **Common use self-bag drop**
- Baggage Processing: Baggage Logistics and Conformance Services
- Security check point and Exit Border Control: **One ID** and **Smart Security**
- Travel Communication



- **Working on the technology foundations to create a more interactive and trusted decision-making environment for Airport operators and Airline operations:**

- **Open API**
- **Airline Industry Data Model (AIDM)**



The airline industry needs a coordinated and collaborated approach to identify the primary use cases for the passenger journey and develop standards to support a broader and easier implementation. This approach will benefit transportation providers by enabling them to offer added value products and personalized services.

3. Concept

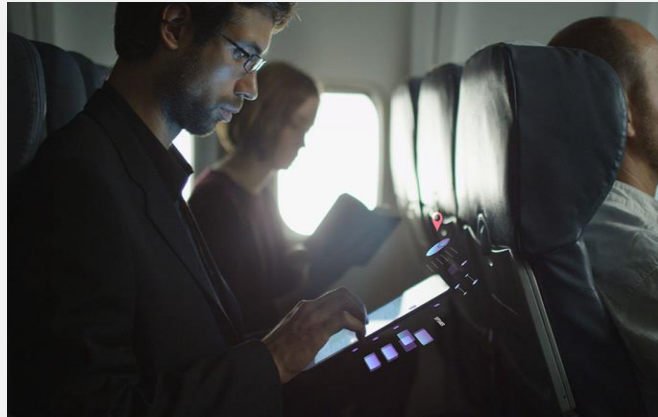
The **Travel Communication & Personalization project** is to provide real-time interaction that aims to enable multiple Industry Stakeholders to communicate with passengers consistently throughout their end to end journey, providing passengers with trusted and accurate travel information across all touch points using industry data exchange standards.

With the growing availability of airport/onboard WI-FI, today's mobile communication technologies allow for real-time interaction with the passengers and for more personalized services. Passengers will have the ability to make choices in how to shape their own end to end journey in order to ensure a more stress-free experience.

IATA's Travel Communication project seeks to enable communication via API technology by developing joint standards and recommended practices which will leverage a single integrated data model called the Airline Industry Data Model (AIDM).

A personalized profile should be created by the passenger and reused regardless of their preferred communication channels (**Personalization**). As passengers will have access to better decision-making tools and data, stakeholders will in turn be able to provide them with the best experience possible.

To be efficient and financially sustainable, passenger information should be shared according to the principle of "privacy by design" and become an integral way in which data between entities is shared in a trusted, timely and yet open manner under a trusted framework.



4. Scope

Travel Communication & Personalization, in its concept, introduced at the time of order creation (booking) the option of allowing passengers to select and modify their preferred communication channels and service options available. This is done on a voluntary basis and can be changed on demand during interactions with the airline be it during the shopping phase, order creation or while travelling.

Assumptions:

- Travel Communication will support ONE ID digital identity but it will not be mandatory
- Customers' consent will be needed to enable real-time communication
- Standards will be in line with data privacy law (Privacy by design)
- Industry standards will leverage the AIDM
- API technology will be the foundation
- ACRIS and Seamless Travel from ACI should be aligned to support AIDM data model
- EU-wide Multimodal Travel Information Service will be in effect and National Carrier will enable the system to support this legislation
- Simplify and improvement of the current passenger process will be covered by other IATA groups:
 - Remove the need to present documents (acceptance will be communicated via mobile devices)
 - Physical check-in will be progressively removed
 - 2-way communication standards will be established with Governments for passenger data exchange

