IATA

Atlanta, 7 September 2014

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Airport, Passenger, Cargo & Security
ACI and IATA cooperation

- The ACI – IATA new MoU was signed on October 2nd 2013
- Several Annexes to the MoU were signed on December 5th 2013 (SmartSecurity, SAE, ABC)
Passenger Experience

By 2020, 80% of global passengers will be offered a Secure Fast Travel experience
A Fast Passenger

10 minutes to Duty Free / 30 minutes to Taxi
Fast Travel Program

CONTROL

CONVENIENCE

CHOICE
FAST TRAVEL
→ Check-in
Check-in

Kiosks

Web

Mobile/Automated
Check-in

Mobile Check-in - NFC

- Special stream under Fast Travel to cover NFC and Mobile Services
- Business Requirements and Use Cases developed
- IATA / GSMSA White Paper early 2011
- Identification of possible industry standards to develop to support implementation
Check-in

7144
AL / AP Pairs

84%
of passengers are offered with self-service check-in
FAST TRAVEL

→ Bags Ready-to-go
Passenger Baggage Processing

The Problem
While self-service check-in is massively offered to passengers by airlines, baggage check-in remains a difficult process. Passengers having checked-in via a self-service channel still have to stand in long queues only to drop their bag.

The Solution
Increasing significantly passengers through put at bag drop locations by allowing passengers to print and apply their bag tags themselves and offer a dedicated touch point for baggage acceptance only.
Where is this initiative coming from?

- It’s what the passenger wants
- A better airline and airport experience
- Airlines wanting to reduce operation costs

“More than half (53%) of air travellers would prefer to use a permanent luggage tag that is unique to them and can be reused every time they travel.”

(IATA Global Passenger Survey, 2013, 7792 respondents)
Bags Ready to Go

301

AL / AP Pairs

18%

of passengers are offered with self-tagging
Passenger Baggage tagging options

- Self Service Kiosk
- Home Printed (new)
- Electronic Tag (new)
Advances in Self-Service- Bags Ready to go

**Self Service Kiosk tagging**
Check in and print and self tag the bag at a kiosk. Bag tag activated once accepted at a baggage drop

**Printing at Home**
A cost effective option that allows a passenger to print their bag tag from home and arrive at the airport and just drop and go

**Electronic Tagging**
An electronic baggage tag that the passenger can program using the airline smart phone application – or the airline can control – that uses an electronic display to show the baggage journey information
What are the big changes as result of the new tagging options?

**Baggage Claim Receipt Tag**
The existing paper baggage claim receipt cannot be included on these new baggage tag formats. A electronic solution is needed, *(Electronic Baggage Claim Receipt, Resolution 752)*

**Bingo Reconciliation Stubs**
The 3 small barcode paper stubs will not be included. This means there can be no manual reconciliation and therefore a more efficient automated scanning system must be introduced.
Implementing Home Printed and Electronic Bag Tags

Important and latest information - USA

TSA announced their intended (not yet signed off) new policy for Self-Tagging:

- All carriers, operating flights both to and from the US, would be allowed to introduce all forms of self-tagging without restrictions.
- Only restriction: airline representative must perform positive ID check.
FAST TRAVEL

→ Document Check
Document Scanning

An airline offering the ability for a passenger to self-scan travel documents to perform automated verification of the travel document data against travel data requirements.
45% of passengers are offered with self-service document check
FAST TRAVEL

Flight re-booking
Flight Re-Booking

In the event of an irregular operation such as flight delays, misconnects or cancellations
An airline offering the ability for a re-routed passenger to get proactively re-booked and deliver their new boarding token or re-booking options via a self service channel.
Flight Re-Booking

4270

AL / AP Pairs

60% of passengers are offered with flight re-booking
FAST TRAVEL

→ Self-boarding
Boarding

An airline offering the ability for a passenger to self-scan their boarding token to gain entry to the aircraft in a controlled manner.
Self Boarding

1942 / 343

AL / AP Pairs

41%

of passengers are offered with self-boarding

12.5%

With Self Boarding Gates
FAST TRAVEL

→ Bag Recovery
Baggage Collection

An airline offering the ability for a passenger to register a mishandled bag, utilising a self-service device (kiosk, mobile, web)
Bag Recovery

