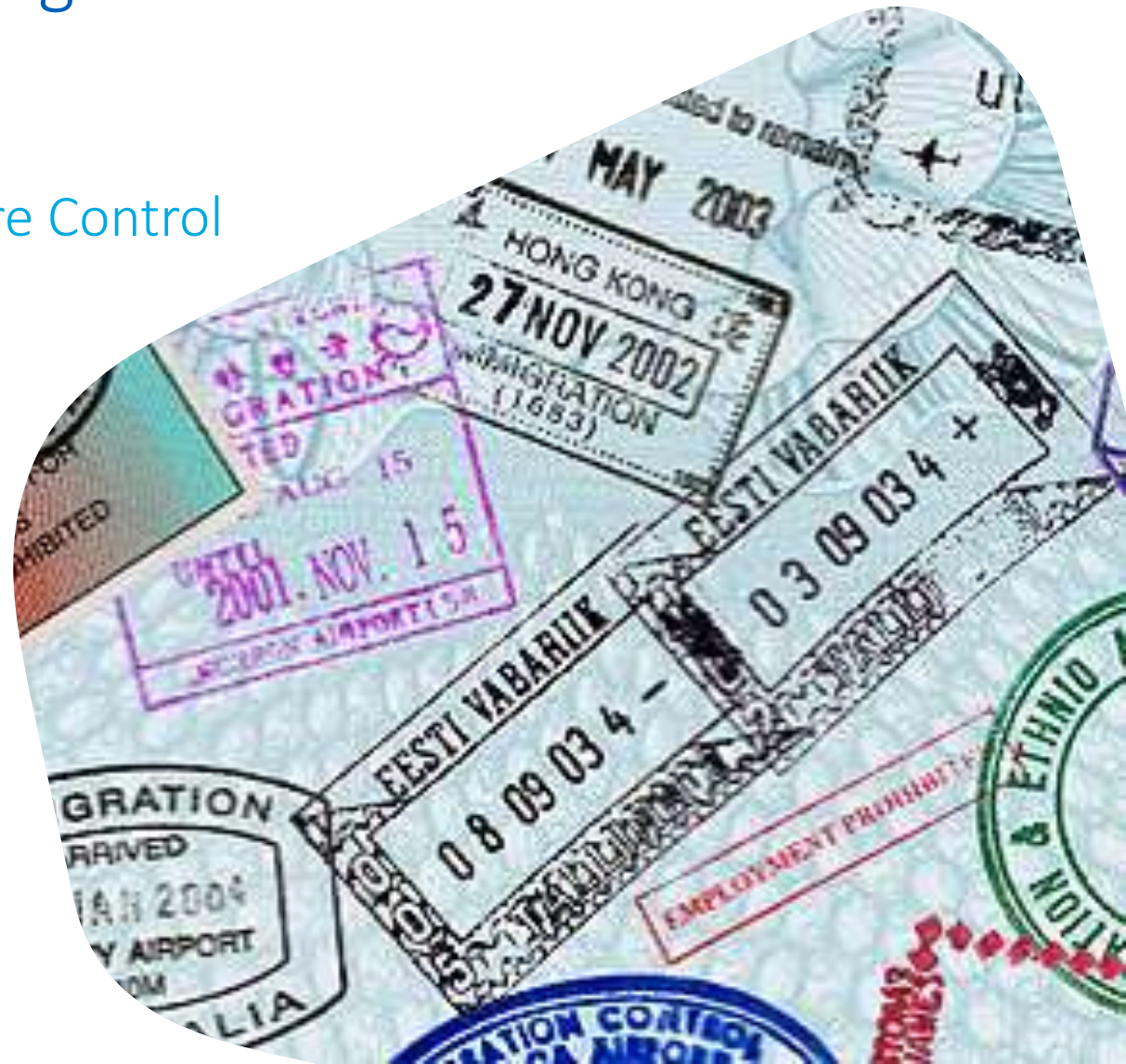


Exchanging Passenger Data

Interface with Departure Control Systems



Peter Butler
Amadeus Product
Management
16th May 2018
Sofia, Bulgaria

1.

