

# Carrier Interface Overview

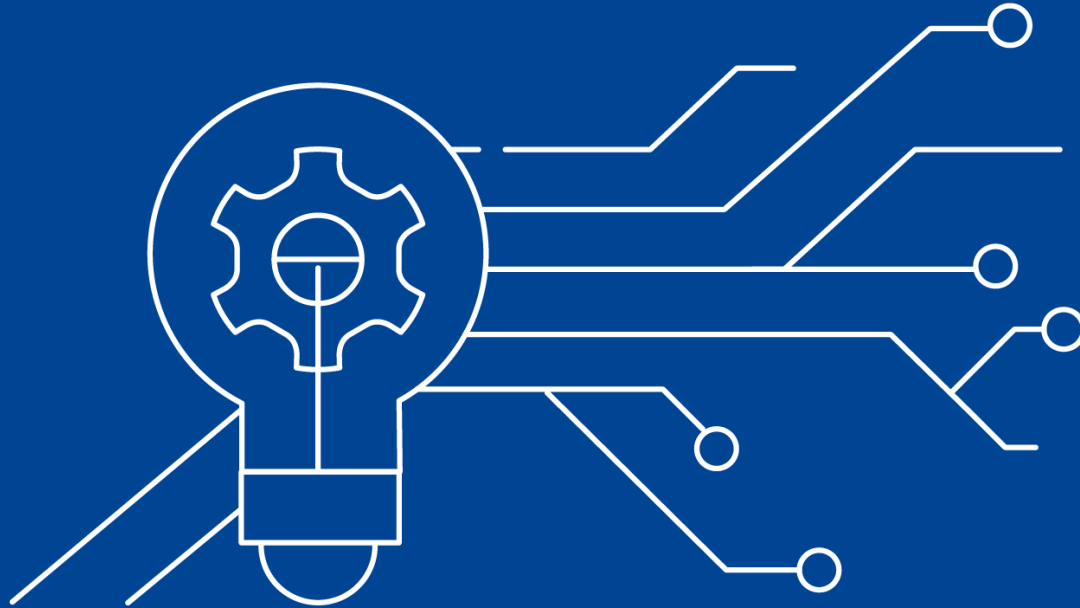
March 2023

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# Legal Context

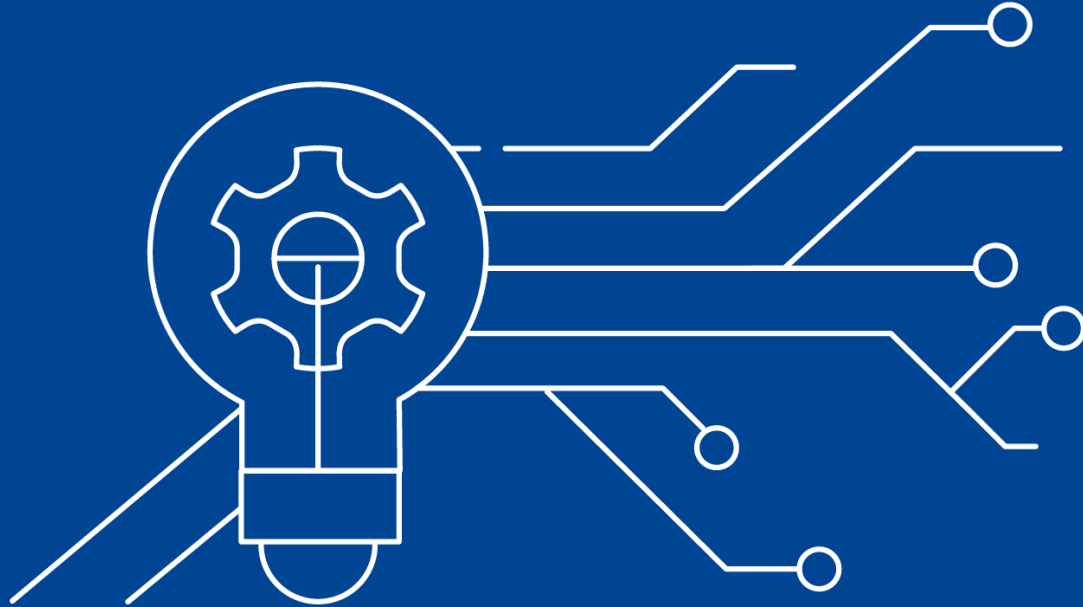


# Legal context



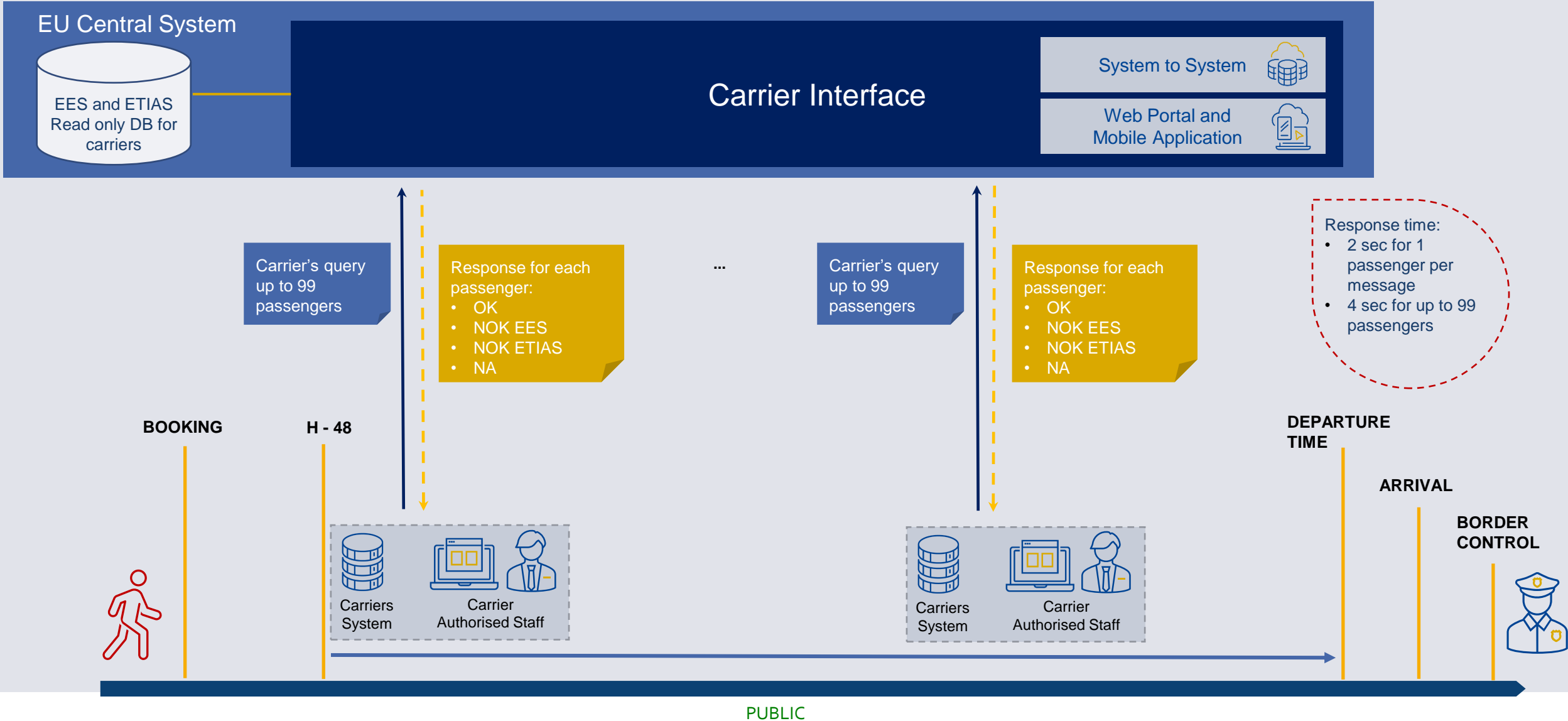
- EU regulations: 2021/1217 (the “EES Regulation”) and 2021/1224 (the “ETIAS Regulation”) set out the necessity to query EES and ETIAS in order to receive details regarding the status of third country nationals travellers arriving to Member States territory.
  - The Entry/Exit System (EES) will replace the manual stamping of passports of third country-nationals, within the scope of the system, with an electronic record of entries and exits. Carriers will need to verify whether third-country nationals travelling to the EU on a short-stay, be it a single or double entry visa, have already used the number of entries authorised by their visa.
  - The European Travel Information and Authorisation System (ETIAS) will require carriers to verify, prior to boarding, that their visa-exempt passengers have a valid travel authorisation to enter Member States territory.