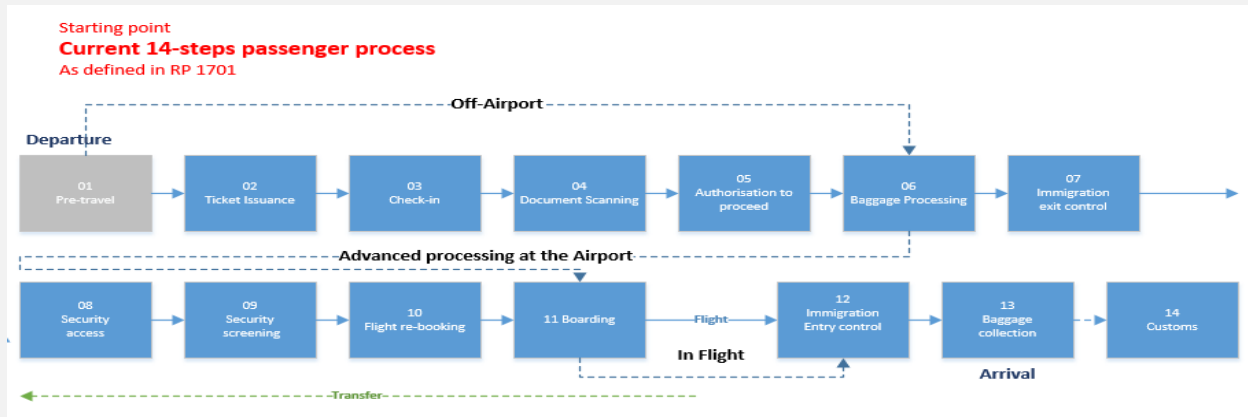


5. High Level Industry issues



- Stakeholders want and need the data to provide relevant customer service/offers but customer related data is fragmented in siloes
- Ensuring the quality and ownership of the data
- Many different data sources need to be integrated and the support of DCS service providers is required
- Data sharing opportunity is not fully understood at the airline executive level (Market protection), a strong commitment is needed from all parties
- Data standardization
- Data privacy & security

6. Passenger Journey Scenarios / Use Cases



Main points of the journey

- Off Airport (Home/Hotel)
- Advanced processing at the Airport/Airport Journey (Arriving at Airport facilities)
- In Flight
- Airport arrival, connection/destination (Destination of transit airport)

Off- Airport

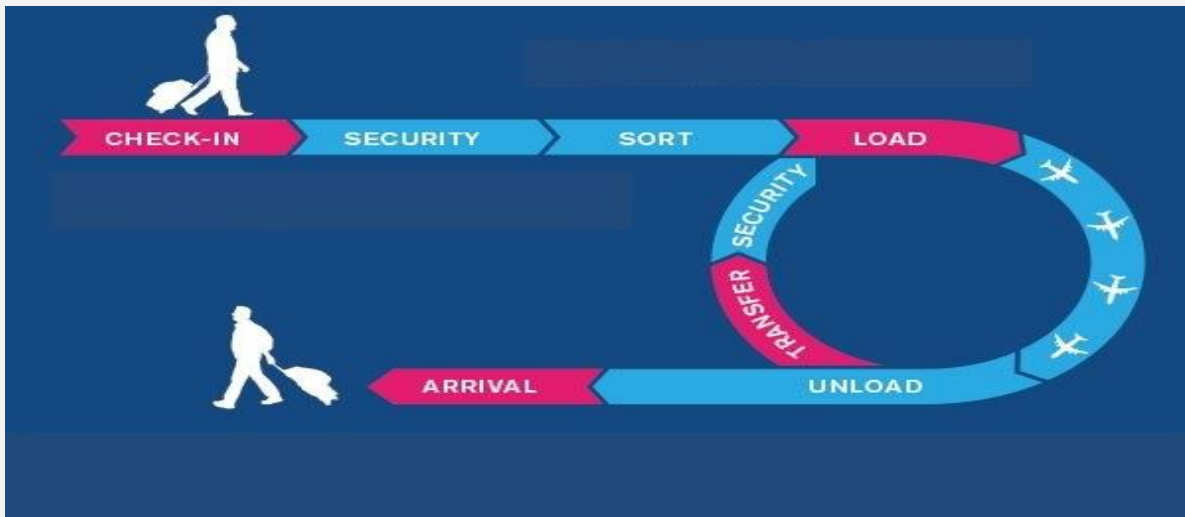
- Order creations (Bookings) can be made through direct or indirect channels
- Passenger selects one or 2 way data sharing option from order creation (booking) portal and communication information from diverse sources:
 - Advance Passenger Information to Airlines and Governments (1)
 - Auto Request E-visa or ETA, EA for the selected travel trip (1)
 - Complete online pre-travel requirements via Airlines' service providers of his/her choice and communicate proof of compliance prior to travel (1)
 - Auto Check-in (1)
 - Fast Track access through security (1)
 - Advance seat selection (1)
 - Last minute upgrade (1)
 - Taxi services (1)
 - Parking reservation or valet parking (1)
 - Hotel booking near the airport with transportation (1)
 - Lounge access (1)
 - Reservation at preferred restaurant prior departure (1)