Amadeus – A Brief Overview

ETH:R'
A
DTM
LOC+178+NCE'
LOC+22+ATL'
LOC+179+MEX'
LOC+174+FRA'
NAT+2+CHE'
RFF+AVF:RXDWWH'

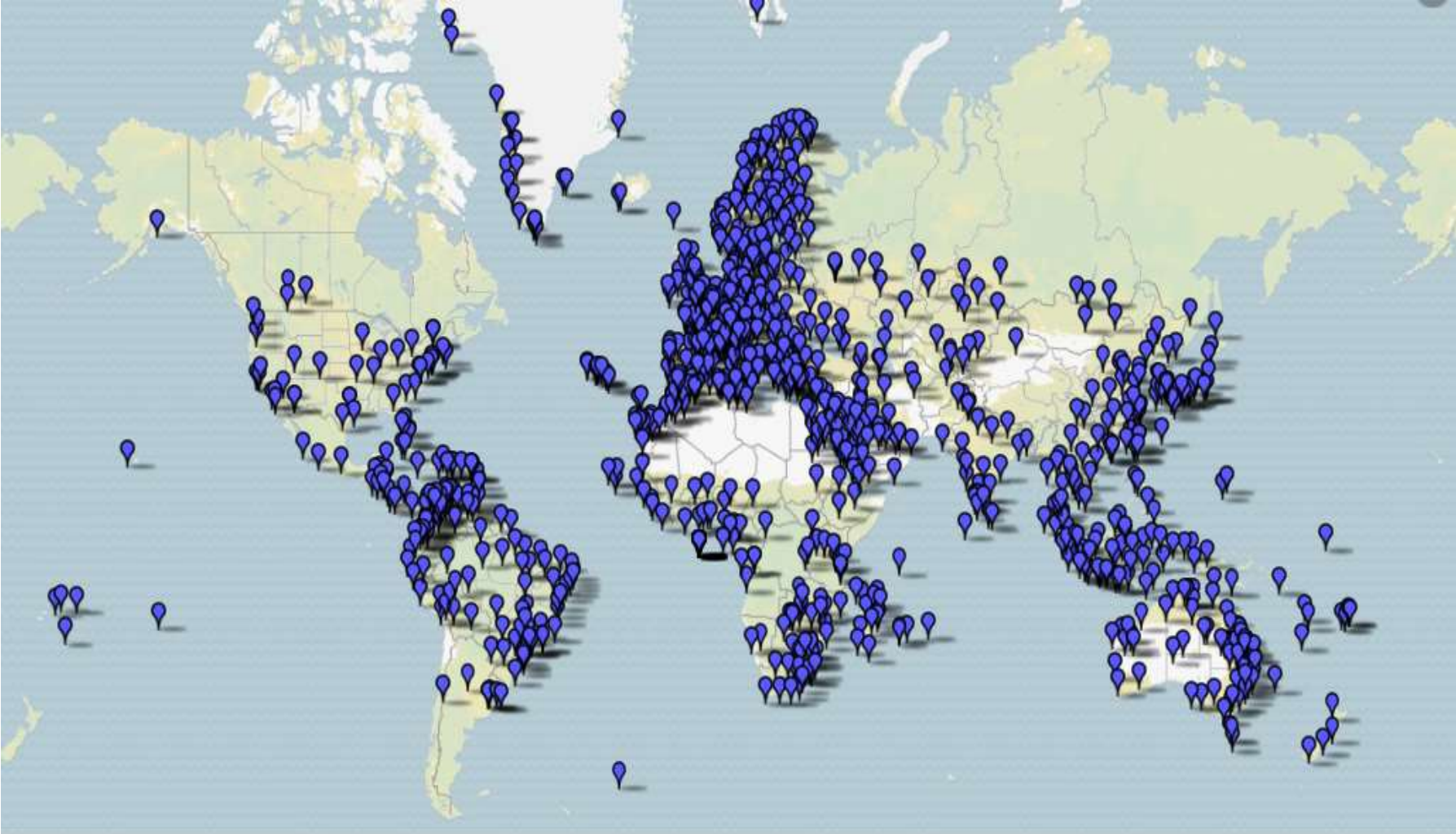
Amadeus – who are we?

