Securing and facilitating the traveler's journey

Contactless biometrics and automated solutions support the recovery of the travel industry







Key challenges faced by the aviation industry

ccording to IATA, by 2037, the number of air travelers will reach an estimated 8.2 billion people. Despite the pandemic, air travel is steadily recovering, and IATA's forecast may very well come true.

The rising number of air travelers and the pandemic have led all stakeholders—governments, airports and airlines—to find solutions to minimize the risk of germ transmission and to reassure travelers that it is safe to fly again. The main aviation actors (IATA, ACI, etc.) are encouraging contactless biometric solutions that increase automation and reduce interaction. The goal is to identify passengers as efficiently, safely and securely as possible.

One example of this approach is the IATA One ID concept, which is based on ID management and biometric recognition, and advocates a document-free process. Passengers will identify themselves at each step of their journey through the airport using biometric technologies such as face recognition.

Another example is the Digital Travel Credential (DTC), which would allow passengers to start the check-in process safely from home. While biometrics are the key technology for a secure and seamless journey, the touchless design of the DTC, and the fact that it is stored on the user's device, are critical mitigating factors for hygiene concerns. Additionally, when traveling, people may need to prove that they are not suffering from specific symptoms and/or illnesses. A convenient and secure option would be to link the DTC to the health certificate. The DTC would increase the overall level of security of the entire passenger journey, as it is a trusted digital copy of the physical passport.

> While biometrics are the key technology for a secure and seamless journey, the touchless design of the DTC, and the fact that it is stored on the user's device, are critical mitigating factors for hygiene concerns.

IDEMIA

A HAPPY TRAVELER IS A LOYAL CUSTOMER

Travelers will be able to create their unique identifier from home for a safer and more convenient travel experience. With our suite of contactless biometrics and automated solutions, that are designed to ensure privacy, IDEMIA is perfectly positioned to support the recovery of the aviation industry.

James is a citizen of Utopia. He is excited about his trip to Abroadia for the opening of an art gallery that is presenting his paintings. He has organized everything down to the smallest detail, and has obtained all necessary authorizations for his trip.

SCAN ME!



 ¹ Electronic Travel Authorization
² Advanced Passenger Information -Passenger Name Record

Check in securely from a remote location

To enjoy a safe and seamless journey, James securely creates his unique identifier by sharing his Digital Travel Credential, health certificate and biometric data. The facial recognition technology in the app includes a liveness check, allowing James to prove his identity with ease, while his privacy is maintained. James enrolls once to obtain a unique identifier and is ready to fly.

 $(\bigcirc$

 $\overline{\mathbb{V}}$

麗

0

 \mathbb{O}

James stores his unique identifier in his smartphone

> Or, James gives his consent to temporarily share his unique identifier with the Identity Management Platform

IPOL

A convenient health certificate check

To enter the airport, James has to present his health certificate. As the certificate is linked to his unique identifier, all James has to do is stand in front of the biometric kiosk to prove that he is the rightful owner of the valid health certificate.

A secure and seamless journey from the bag drop to the boarding gate

IMMICRATION

BORDER CONTROL

NRSIDE TONE

Physical passports no longer need to be scanned! Using his unique identifier, James experiences a touchless journey even while wearing a face mask. He is securely identified with a look or with a simple scan of his smartphone.

SELF BAC DROP

Your eLanding

Pre-border checks from anywhere

On his way to Abroadia, James completes an electronic landing card offline. In addition to his basic demographic data and flight details, he answers specific health-related questions. 4 Reliable risk assessment

CATE 01

BOARDINC

LOUNCE ACCESS

As soon James boards the plane, all his travel data is securely sent to Abroadia. Abroadia cross-checks his data against reference databases and analyzes it via a risk assessment procedure, in compliance with international regulations and privacy principles.

DUTY EREE

API-PNR²

いい。

Some countries have an interactive API (iAPI) process in place at check in, which means that the risk assessment is completed very early on in the trip for a stress-free journey.

Travelers in control of their journey are happy and loyal customers

o improve the traveler experience, stakeholders need to know their customers and their habits better so they can provide tailor-made services. More and more airports and airlines now provide apps that act as travel companions, enabling travelers to plan trips, check flight information, and obtain personalized services such as discounts for frequent flyers who regularly use airport parking. In order to comply with privacy and security regulations, all apps must obtain passenger consent before accessing personal data.