(1) Personalization use cases

Off- Airport (Cont'd)



- Selecting Flight status notification and third party services options
 - ✓ **Departure airport (same information will be communicated at transit airport for code sharing flight or by adding a flight by the passenger within the application)**
 - Airport IATA code and description
 - Terminal Information
 - Gate info
 - Estimated boarding time
 - Estimated departure time
 - Revised departure time
 - Revised boarding time
 - ✓ **Arrival airport or Transit**
 - Airport IATA code and description
 - Terminal Information
 - Gate info
 - Estimated arrival time
 - ✓ **Flight Information**
 - Duration
 - Distance to destination
 - Operating carrier
 - Aircraft Type
 - Class available with meal information (First, Business, Economy)
 - ✓ **Way Finding notification on arrival at Airports**
 - Bag (pick up off-site or self-bag drop selection)
 - Baggage tracking notification
 - Shopping offers or last-minute deals (Retail)
 - Car rental offer with home delivery 1 day before departure
 - Option to enable digital wallet with notification for the trip using local currency.
 - Preorder assistant services (Concierge, wheelchair, Baggage carrier)



Advanced processing at the Airport/Airport Journey (Arriving at Airport facilities)

- On arrival at Airport, verification of passenger's identity is done and communication is sent to welcome passenger (1)
- Way finding to the next selected option is communicated (Car Park, Terminal for bag drop, Door to security check point)
- Communication to passengers allowing them to be cleared from customs or going to secondary notification will be sent for border inspection (1)
- Seat selection option change option will be communicated to the passenger (1)
- If passenger is not entitled for Airline access lounge, Airport lounge offers to be submitted (1)
- Carry-on handling pre-boarding communication (1)
- Just in time boarding notification
- Short stay hotel offering for transit passenger (1)

(1) Personalization use cases



In-Flight Connectivity

- Based on passenger's preferences and chosen communication channels, Airlines may at this point elect to customize the on-board cabin experience to meet their needs).

- ✓ Customized approach (Internal API):

1. Offering WIFI LAN on board to allow the following:

- a. Personalized meal option and time to eat ⁽¹⁾
- b. Ordering food and beverages on demand ⁽¹⁾
- c. On-board Shopping (Duty Free), for delivery at the destination (Location of choice) ⁽¹⁾
- d. WEB access for online communication and SMS transmission on the ground ⁽¹⁾
- e. Chromecast type of display to EFI from mobile devices to cast (Entertainment of passenger choice or LAN gaming) ⁽¹⁾
- f. Access to electronic magazine (Texture type services) ⁽¹⁾
- g. Access to mandatory documents such as Aircraft Safety Cards, resulting in flight weight reduction ⁽¹⁾
- h. On-board seat change services prior to actual departure ⁽¹⁾

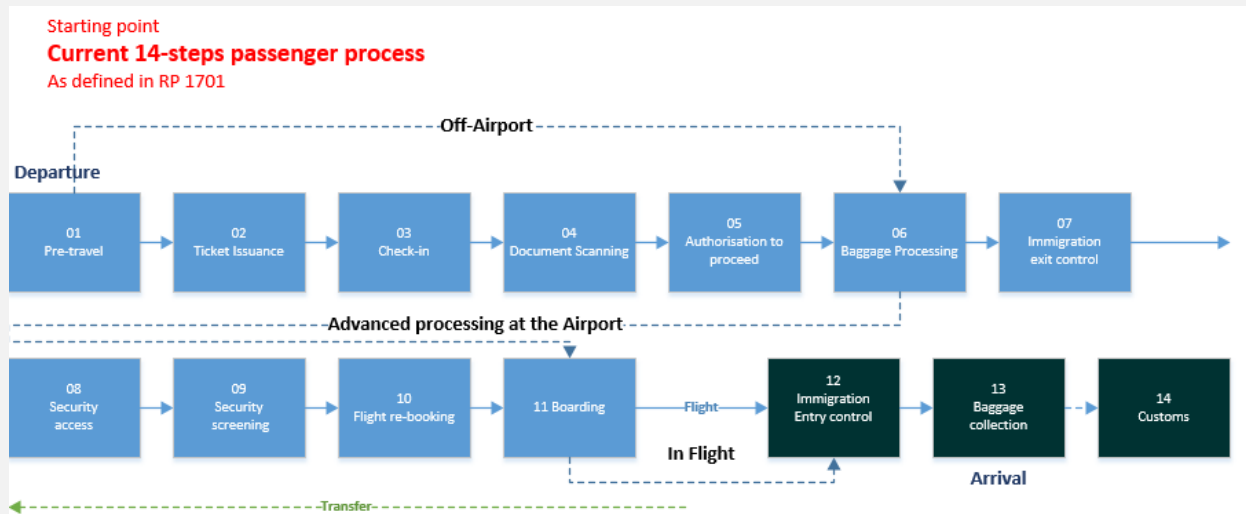
2. Standard services approach (API shared)