1368 AL / AP Pairs

24% of passengers are offered Bag Recovery
<table>
<thead>
<tr>
<th>TOP 18 Fast Travel Airlines</th>
<th>% of Airline</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK – Scandinavian Airlines Systems</td>
<td>90.01%</td>
</tr>
<tr>
<td>QF – Qantas Airways Ltd.</td>
<td>80.83%</td>
</tr>
<tr>
<td>AC – Air Canada</td>
<td>71.56%</td>
</tr>
<tr>
<td>HA – Hawaiian Airlines</td>
<td>69.01%</td>
</tr>
<tr>
<td>NZ – Air New Zealand</td>
<td>68.34%</td>
</tr>
<tr>
<td>AF – Air France</td>
<td>68.08%</td>
</tr>
<tr>
<td>LX – Swiss International Airlines</td>
<td>62.52%</td>
</tr>
<tr>
<td>AA – American Airlines</td>
<td>61.29%</td>
</tr>
<tr>
<td>AY – Finnair</td>
<td>55.27%</td>
</tr>
<tr>
<td>AS – Alaska Airlines</td>
<td>53.59%</td>
</tr>
<tr>
<td>SN – Brussels Airlines</td>
<td>52.83%</td>
</tr>
<tr>
<td>IB – IBERIA</td>
<td>52.35%</td>
</tr>
<tr>
<td>LH – Deutsche Lufthansa AG</td>
<td>52.01%</td>
</tr>
<tr>
<td>TF – Malmo Aviation</td>
<td>49.95%</td>
</tr>
<tr>
<td>OS – Austrian</td>
<td>49.83%</td>
</tr>
<tr>
<td>EY – Etihad Airways</td>
<td>49.34%</td>
</tr>
<tr>
<td>CX – Cathay Pacific Airways</td>
<td>48.62%</td>
</tr>
<tr>
<td>KL – KLM Royal Dutch Airlines</td>
<td>48.60%</td>
</tr>
</tbody>
</table>
Passenger Facilitation

Automated Border Control (ABC)
- Improve border crossing through the promotion of ABC
- Expedite Nationals and low risk passengers through ABC

Direct Benefits
- Average Border Crossing can be cut from 2 – 3 minutes to below 30 seconds

Solutions for automation
- ePassports or ID cards containing biometric data
- Registered Traveler Program

Hiring additional resources is not always solution
Solutions for Automation

**e-Passport**

The electronic chip contains the passport holder’s photo, and may contain fingerprints/iris.

**Citizenship**

The chip may include the holder’s fingerprint, iris scan and facial recognition.

**Registration**

Applicants are fingerprinted, photographed, background checked and interviewed. The chip contains a reference number which will be linked to a database.
Passenger Facilitation Program

Security Access & Egress
Key Facts and Figures

Traffic forecast 2013 - 2017
- Global increase by 5.8% annually

Consequences
- Long queues, delays
- Increase in security tax

Solutions
- Improve existing process at Security
- Smart Security
The most frustrating element at Security

Air Travel Survey conducted with 8000 Passenger worldwide
Acceptable Queuing Times

Air Travel Survey conducted with 8000 Passenger worldwide
Adding more screening lanes is not always solution
Is there a solution?

2010 Process Study
- Conducted at various airports to identify best practices
- Data collection from 142 Airports world wide

2011 ACI & IATA Documents
- Recommended Practice
- Implementation Guide

2012 Pilot Project
- Process Improvement Questionnaire
- Conducted at 6 Airport

2013 Roll out
- 14 airports visited

2014 Mass Implementation
Security Screening Process Flow

Access → Queue → Prepare → Screening → Re-pack → Exit
Passenger Information
Passenger Information before entering the queue

Posters & Bins

- London Heathrow Terminal 5
- Kansai Airport
- Rome-Fiumicino Airport
Passenger Process Flow - Access

Access Queue Prepare Screening Re-pack Exit

BOTTLE NECK
Passenger Process Flow - Queue
Queuing System

- Single queue serving multiple screening lanes
- Flexible tensa barriers
- Queuing System should be adaptable depending on:
  - Passenger mix
  - High and low peak hours
Preparation Area

Tables/Roller beds
Staff allocation – Assist Passenger prepare

1. Queue Manager
2. Tray Loader
3. Screener
4. Female Searcher
5. Male Searcher
6. Secondary Searcher
Secondary Passenger Search
Real Time Information

Real Time Information on Waiting times
What is important

- Government, Airports and Airlines should work together
- Consistent and timely Passenger information
- Establishment and monitoring of performance metrics
Security Access & Egress Roadmap 2014

80 Airports Worldwide
Next Generation Passenger Screening

the evolution is underway
IATA and ACI agreed to join efforts, pool resources and merge their respective initiatives in next generation passenger screening under the joint Smart Security program.