# Carrier Interface Overview



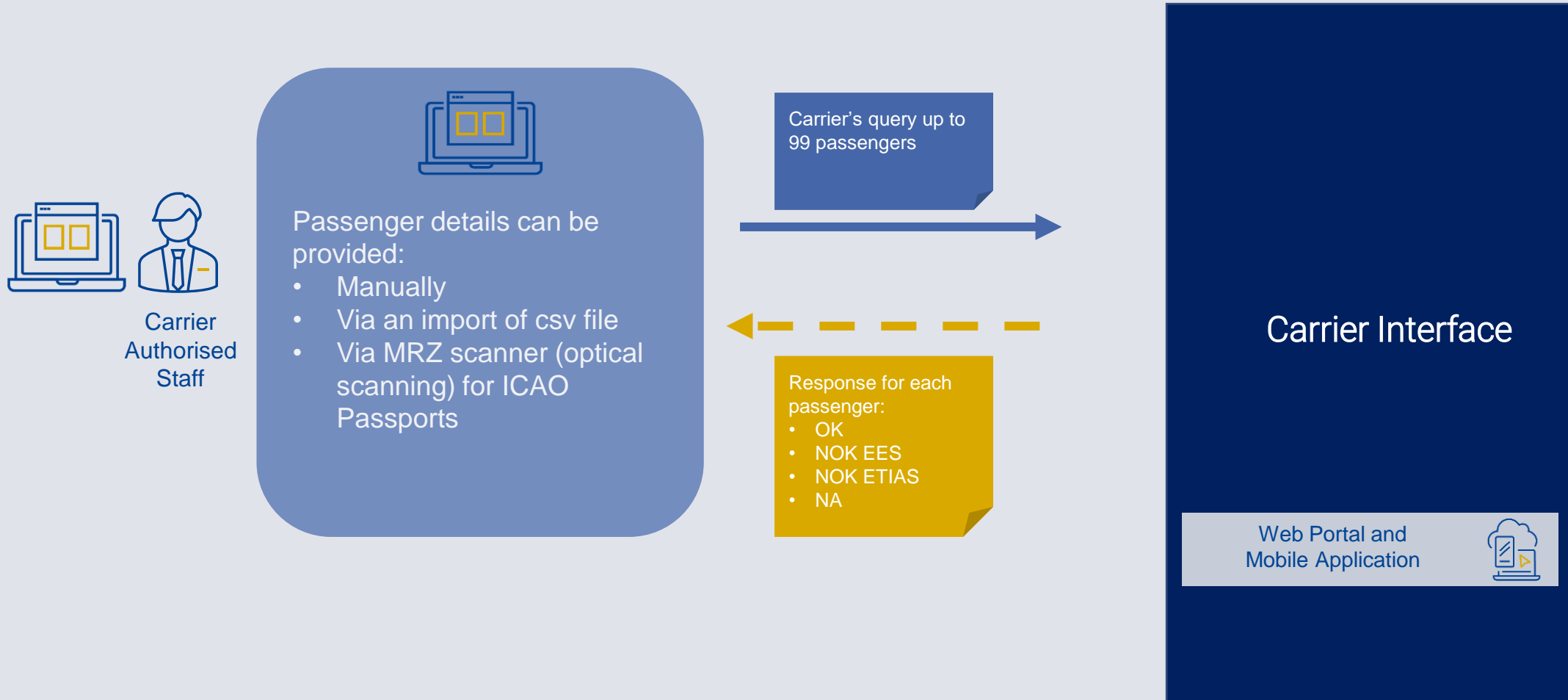
# Carrier Interface

## Overview



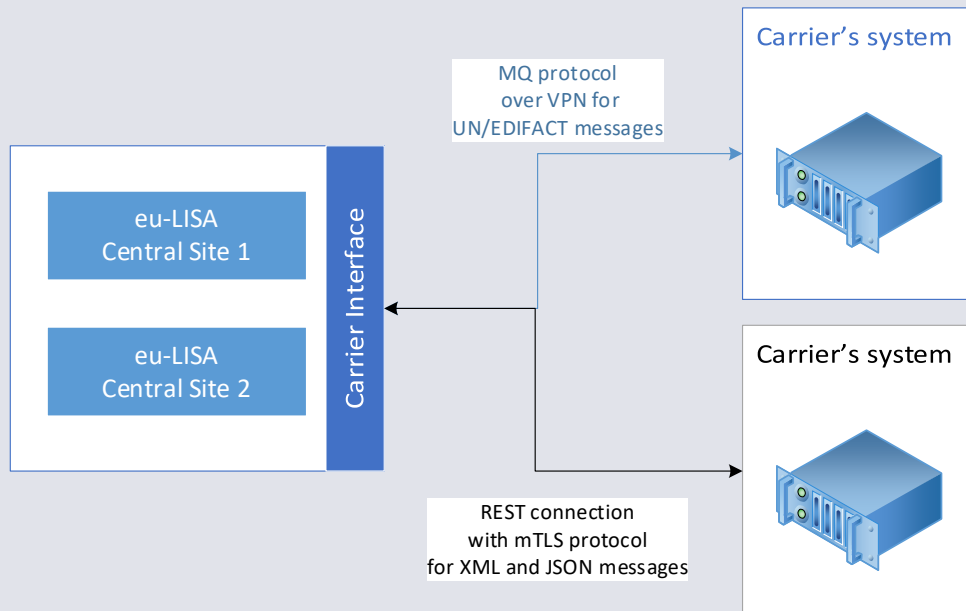
# Carrier Web Portal and Mobile Application