_ Provider of Passenger Service Systems

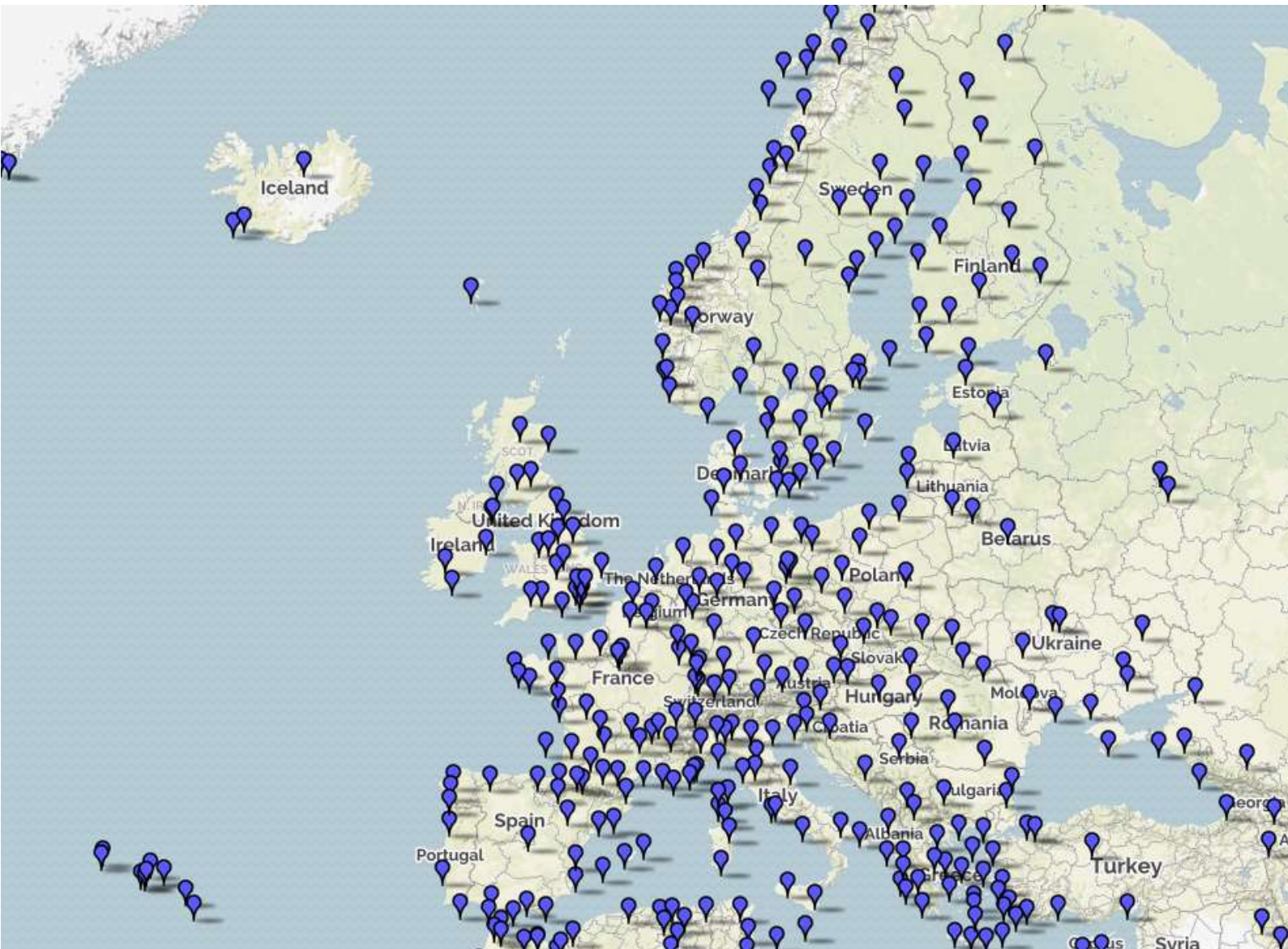
- Reservations
 - Inventory
 - DCS
-
- Around 150 airlines use Altéa Reservations
 - 140 airlines use Altéa DCS
 - 100 Ground Handlers service a further 300+ airlines
 - Over 1 billion passengers boarded a year
 - Around 45 passengers checked in per second at peak times

A Community System

Where in the World are we?



Where in the Region are we?



Passenger Data

An overview



Passenger

- Booking
- Self-service check-in
- Add personal details



Airline System

- Reservations System
- Check-in system (DCS)
- Verify personal data
- Builds and Transmits PAXLST



Data Collector

- Teletype
- IBM MQ
- Receives PAXLST
- Parse data for Targeting Centre



Targeting Centre

- Interface with Interpol
- National Watchlists
- Visa checks

2.

Regulatory Compliance in DCS

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Regulatory Compliance in DCS

- ▶ Message standards agreed by WCO/ICAO/IATA committee
- ▶ Requirement from National Authorities of many nations to transmit passenger information as part of departure control process
- ▶ Collection of data elements from passengers is configurable using business rules
 - ▶ Typically this will be limited to the data in the machine readable zone (MRZ) of the travel document
 - ▶ Document type and number
 - ▶ First and last names
 - ▶ Date of birth
 - ▶ Gender
 - ▶ Nationality
 - ▶ Expiry date or travel document
- ▶ Two types of data transmission :
 - Non-interactive batch message – industry standard PAXLST message
 - Interactive process (APP, iAPP, iAPI)

Regulatory Compliance in DCS

- ▶ No response is expected for the non-interactive process
- ▶ In interactive process, status received from the authorities is stored in the DCS record
 - ▶ Handling of 'Not OK' passengers is procedural, and as per the recommendation of the respective authorities
 - ▶ Authority may update status between time of check-in and boarding

Regulatory Compliance in DCS

- Batch PAXLST

APIS

Batch message containing data for all passengers is sent from DCS to the National Authority's system after flight departure. No response is expected from the receiving system. Messages are sent via SITA/ARINC network or increasingly via dedicated MQ link.

