Today’s Presentation in Context:

- It is no longer sufficient to capture identity data that will remain stationary in identity repositories.
- There are important circumstances where identity data must be shared in a responsible way to enable positive outcomes for the people it identifies.
- Data sharing has also become a requirement in order to improve security and combat terrorism.
- We are now in a world where identity data necessarily will be dynamically shared among large groups of actors.
- In this presentation we will explore the concept of exchange of identity data within the context the Advance Passenger Information schemes which have become one of the largest domains of identity data exchange operating within a multi-stakeholder environment that requires standards and dynamic exchange of identity data and actionable information.
OBJECTIVES

• Exploring the lessons learned for identity data management gained from large scale API experience
• Understanding the complexities of passenger data exchange programs
• Exploring the various standards/technologies that exist today
• Discovering the benefits of implementing such standards
• Understanding the privacy and data protection aspects of handling passenger data
OUR EXPERIENCE

20 YEARS

200M+ PASSENGERS EVERY YEAR

20+ MAJOR SOLUTIONS DELIVERED

150+ CERTIFIED AIRLINES
WHAT IS TRAVELER DATA?

Electronic data related to traveler’s …:

- … identity and flight details
- … booking or reservations details (PNR)
- … check-in data (DCS)

• Batch/Passive: API
• Interactive: iAPI / APP
API vs. PNR & DCS

The objective is to ensure government agencies always have the right information in the right place at the right time to make informed decisions.

API

Help identify people you know about.
Example: People on your watchlist.
Useful for: Immigration, Security, Customs.

PNR & DCS

Help identify people and trends you did not know about.
Example: Suspicious travel patterns.
Useful for: Law enforcement, Security, Customs.
## API vs. iAPI

<table>
<thead>
<tr>
<th>iAPI</th>
<th>API</th>
</tr>
</thead>
<tbody>
<tr>
<td>• iAPI is <strong>interactive</strong></td>
<td>• API is not interactive</td>
</tr>
<tr>
<td>• With iAPI Government can <strong>deny boarding</strong> with integrated risk checks at check-in</td>
<td>• API checks are done when passenger is already in air</td>
</tr>
<tr>
<td></td>
<td>• With API, intervention can only take place when passenger arrives – thus deportation costs</td>
</tr>
<tr>
<td>• iAPI data is <strong>hard</strong> (from passport MRZ)</td>
<td>• API data is <strong>soft</strong></td>
</tr>
<tr>
<td>• iAPI data has <strong>lower error</strong> rates in data</td>
<td>• API data has higher error rates in data</td>
</tr>
<tr>
<td>• Reconciliation of Entry/Exit movements is <strong>automatic</strong> with iAPI</td>
<td>• With API data, the automatic reconciliation of Entry/Exit movements is very difficult due to quality of data</td>
</tr>
<tr>
<td>• iAPI can also be used:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• for <strong>domestic traffic</strong></td>
</tr>
<tr>
<td></td>
<td>• for <strong>sea and land borders</strong></td>
</tr>
</tbody>
</table>
PASSENGER NAME RECORD (PNR)

PNR RECORD LOCATOR

- Unique for the reservation and the airline
- A six character alphanumeric code
- Recycled over time (usually 12 months)
- A rich source of data on travelers such as:
  - Full itinerary
  - Contact details (phone, address)
  - Payment form (e.g. credit card)
  - Seat assignment
  - Travel companions
  - Travel agency information
  - Baggage details
  - etc....
TRAVELER DATA

TIMELINE

TRAVELER PROCESS TIMELINE

<table>
<thead>
<tr>
<th>Up to T-350 days Booking</th>
<th>Government window, e.g. T-72 hours</th>
<th>T-24 hours</th>
<th>T-8 hours</th>
<th>Check-in</th>
<th>Flight Departure T-0</th>
</tr>
</thead>
</table>