Our vision is to improve the journey from curb to airside, where passengers proceed through security checkpoints with minimal inconvenience, where security resources are allocated based on risk, and where airport facilities can be optimized.
Objectives

Smart Security

Strengthen Security

Increase Operational Efficiency

Improve Passenger Experience
How will we get there?

Legend
- Inception
- Concept Definition
- Component Testing & Evaluation
- Proof of Concept & Guidance Material
- Wider implementation

Program Inception
- SmartS 2014
- SmartS 2017
- SmartS 2020


March 2014
Who is involved?

- **Smart Security Management Group**
  - Defines policy, technical and operational requirements, develops positions and drives the program of work
  - 15 members representing industry and government

- **Smart Security Working Group**
  - Contributes to recommended practices, guidance material and other deliverables
  - Includes airlines, airports, governments, solution providers, consultants, academia
The three pillars of the solution

- Risk-based security and differentiated screening
- Technology for enhanced detection capability
- Process innovation for increased operational efficiency
In **2012**, component testing and evaluation kicked off with trials in GVA, LHR and AMS.

In **2013**, component testing and evaluation shifted into higher gear as we continued to evaluate the Smart Security 2014 blueprint with industry and government partners.
Purpose
To test and demonstrate the operational efficiencies that can be delivered through implementation of a high throughput CIP system

The Trial
X-rays from two lanes were networked, with images collected, queued and presented to officers stationed away from the lanes in a centralized image processing room

Results
- Over 600 trays processed per hour per lane
- Additional staff per lane required, but less lanes required across the concourse
- Further studies on resourcing to be undertaken
- Guide to developing a CIP room produced
Purpose
Investigation into ways to maximize the utilization and throughput when implementing Security Scanners

The Trial
Deployed as a secondary measure to resolve alarms on the WTMD
Two resolution stations were used to allow parallel processing of passengers

Results
- 450-500 passengers per hour with WTMD/Security Scanner combination
- Received positive feedback from staff and passengers
- Maximized Security Scanner + Centralized Image Processing trial = overall high throughput screening point
Purpose
To investigate the accuracy, reliability and speed of using biometrics and e-passports in the ground process to positively identify passengers so that appropriate risk based security measures could be applied.

The Trial
- Passengers authenticated their identity at a kiosk via a simple user interface.
- They were then able to verify their identity at the checkpoint by simply looking at a biometric camera.
- Tested the passenger process, technology performance and response from passengers.

Results
- Accuracy: adequate level
- Speed: fast enough for operational use
- Passengers: found it easy to use
In 2014, selected airports will deploy a proof-of-concept Smart Security checkpoint based on the 2014 solution footprint.

- Lane configuration and automation
- Security scanners
- Large electrical items effectively screened while in bags
- Remote screening
- Unpredictable measures and steps towards risk-based differentiation
Airport Service Quality

www.aci.aero/Airport-Service-Quality

- Increasing need for recognized and reliable quality of service indicators
- Increased importance of passenger satisfaction level due to stronger competition between airports
Previous ADRM LoS concept

- Based on alpha system (A,B,C, etc.)
- Misleading – implies “A” is better than “C”
Previous ADRM LoS concept

- Intent is that LoS should optimise the criteria of time (queuing, waiting, process, etc.) vs. space take (m²)
- Optimal “best fit”.

Table F9.7: Level of Service Maximum Waiting Time Guidelines (In Minutes)

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Short to acceptable</th>
<th>Acceptable to long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check-in Economy</td>
<td>0 — 7</td>
<td>7 — 10</td>
</tr>
<tr>
<td>Check-in Business Class</td>
<td>0 — 3</td>
<td>3 — 5</td>
</tr>
<tr>
<td>Passport Control Inbound</td>
<td>0 — 7</td>
<td>7 — 15</td>
</tr>
<tr>
<td>Passport Control Outbound</td>
<td>0 — 5</td>
<td>5 — 10</td>
</tr>
<tr>
<td>Baggage Claim</td>
<td>0 — 3</td>
<td>3 — 7</td>
</tr>
<tr>
<td>Security</td>
<td>0 — 3</td>
<td>3 — 7</td>
</tr>
</tbody>
</table>

F9.8 MAXIMUM QUEUING TIME

The occupancy patterns in various subsystems change rapidly and thereby affect the space available to occupants. In addition, the occupancy time for a subsystem can vary, resulting in a change in comfort. For this reason, time is a significant factor in determining the quality of service and must be considered as a primary variable in level of service measures. It is very difficult to establish a precise, quantified relationship between available space, time, and level of service. This may explain why time is often neglected as a factor of level of service and standards are sometimes set purely to space requirements.