Currently implemented with around 50 countries

Regulatory Compliance in DCS

Batch PAXLST - example

UNA:+.) -
 UNB+UNOA:4+1A:6X+BGPIU+160511:1220+1A142064635++APIS-
 UNG+PAXLST+GREAT AIRWAYS:6X+XXPIU+160511:1220+1A142064636+UN+D:05B-
 UNH+1+PAXLST:D:05B:UN:IATA+6X95521605121015+01:F-
 BGM+745-
 NAD+MS+++US SMC HELP DESK ALTEA DCS-
 COM+0013054068840:TE+0000000000:FX-
 TDT+20+6X9552-
 LOC+125+DOH-
 DTM+189:1605120635:201-
 LOC+87+SOF-
 DTM+232:1605121015:201-
 NAD+FL+++ALPHA:BRAVO-
 ATT+2++M-
 DTM+329:891212-
 MEA+WT++KGM:10-
 FTX+BAG+++6X178183-
 LOC+178+DOH-
 LOC+179+SOF-
 NAT+2+IND-
 RFF+AVF:57YHVY-
 RFF+SEA:014A-
 DOC+P:110:111+A232323-
 DTM+36:181212-
 LOC+91+IND-
 NAD+FL+++BRAVO:CHARLIE-
 ATT+2++F-
 DTM+329:781212-
 MEA+WT++KGM:20-
 FTX+BAG+++6X178187:2-
 LOC+178+DOH-
 LOC+179+SOF-
 NAT+2+GBR-
 RFF+AVF:58BOWM-
 RFF+SEA:002A-
 DOC+P:110:111+242321232-
 DTM+36:181212-
 LOC+91+GBR-
 NAD+FL+++DELTA:FOX-
 ATT+2++M-
 DTM+329:561215-

MEA+WT++KGM:30-
 FTX+BAG+++6X178194:2-
 LOC+178+DOH-
 LOC+179+SOF-
 NAT+2+JPN-
 RFF+AVF:575H5Z-
 RFF+SEA:014B-
 DOC+P:110:111+J2343433-
 DTM+36:191212-
 LOC+91+JPN-
 NAD+FL+++FOX:GOLF-
 ATT+2++F-
 DTM+329:871112-
 MEA+WT++KGM:30-
 FTX+BAG+++6X178198-
 LOC+178+DOH-
 LOC+179+SOF-
 NAT+2+HUN-
 RFF+AVF:575H7Z-
 RFF+SEA:014C-
 DOC+P:110:111+23324S34-
 DTM+36:181212-
 LOC+91+HUN-
 CNT+42:5-
 UNT+76+1-
 UNE+1+1A142064636-
 UNZ+1+1A142064635-

Regulatory Compliance in DCS

- ▶ Interactive API (iAPI)

iAPP/iAPI

Batch message is sent once, between -72hrs and -24hrs - before flight departure for passengers with minimum data and response received synchronously within agreed timescale.

If passenger details change after batch is sent, another message is sent for those passengers.

Interactive message sent to the National Authority's system during acceptance if passenger does not have status or new regulatory details are collected during acceptance.

Synchronous response received with OK/NOK status for the passenger.

Authority may send unsolicited message after check-in is completed to change the passenger status

Dedicated MQ link is used for each Authority

Currently implemented with 5 countries

Regulatory Compliance in DCS

iAPI - examples

Output as PAXLST

```

UNA:+.?'
UNB+UNOA:4+ALTEACM:ZZ+CBSAAPIS:ZZ+180316:1243+T665954410001++APIS'
UNG+PAXLST+RJ+CBSAAPIS+180316:1243+T66595441+UN+D:05B'
UNH+1+PAXLST:D:05B:UN:IATA+IIRJ026920180317AMM432076'
BGM+745+CP'
RFF+TN:IIRJ026920180317AMM432076:::001'
NAD+MS+++RJ IT PROJECT MANAGER'
COM+0096265202850:TE+0096265672527:FX'
TDT+20+RJ269+++RJ'
LOC+125+AMM'
DTM+189:1803170200:201'
LOC+87+YUL'
DTM+232:1803170700:201'
NAD+FL+++ALPHA:BRAVO+AZ+AZ+AZ+99999+USA'
ATT+2++M'
DTM+329:840113'
LOC+178+AMM'
LOC+179+YUL'
NAT+2+USA'
RFF+AVF:NJF3XG'
RFF+ABO:10CDCE0004562991CAN'
DOC+P:110:111+3049384'
DTM+36:180112'
LOC+91+USA'
CNT+42:1'
UNT+23+1'
UNE+1+T66595441'
UNZ+1+T665954410001'