## Input Data



# System to System Communication Protocol Options

## Communication Protocol Options



### IBM MQ over Ipsec VPN:

- An IPsec VPN must be set up between the DCS/Carrier and the Carrier Interface before exchanging the UN/EDIFACT messages over the IBM MQ
- The Carrier Interface shall issue a private certificate 2048-bit Rivest-Shamir-Adleman (RSA) keys to the Carrier for each eu-LISA primary site (including secondary site)
- Both eu-LISA and the Carriers shall provide the communication means and technical details during the implementation phase (such as Internet Protocol (IP) addresses/Uniform Resource Locators (URLs), IBM MQ addresses/queues numbers to be contacted and certificates).

### REST API over mTLS:

- The Carrier Interface supports the REST standard for the transmission of JSON or XML based messages between the Carrier and the CI
- These messages must be exchanged over a secure connection based on the mTLS
- Both eu-LISA and the Carriers shall provide the communication means and technical details during the implementation phase (including IP addresses/URLs to be contacted and certificates)
- To ensure data privacy and integrity between eu-LISA and the Carriers, TLS 1.3 shall be used as the communication standard.

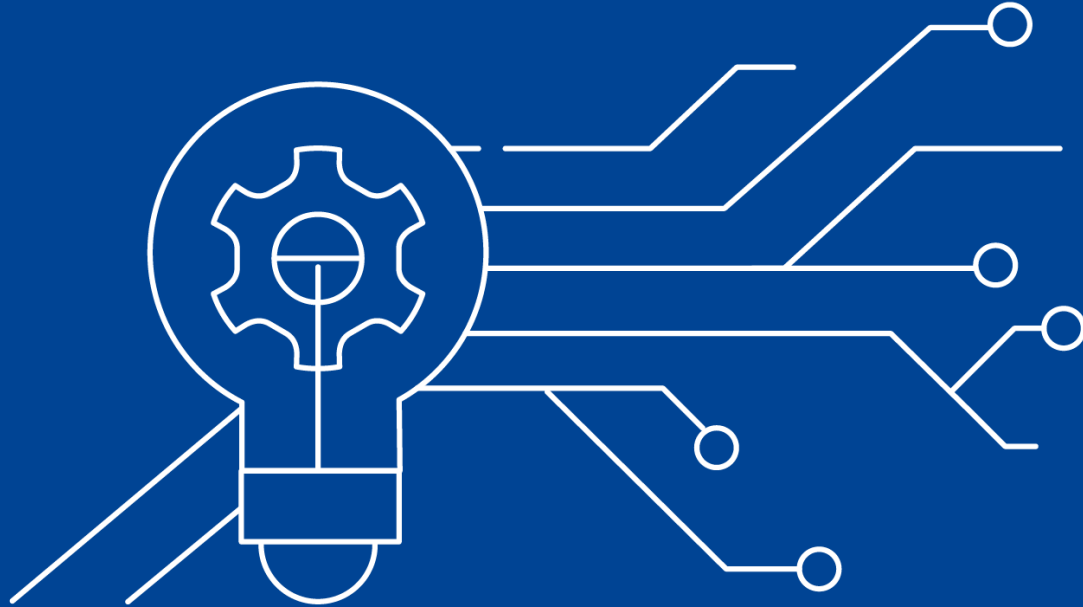


# System to System message formats

The carrier Interface manages the below message formats:

- **WCO PAXLST (version 15B)** and **CUSRES (12B)** definitions by IATA implementation guidelines
- **XML 1.0 (Fifth Edition)** as published at <https://www.w3.org/TR/xml/>
- **JSON the baseline standard is STD90 (RFC8259)** as published at <https://tools.ietf.org/html/std90>

# Carrier Interface – Query/Reply



# Query – Passenger Data

#	Attribute description	Mandatory (M) or Optional (O)
1	Surname (family name)	M
2	First name or names (given names)	M
3	Date of birth	M
4	Sex	M
5	Nationality	M
6	Type of the Travel Document	M
7	Number of the Travel Document	M
8	Three letter code of the issuing country of the TD	M
9	Date of expiry of the validity of the TD	M