Using an enrollment app and their smartphone, travelers can even check in remotely from the comfort of their home. The facial recognition technology in the app includes a liveness check, allowing travelers to securely authenticate their identity. Passengers enroll once and are ready to fly. It is as simple as that.

Passengers are in full control of their data; they can either keep the data on their smartphone or share it temporarily with the airport/airline for an even smoother experience. For example, Registered Traveler Programs based on biometrics can offer a tokenless walk-through journey for pre-enrolled frequent flyers. Passengers can arrive just before boarding without worrying about waiting times or delays. Alternatively, they can arrive earlier, enjoy a meal at a restaurant or duty-free shopping, and pay using their biometrics.



The world's first contactless passenger journey

Since October 2020, Lyon–Saint Exupéry Airport, part of VINCI Airports, has been testing MONA an **innovative project that aims** to streamline the passenger journey while guaranteeing a high level of security. Based on **biometric technology**, this one-year pilot offers all TAP and Transavia passengers a smooth, **contactless** experience **from check-in**, which can be done **from the comfort of their home**, **to boarding**. IDEMIA, in partnership with RESA, was chosen to implement this breakthrough project.



Project scope

Passenger experience:

The passenger is able to use facial biometrics throughout their journey.

- Biometric enrollment: remotely, from home, with a smartphone or at the airport at a selfservice kiosk
- Airside zone access fast lane: biometric eGate
- Biometric check-point: facial capture for identity verification
- > Self-boarding: biometric eGate

Benefits

Customer benefits:

- > Effective, modern solution
- > Higher throughput at boarding
- > Increased security through biometrics
- > Improved resource management

Key technologies:

- SmartBio SDK: live face capture using a smartphone (iOS, Android) embedding liveness detection
- SmartDoc SDK: automated ID document capture (passport) using a smartphone (iOS, Android)
- MFACE[™]: walk-through face capture and matching (two configurations: OEM and Desktop unit)
- › eGates: single door, mono-directional
- > TravelKiosk™: self-service kiosk for simple and fast enrollment at the airport (with MFACE)
- Traveler IMP: traveler identity management platform, embedding IDEMIA's outstanding biometric engine, MBSS

Traveler benefits:

- > User-friendly boarding experience: contactless and convenient
- No need to show documentation
- > Reduced waiting times
- Privacy by design: passenger data is erased after boarding (GDPR and CNIL compliant)

Trusted worldwide to support the aviation industry



8





A successful partnership between airlines, airports and governments

frictionless passenger journey must reduce waiting times, and the best way to do this is by coordinating all systems that manage travelers' identities.

Airports and airlines need to work hand in hand with government border agencies to make the passenger journey as seamless as possible. Airlines collect valuable passenger data prior to travel that they share with governments, helping identify individuals that potentially pose a threat.

This passenger data analysis allows governments to optimize the border crossing process, providing bona fide travelers with a smooth and convenient journey. For this to be done efficiently, the automated border control process (performed by governments) has to be interoperable with all other touchpoints (check-in, self-service bag drop, airside access, duty-free shops, lounge and boarding).

Passenger data analysis allows governments to optimize the border crossing process, providing bona fide travelers with a smooth and convenient journey.

The world's first facial recognition in air shuttle service

The **Embarque + Seguro** project, a 100% **digital boarding** system using the Brazilian Serpo driver's licenses biometric database, tests for the **first time in the world a biometric air shuttle between Rio de Janeiro and São Paulo domestic airports**, which has one of the largest movements in the world based on facial recognition.

IDEMIA's **facial biometric technology** was chosen to capture a passenger's face image in a fraction of seconds, avoiding queues and delays.



Project scope

Self-boarding using biometrics without the need to present either a boarding pass or an identification document, making the boarding process even more agile.

Passenger experience:

- Passenger enrollment using the government's app, so they are to be ready-to-fly
- > Passenger identity verification at the security checkpoint gates: eGate powered by IDEMIA's biometric capture (MFACE™)
- Passenger boarding process: Azul airline facial verification system

Benefits

Customer benefits:

- > Modern, innovative solution
- > Faster and simpler boarding process
- > Increased national security
- > Meets legal requirements for data protection

Key technologies:

- → MFACETM: walk-through facial capture and matching device
- Integration with security checkpoint gates (Digicon)
- Secure connection with Brazilian Serpo driver's license database service

Traveler benefits:

- Pleasant boarding experience: contactless and convenient
- No need to show/scan documents at both airports
- > Effortless, non-intrusive: walk-through facial capture
- Less waiting times
- Privacy by design (compliant with national and GDPR requirements)

Safeguarding travelers' identity and making their journey stress free

iometric data is extremely sensitive information that has to be treated as such, which is why travelers should be given the choice as to where this data is stored.