```

Response as CUSRES

```

UNA:+.?'
UNB+UNOA:4+CBSAAPIS+ALTEACM+180316:0843+T665954410001++APIS'
UNG+CUSRES+CBSAAPIS+RJ+180316:0843+T66595441+UN+D:05B'
UNH+1+CUSRES:D:05B:UN:IATA+IIRJ026920180317AMM432076'
BGM+962'
RFF+TN:IIRJ026920180317AMM432076:::001'
RFF+AF:RJ269'
DTM+189:1803170200:201'
DTM+232:1803170700:201'
LOC+125+AMM'
LOC+87+YUL'
ERP+2'
RFF+AVF:NJF3XG'
RFF+ABO:10CDCE0004562991CAN'
ERC+0Z'
UNT+13+1'
UNE+1+T66595441'
UNZ+1+T665954410001'

```

Regulatory Compliance in DCS

iAPI – Government Responses

ERC+11
ERC+0A
ERC+0 (Optional ESTA Result)

New AQQ Vetting Result
0 – Customer is cleared to board
1 – Customer is inhibited to board
2 – Selectee
4 – APIS Data Error

New Result Indicator:
Z – ESTA not required
A – Valid ESTA application on file
B – ESTA application not present on file
C – Additional US Travel Document required
1 – ESTA inhibited
X – Insufficient Information
D – Document not on file
R – Recommend Do not Board
T – Time-out

The screenshot shows a flight information system interface. At the top, it displays flight details: 6X341, 21OCT NCE (1) → LHR London Heathrow (1), Acceptance Open, Gate: None, Boarding: 07:15, and STD: 07:45. Below this is a table with columns: Customer, Flg Tkt Cabin, Sec, Seat, Accept Baggage, and Info. Two rows are visible: Row 1 for 'FIG Freddie Mr' with flight 6X341, cabin NCE-LHR, and status M(Y) and IAPP (both redacted with a red box); Row 2 for 'GREEN Grant Mr' with flight 6X341, cabin NCE-LHR, seat 003, 9A, and a green checkmark. Below the table are input fields for 'Select Customer: 1' and 'Select Flight(s): A', and an 'Expand [SF2] 1 of 2 Selected' button. A blue instruction icon says 'Select customer to view corresponding record. Refine the 'All Categories' display with F2 function.' Below that is an 'IAPP Check Status' section with a redacted message: 'IAPP STATUS - GBR - Do Not Board NO BOARD FREE TEXT'. At the bottom left is a 'Boarding Pass Print Details' button.

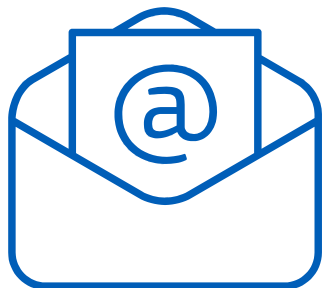
3.

Certification Process

ETH:R'
A
DTM
LOC+178+NCE'
LOC+22+ATL'
LOC+179+MEX'
LOC+174+FRA'
NAT+2+CHE'
RFF+AVF:RXDWWH'

Regulatory Compliance in DCS

Certification Process



Notification

- Letter to Airlines
- Provide legal basis
- Provide Guidelines
- In English



Pre-certification

- Define scope
- Routes
- Technical information from providers
- Data matrix or dashboard



Certification

- Test platform
- Define test scenarios
- Roll-out plan



Business as usual

- Outage process
- Contacts for irregularities

Regulatory Compliance in DCS

Certification processes

- ▶ Interactive API
 - ▶ Separate MQ channels for test and production
 - ▶ Authority may consider certification at system level
 - ▶ System uses fake airline in test
 - ▶ Allows for “light” certification by airlines
 - ▶ Plan for roll-out in production
 - ▶ Identify pilot airline
 - ▶ Test extensively in collaboration with your home airline
 - ▶ Schedule all airlines and agree plan with airlines and service providers
 - ▶ Authority may decide that only certified airlines have access to submit data

Thank you!