- a. Flight status and position, allowing Google Earth type connectivity to retrieve information on the current area of the flight
- b. Live Flight status (allowing to send current flight status to another person for pickup at the airport)* ⁽¹⁾
- c. Flight status on connecting flight (rebooking option) *⁽¹⁾
- d. Track baggage and delivery option (carrousel, hotel, home, etc.)*
- e. Pre-check-in at hotel selected (partners can deliver a personalized customer service by offering room available upon arrival time - no more need to wait until 15:00 to have room)
- f. Hotel shuttle bus ordering and way finding to pick up point*.⁽¹⁾
- g. Special offer push for services at the destination airport* ⁽¹⁾
- h. Lounge information and advance reservation for services (Shower, Relaxation room, breakfast, etc.)* ⁽¹⁾
- i. Complete E-declaration for border processing* ⁽¹⁾
- j. Taxis and concierge services to get to the final destination*⁽¹⁾
- k. Parking payment or shuttle bus to car park ordering *⁽¹⁾
- l. Reservation of a city tour, or customized experience airport*⁽¹⁾
- m. ADA assistance (wheelchair, etc.) *⁽¹⁾

Connection Airport:

* See inflight, all done inflight but can be performed on arrival/connection airport /⁽¹⁾ Personalization use cases

Arrival Airport/ Destination



- Way finding enabled, interaction with the passenger in the language of his choice, guiding him to customs/ baggage hall
- Baggage collection notification
- On-board purchase message notification for pickup or delivery. (1)
- *Customs process (1)
 - Identity confirmation message
 - E-declaration acceptance message
 - Selected passenger notification to proceed to secondary screening (if applicable)
 - Clear passenger notification to proceed to exit
- Transport schedule status information (High-speed train, bus, subway, etc.)
- Pre-purchase of ground transport via mobile offering (1)
- Passenger choosing off-airport baggage delivery status notification update. (1)
- Find a friend or group option using wayfinding for easier meeting and greeting location. (1)

(1) Personalization use cases

7. Messaging

Travel Communication, OPEN API project and ACI Seamless Travel will be supporting the business process standards and technologies underlying digital transformation.

Moreover, the frequency with which these new systems change has also increased. For example, whereas the database schema of an airport operations system may change only on an annual basis, the requirements of the on-line and mobile consumer applications connecting to those systems may change weekly, daily or even hourly.

The two most important items required from the industry perspective, are the standardization of the data formats used when data is being published, and the standardization of the data definitions. IATA already provides the Airline Industry Data Model (AIDM) for the data definition and modeled business requirements.

(Source OPEN API v1 2017)