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# Query – Itinerary Data

#	Attribute description	Mandatory (M) or Optional (O)
10	Scheduled location of entry	M
11	Scheduled local date and time of arrival at a location	M
12	Scheduled local date and time of departure	M
13	Identification number of scheduled means of transportation	M
14	Carrier operator	M ( applicable for Sys2Sys channel)
15	Traveller in transit flag	O (if applicable)
16	Traveller out of scope flag	O (if applicable)
17	Query submission date and time in UTC time	M ( applicable for Sys2Sys channel)
18	Passenger request identifier	M ( applicable for Sys2Sys channel)
19	Notification request identifier	M ( applicable for Sys2Sys channel)
20	Multiple entries required	M (if applicable) for land and maritime carriers only

# Traveller classification as per EES and ETIAS EU regulations

## EES

### Travelers with visa in scope of EES

Third country nationals and holders of **single or double entries visas**

## EES

### Travelers - out of scope of EES

Third country nationals as per article 2 (3) of EES regulation, such as:

- Holders of a residence card or residence permit
- Holders of a Long-stay visa
- Holders of Diplomatic passport or laissez-passer
- Persons exempt as per Article 6a(3) of the Regulation (EU) 2016/399
- EU nationals
- Nationals of Andorra, Monaco and San Marino and holders of a passport issued by the Vatican City State or the Holy See



## ETIAS

### Travelers in scope of ETIAS

Nationals from visa exempt countries and not holders of any ETIAS out of scope category (reference to Article 2(2))

## ETIAS

### Travelers from countries with visa requirements in scope of ETIAS

Third country nationals exempt from the visa requirement as described in Article 2(1) b and c of the ETIAS Regulation (e.g., school pupils etc.)

## ETIAS

### ETIAS out of scope

Third country nationals as per article 2 (2) of ETIAS regulation, such as:

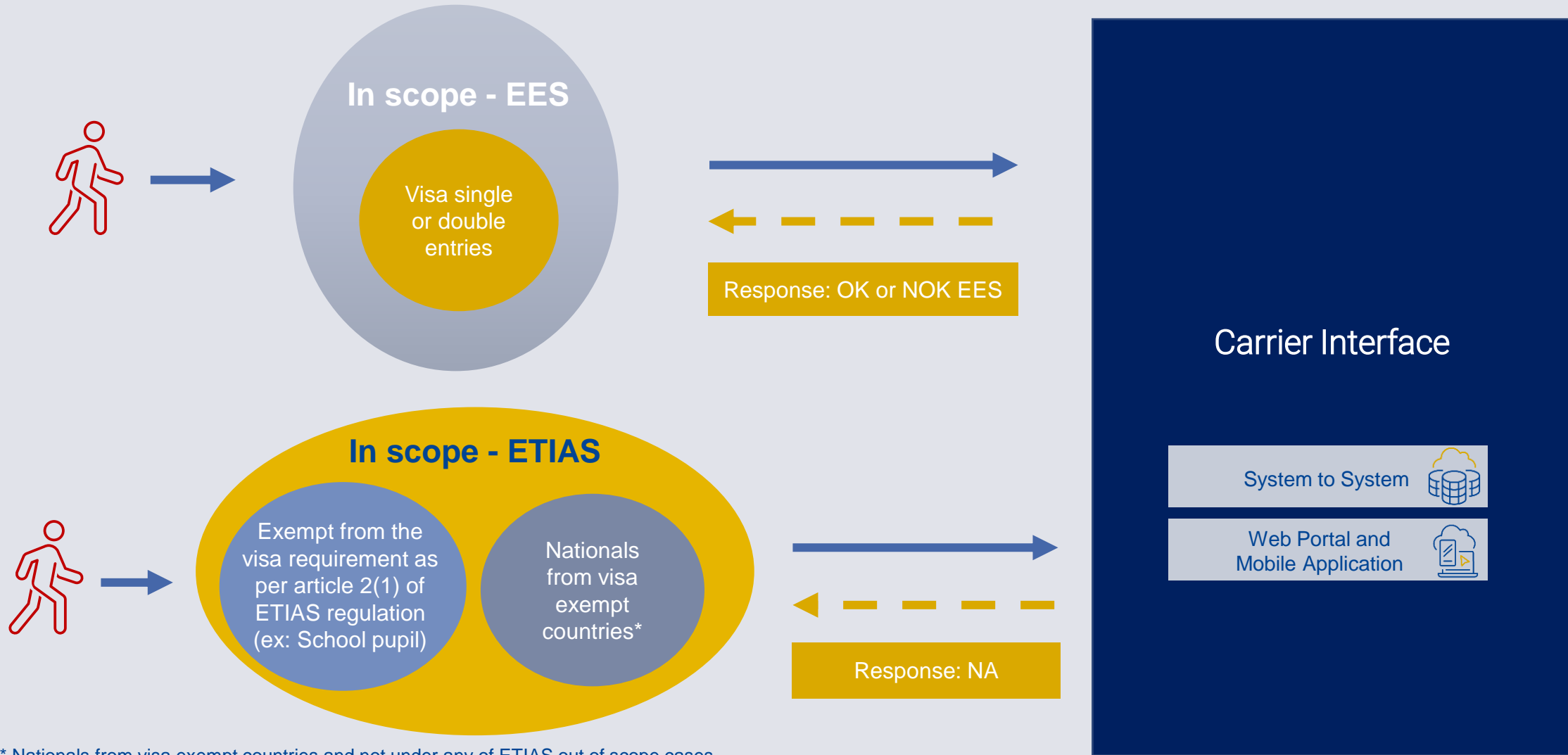
- Holders of a residence card or residence permit
- Holders of long-stay visa
- Refugee or stateless persons
- Holders of diplomatic passport or laissez-passer
- EU nationals
- Nationals of Andorra, Monaco and San Marino and holders of a passport issued by the Vatican City State or the Holy See