ICAO has set a goal of 45 minutes for the clearance of arriving passengers, from disembarkation to exit from the airport, for all passengers requiring no more than normal inspection at international airports (ICAO Annex 9, ninth edition, recommended practice 6.26). Although this includes time taken by government inspection services, it provides an indication of an acceptable time framework.

Table F9.7 shows maximum queuing time guidelines. It is however recommended to use site- and airline-specific standards when available.
New Levels of Service (LoS) Concept

<table>
<thead>
<tr>
<th>Space</th>
<th>Overdesign (&gt; Y m²)</th>
<th>Optimum (X to Y m²)</th>
<th>Suboptimum (&lt; X m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overdesign (&lt; A mins)</td>
<td>Overdesign</td>
<td></td>
<td>Consider improvements</td>
</tr>
<tr>
<td>Optimum (A minutes or seconds to B minutes or seconds)</td>
<td></td>
<td>Optimum</td>
<td></td>
</tr>
<tr>
<td>Suboptimum (&gt; B mins)</td>
<td>Consider improvements</td>
<td></td>
<td>Underprovided, reconfigure.</td>
</tr>
<tr>
<td>Passenger Terminal Processor</td>
<td>Space Standards for Waiting Areas (m²/pax)</td>
<td>Waiting Time Standards for Processing Facilities (Minutes)</td>
<td>Waiting Time Standards for Processing Facilities (Minutes)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------</td>
<td>----------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>ADRM 10th Edition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Departure Hall</td>
<td>&gt;2.3 2.3 &lt;2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check-in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Service Boarding</td>
<td>&gt;1.8 1.3 - 1.8 &lt;1.3</td>
<td>0 0-2 &gt;2</td>
<td>0 0-2 &gt;3</td>
</tr>
<tr>
<td>Bag Drop Desk (queue width 1.4 - 1.6 m)</td>
<td>&gt;1.8 1.3 - 1.8 &lt;1.3</td>
<td>0 0-5 &gt;5</td>
<td>0 0-3 &gt;3</td>
</tr>
<tr>
<td>Check-in Desk (queue width 1.4 - 1.6 m)</td>
<td>&gt;1.8 1.3 - 1.8 &lt;1.3</td>
<td>&lt;10 10-20 &gt;20</td>
<td>&lt;3</td>
</tr>
<tr>
<td>Security Checkpoint (queue width: 1.2 m)</td>
<td>&gt;1.2 1.0 - 1.2 &lt;1</td>
<td>&lt;5 5-10 &gt;10</td>
<td>0 0-3 &gt;3</td>
</tr>
<tr>
<td>Emigration (Passport Control) (queue width: 1.2 m)</td>
<td>&gt;1.2 1.0 - 1.2 &lt;1</td>
<td>&lt;5 5-10 &gt;10</td>
<td>0 0-3 &gt;3</td>
</tr>
<tr>
<td>Boarding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seating</td>
<td>&gt;1.7 1.5 - 1.7 &lt;1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gate Lounge Standing</td>
<td>&gt;1.2 1.0 - 1.2 &lt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigration (Passport Control) (queue width: 1.2 m)</td>
<td>&gt;1.2 1.0 - 1.2 &lt;1</td>
<td>&lt;10 10 &gt;10</td>
<td>&lt;5 5 &gt;3</td>
</tr>
<tr>
<td>Transfers</td>
<td>&lt;5 5 &gt;5</td>
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<tr>
<td>Baggage Claim Area</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Narrow Body</td>
<td>&gt;1.7 1.5 - 1.7 &lt;1.5</td>
<td>&lt;0 0-15 &gt;15</td>
<td>0 0-15 &gt;15</td>
</tr>
<tr>
<td>Wide Body</td>
<td>&gt;1.7 1.5 - 1.7 &lt;1.5</td>
<td>&lt;0 0-25 &gt;25</td>
<td></td>
</tr>
<tr>
<td>Public Arrival Hall</td>
<td>&gt;1.7 1.2 - 1.7 &lt;1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP Lounges</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 The lower limit is only to be considered if extensive F+B seating is provided in the departure lounge, or, concession zone seating available.
## Benefits

### Aircraft Operators
- Improved value proposition
- Shorter transit times
- Cost avoidance in take-off delays

### Airports
- Improved passenger throughput
- Reduced queue length and times
- Economic benefits in retail revenue

### Government
- Maintain determined level of security
- Avoid security charges increase
- Reduced size of crowds to minimizes level of threat

### Passengers
- Reduced queuing times, less stress and hassle
- Increased discretionary time after security checkpoint
Questions & Answers