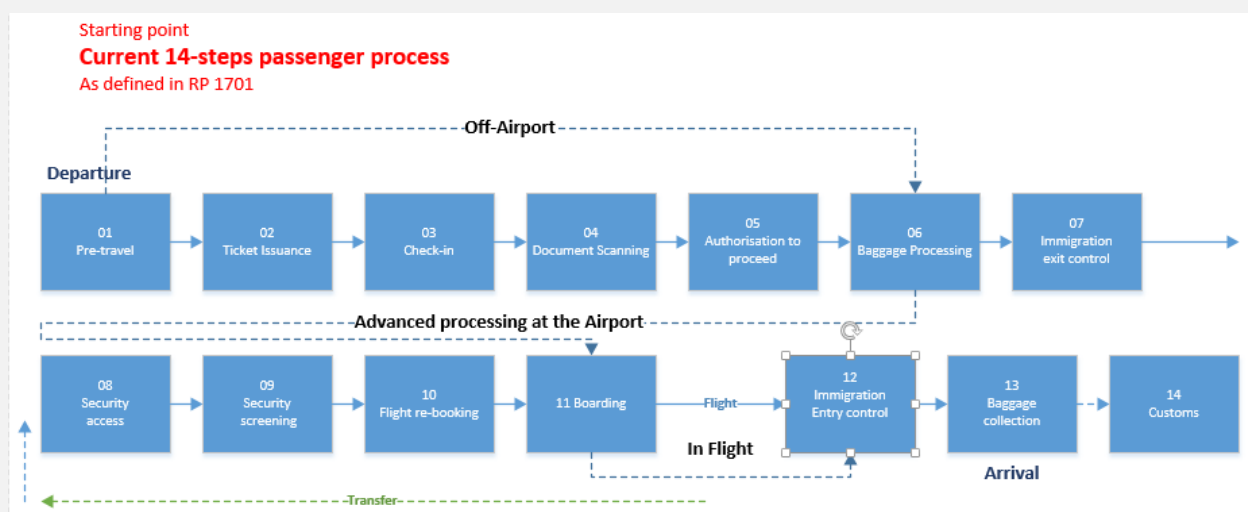
8. Simplify and Improve the Current Process

Other Passenger experience groups in IATA are currently working on improving the current 14-steps process defined in RP1701 by Fast Travel

The main point of focus to achieve those objectives are derived from One ID and Fast travel initiatives.

Goals:

1. Remove the need to present documents (One ID concept Paper) at each touch points
2. Remove the need for check-in at physical Airport
3. Simplify the transmission of passenger data to Governments
4. Removal of Physical boarding pass
5. Risk-based assessment (simplifying the passenger's traveling experience by removing the need to show a boarding pass and or a passport through the airport process checks point).
6. Enable passenger tracking at the airport providing a better passenger experience but also allowing Airlines, Airports, baggage handlers, and authorities to make a better use of the data and communication shared in order to optimize the Airport/Airline operations.



9. Shared benefits

Achieving Travel communication / Open API goals by developing and opening a set of trusted standard data (accurate and at the latest version) that can be consumed, will benefit the overall passenger experience and will provide better decision-making tools to support operations allowing the industry to increase the quality of service at the lowest cost possible.

Airline Strategic Partners will be able to subscribe to the data airlines/airport expose by API, opening possibilities of innovation which they were not initially aware, providing a win/win situation using emerging technologies.



10. Benefits for the airlines:

Cost avoidance:

The project team will be looking at the overall end to end passenger experience approach. The team foresees that Airlines and Airport can expect an overall cost reduction associated with the OPEN API concept using a dynamic interaction with passengers. By improving the current process which will result in reducing the need for physical check-in hall layout and its infrastructure, improving the physical check point's process and eliminating the need for physical printing of boarding passes and bag tags. We believe there is a major business case in reducing recurring maintenance cost for the industry.



Ancillary fee opportunities:

Airlines today are investing massively on customer profiles using their own loyalty programs. They are pushing the sales of ancillary fees such as baggage, last minutes upgrade, and lounge access and are constantly seeking for new opportunities.

The data to create business intelligence and customized offers is certainly available, but rarely gets turned into appropriate, personalized offers.

With the use of API and a better usage of personalization profiles, airlines will have the appropriate analytical capabilities to make use of the data and generate personalized offers based on passengers' individual needs and wants such as : last minute seat change (up to the end of the boarding process), carry-on pre-boarding services providing a more relaxing boarding experience and sharing data with subscribed partners providing a better passenger experience (Pre-check in at the hotel according to flight schedule, Ground transportation reservations, customized airport services on arrival); always keeping in mind the ultimate goal in providing the passenger a better travel experience.



Better on time performance:

Wayfinding encompasses all of the different ways in which people orient themselves in physical space and navigate from place to place. Communication messages can be customized to the preferred language of the passenger allowing for an easier and faster orientation. Real-time queue management providing intelligence to the authorities allows them to anticipate crowds, staff allocation and enables the possibility in real time to direct passenger flow management resulting in creating a better passenger flow to the gate and reducing queue lines.