Travelers

- Passenger

Reservation System

- Passenger makes booking

Departure Control System

- Booking data provided to Government

- Flight data provided to DCS

- Flight loaded

Government

- Check-in process

- On-departure declarations

- Government Database
## DATA ELEMENTS AND DATA SOURCES

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
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</thead>
<tbody>
<tr>
<td>NAMES</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>DATE OF BIRTH</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>GENDER</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>TRAVEL DOCUM ENT NO</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>TRAVEL DOCUMENT DETAILS</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>FLIGHT DETAILS</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>CHECK-IN STATUS</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>SEAT NUMBER</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>SEAT PREFERENCES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAGGAGE INFORMATION</td>
<td></td>
<td></td>
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* Based on IATA recommended code set
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</thead>
<tbody>
<tr>
<td>PNR LOCATOR</td>
<td>SOME</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>BOOKING DETAILS (DATE, TRAVEL AGENT)</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>ITINERARY DETAILS</td>
<td>CURRENT LEG</td>
<td>FULL ITINERARY*</td>
<td>CURRENT LEG</td>
</tr>
<tr>
<td>TICKET INFORMATION</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>FORM OF PAYMENT</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>CONTACT DETAILS</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>GENERAL REMARKS (SPECIAL SERVICE REQUESTS/ OTHER SERVICE INFORMATION)</td>
<td></td>
<td>*</td>
<td>SOME</td>
</tr>
<tr>
<td>FREQUENT TRAVELLER DETAILS</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>BOOKING HISTORY (CHANGES TO PNR)</td>
<td></td>
<td>*</td>
<td></td>
</tr>
</tbody>
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DATA RECONCILIATION AND STORAGE

- All data needs to be linked to a traveler – *Person centric*
- For each type of incoming data, matching algorithms determine if a:
  - New traveler needs to be created or
  - New event needs to be linked to an existing traveler
Data privacy laws across the world, aim to protect citizens’ privacy and to reshape the way organizations approach data privacy.

- PNR contains personal and sensitive data about travellers
- Countries have different perspectives on how much is “private” and how much can be shared (EU GDPR)
- State to State agreement may be necessary
- Sensitive data should not be required
The objective is to facilitate border movements and improve traveller experience by identifying low risk passengers.

- Incoming data (PNR and DCS) should be risk assessed
- Risk profiles can be setup and checked every time data arrives
- Customs, law enforcement and security agencies can setup their own profiles to help fight terrorism, illegal immigration, smuggling, etc…
- Each agency will be notified if there is a “hit” on a risk profile
# INFORMATION USED TO CREATE PROFILES

## EXPECTED MOVEMENT EVENT
- Form of Payment
- Credit Cards
- Agent Pseudo City Codes
- IATA agent codes
- Age of the PNR
- Itinerary type
- Nationality
- Age
- Gender
- Locations en Route
- Countries en Route
- Go-show
- Number of bags
- Booking classes
- Co-Travelers on PNR
- Extra seat
- Itinerary Type

## BORDER MOVEMENT EVENT
- Nationality
- Age
- Gender
- Document Issuing Country
PROFILING USE CASES

1. Detect links between travelers
2. Detect patterns used by drug smugglers
3. Detect suspicious behavior of certain travelers
4. Detect intentions of over stay
5. Detect intentions of illegal trade
6. Support all types of investigations
7. Monitors the transit/transfer area of an airport
8. Identify specific bags from tag numbers provided in the PNR/DCS message
9. Detect black listed travel agencies
10. Profile passengers based on nationality and travel route
11. Configure a profile for a high risk routes
Umar Farouk Abdulmutallab a.k.a. the ‘Underwear bomber’

- Cash payment of air ticket
- Ticket purchased from airport
- One-way ticket
- No hold luggage
- Suspicious route
- Identified on a US Watch List
A Spanish woman was arrested in Madrid with 12 kg of cocaine hidden in the baggage of her 3 young children.

She was travelling with her children to the Dominican Republic while her husband stayed in Spain.

Authorities utilized API data to identify that the woman had done such trip 9 times within 1 year, and therefore investigated further and found the drugs.
THANK YOU