For more details, please refer to EES and ETIAS regulations

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# Carrier Interface replies

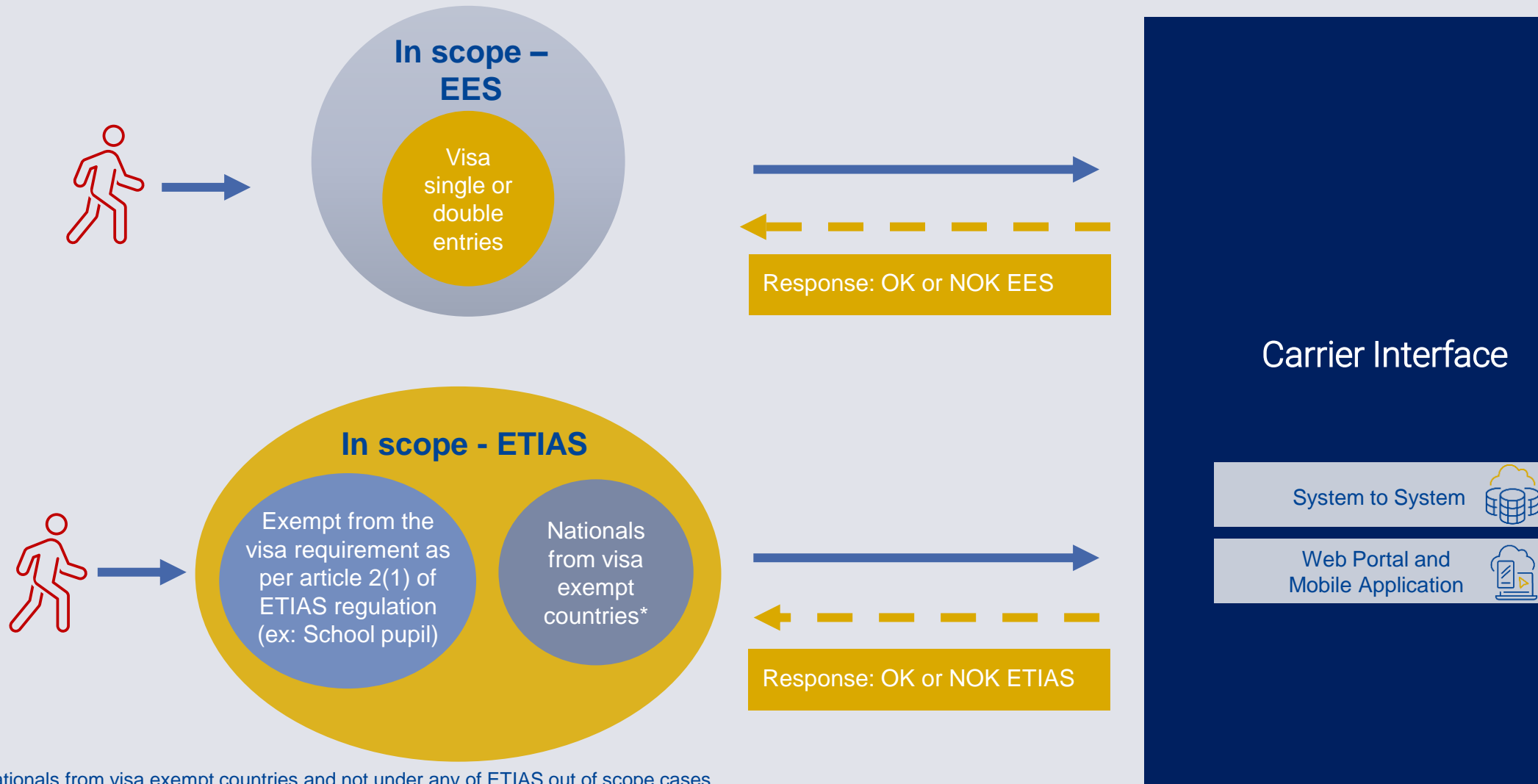
Before ETIAS entry into operation



\* Nationals from visa exempt countries and not under any of ETIAS out of scope cases