By providing the analytic data to the Airlines, they will be able to make dynamic adjustments to the minimal check-in time using a predictive approach. The airline will also have all the information to make the appropriate decision of closing a flight and handling disruptions with an alternate flight while using a pro-active approach to offload checked baggage and avoiding extra delay for the flight.

Airlines will further have the possibility of reviewing their boarding processes, allowing them to develop an interactive real-time boarding procedure to reduce the wait times at the gate prior to boarding.

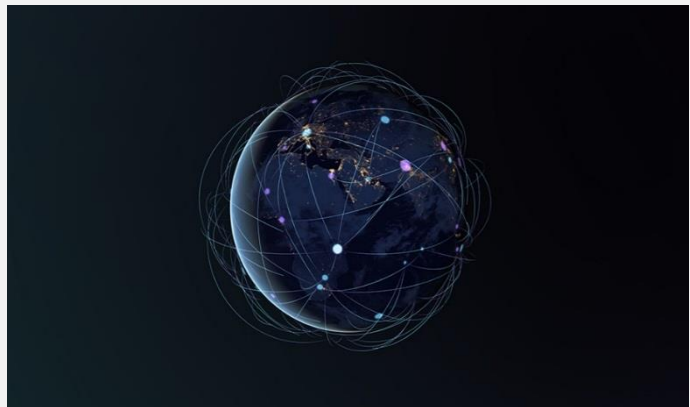


Better Passenger Loyalty Program:

With the personalization of data on customer profiles, airlines can optimize their online media by enhancing their loyalty program through individualized treatment of their members and helping them find inspiration for their next travel purchases.

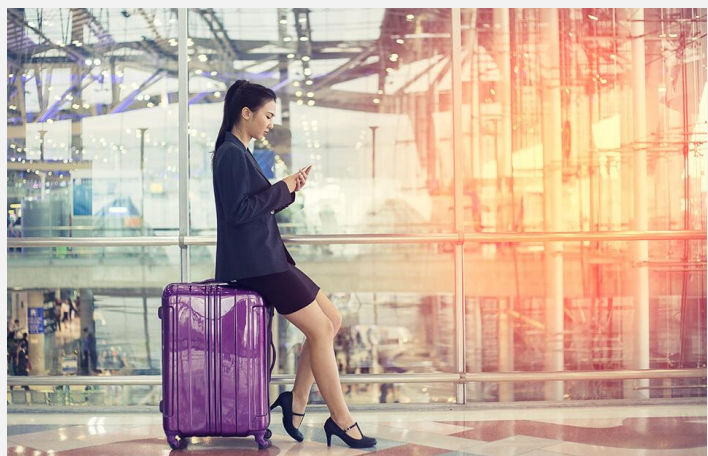
Social networks such as Facebook and Twitter are on top of the list followed by individual Frequent Flyers websites.

Social media is all about connecting with customers. Emotional and customized engagement can be powerful. For example, a period of bad weather may elicit a customer's desire to escape. By making available to specific customers a series of connected narratives that feature the promoted travel services in a paradisiac destination and by providing the customer with special offers (last minutes deals, consuming points from the airline loyalty program) can be an effective tool to enhance loyalty.



11. Benefits for Customers

With this customer-centric approach, passengers will benefit from a streamlined process, avoiding long queue lines at the airport, will receive a more personalized service based on its needs and will allow them to be in control of their end-to-end journey!



12. Legal Consideration

From a legal and regulatory perspective, the industry will need to keep up to date on upcoming legislation such as the General Data Protection Legislation (GDPR) directive 95/46/EC and the directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services.



13. Conclusion

As an industry, it is very important we approach this project in a common way with stakeholders. The key for the success is to develop a common approach where the greatest benefits will serve the passengers.

The priority will be defining the right use cases where exposing data will add value to the customer's journey and see how we can better assist the management of irregular operations.

The case for change is beyond doubt. Innovation with speed and agility is the key to the success for the airlines industry, using a fully coordinated and collaborative approach between stakeholders with the recognition that in many cases the same stakeholders can be in a commercial competition real life environment. By all sharing the same goals of serving the passenger in the best and efficient way possible, we will be able to set common standards allowing room for customization of services.

As the project develops, IATA will be participating in proofs of concepts, guidance material and provide direction and coordination to other IATA initiatives to ensure a coordinated approach in our common goal to improve customer experience, reliability and efficiency.