Passengers looking for a truly seamless experience can opt to have their biometrics stored remotely in a secure central database. This will enable them to use their biometrics to pass through the various airport and airline eSystems, as well as for payments at duty free shops, restaurants, etc. Passengers who prefer not to store their biometric data remotely can keep their data encrypted in a QR code on their smartphone or on their boarding pass, and have to present it every time they are asked to prove their identity.

Combined with biometric recognition, the use of enhanced video analytics and artificial intelligence is manifold; forgotten luggage can be returned to its owner quickly and easily by security agents, airports can protect their infrastructures from unauthorized people attempting to access private areas, and they can also provide personalized services to frequent flyers.

Video analytics can also play a crucial role in providing effective solutions that either autonomously detect and contain threats in specific areas, or assist security officers by providing superior situational awareness.

To enhance the traveler experience, airlines can now photograph each piece of luggage and assign it to a specific flight. Should a suitcase lose its tag, all the traveler will have to do is provide a description, and the airline will be able to identify the bag using artificial intelligence. They will then safely return the luggage to its rightful owner.





The world's first biometric boarding pass

With France being the most visited country in Europe, Air France wanted to remove identity checks at boarding when the traveler's identity is already verified at check-in. Consequently, it launched a trial at Paris Charles de Gaulle for a new generation of boarding passes based on the use of the passenger's biometric facial data.

Project scope

The solution links two different steps of the passenger's journey:

 Biometric boarding pass creation: it can be created at any existing check-in touchpoint (desk, kiosk, mobile app).

Benefits

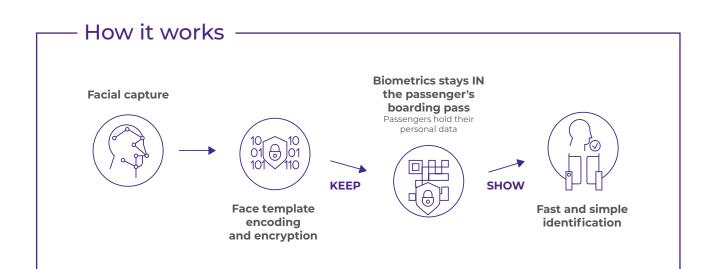
Customer benefits:

- Easier passenger processing: only one travel identity document is checked
- Automatic, self-service processes for identity checks
- > Increased efficiency and reduced costs
- > Time saving
- > Fully compliant to IATA resolution 792v8
 - o PDF 417 (printed boarding pass) o QR code (digital boarding pass)

 Biometric boarding pass usage: passengers can use their biometric boarding pass on any later touchpoint (e.g., at self-bag drop / automated boarding gate).

Traveler benefits:

- No need to scan the ID document more than once
- Personal data privacy: passengers are in full control of their data
- Pleasant experience: simple, secure and convenient
- > Shorter journey due to reduced waiting times



14

IDEMIA, the ideal partner for the aviation industry

ith over 40 years of experience and over 5 billion biometric records processed by IDEMIA and managed by our customers worldwide, IDEMIA is the undisputed leader in biometric systems. Our algorithms—often called the most accurate, fair and consistent in the market—dependably rank in the top-tier across many modalities and multibiometric solutions in NIST evaluations, such as FRVT for Identification for Paperless Travel and Immigration.

This makes us the partner of choice for the most prestigious organizations. We continuously innovate and always hit the ground running; for example, our facial recognition algorithms are mask tolerant. Our off-the-shelf and tailor-made solutions meet the complex and ever-changing demands of our customers.

IDEMIA collaborates with the world's leading airports and airlines, providing them with compact biometric solutions to facilitate their day-to-day activities, bringing more security and peace of mind. We supply biometric systems to law enforcement agencies around the world. Our products and solutions are developed in accordance with the Privacy by Design and by Default principles. We are strongly committed to helping protect and secure citizens' privacy, with the highest possible level of data protection for identity verification and authentication technologies. Our aim is to keep the world as safe and secure as possible, which is why we are dedicated to providing the most advanced tools and guidance available on the market.



Securing and facilitating the traveler's journey

www.idemia.com/smooth-passenger-experience



All rights reserved. Specifications and information subject to change without notice. The products described in this document are subject to continuous development and improvement. All trademarks and service marks referred to herein, whether registered or not in specific countries, are the property of their respective owners.