# Carrier Interface replies

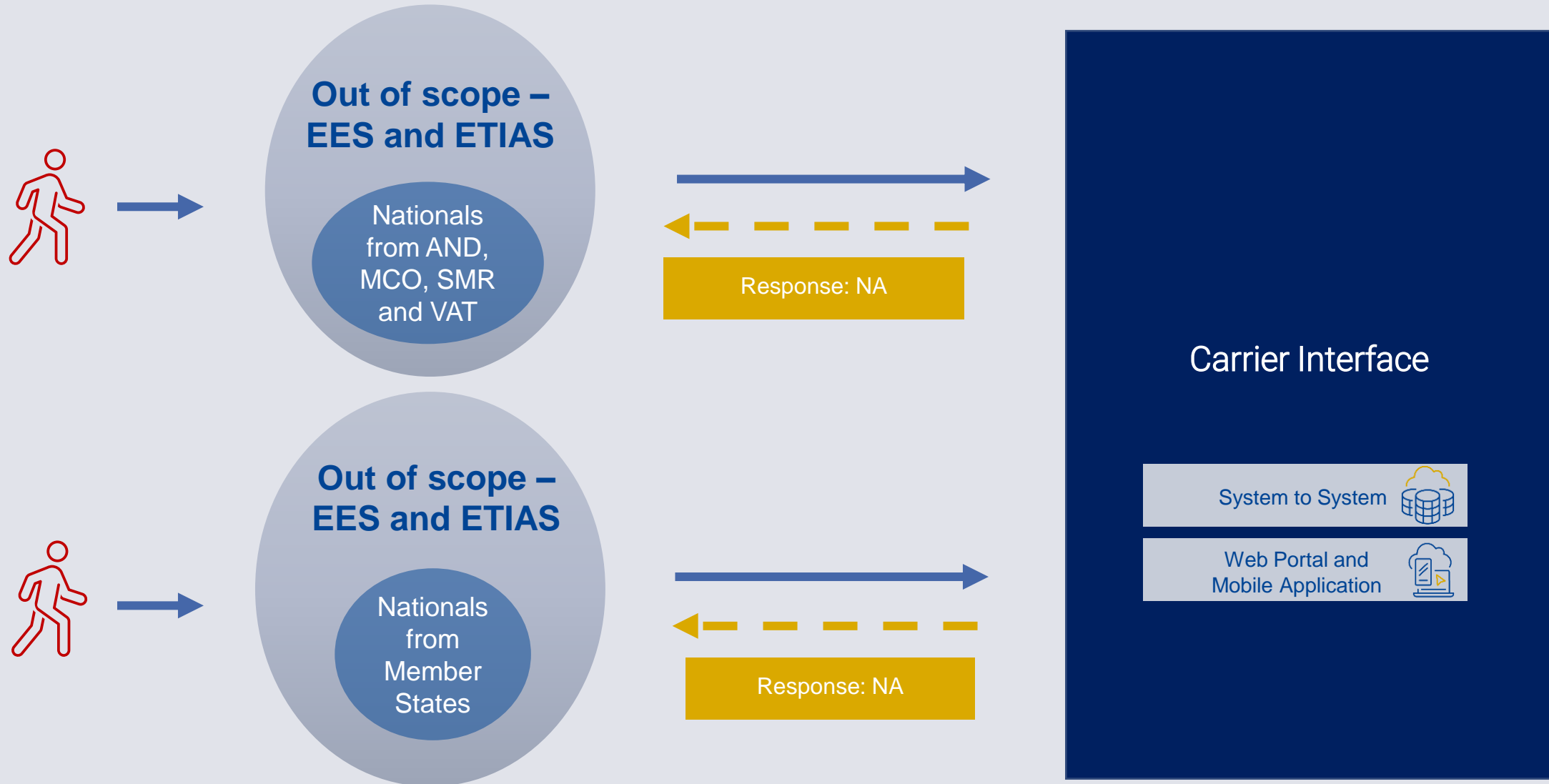
After ETIAS entry into operation



\* Nationals from visa exempt countries and not under any of ETIAS out of scope cases

# Carrier Interface replies

## Nationality checks



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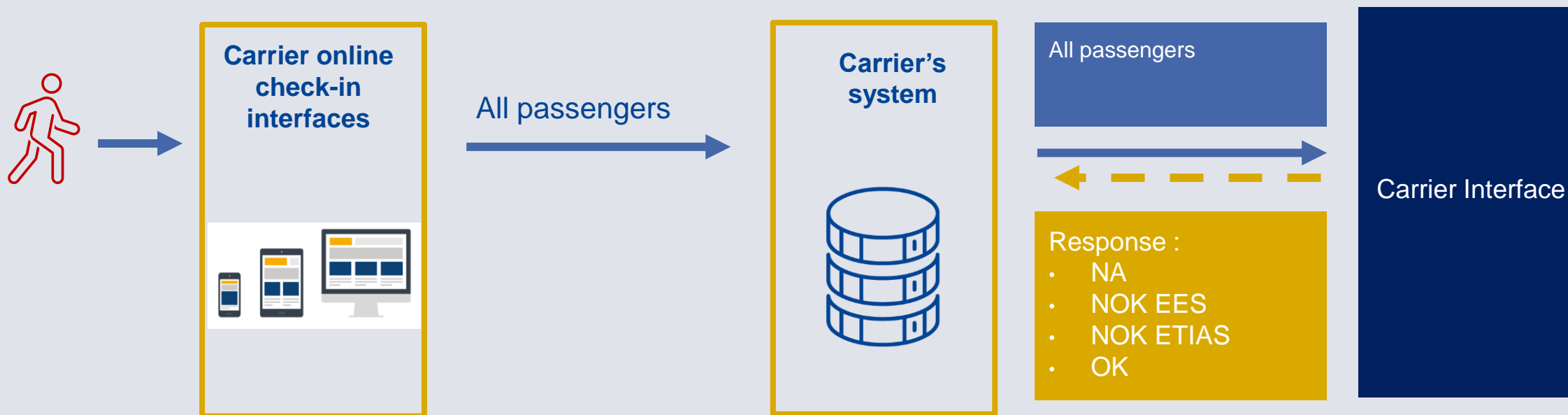


# Carrier's queries during the online check-in

## Option 1

Proposed option by no means required by legal base

- During **the online check-in**, carriers may decide to send **all passengers** data to the carrier interface and receive a Not OK EES or Not OK ETIAS for out of scope passengers
- In case a Not OK EES or Not OK ETIAS is returned, carriers **need to check the travel documents of the passengers** to clarify if they **fulfil the conditions to enter the Schengen area**
- If **verification** of travel documents reveal that traveller has no such documents (example: Resident Permit, Long stay Visa...etc), meaning traveller is **in the scope of the carrier interface**. And by receiving a previous Not OK, it would mean that the traveller has **neither** a single and double entry visa **nor** ETIAS and therefore **not able to enter the Schengen area**



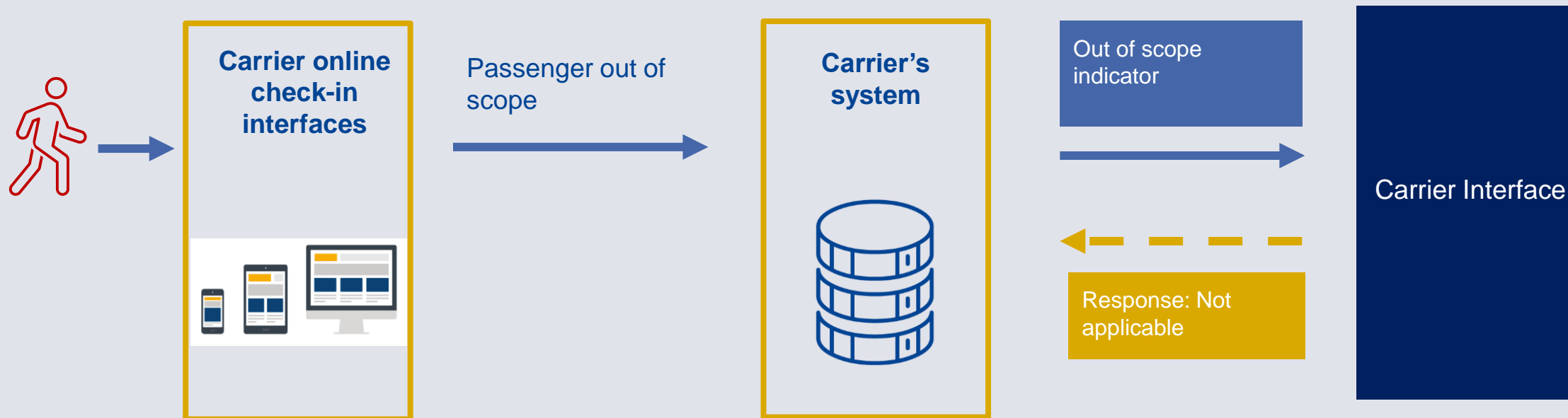
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# Carrier's queries during the online check-in

## Option 2

Proposed option by no means required by legal base

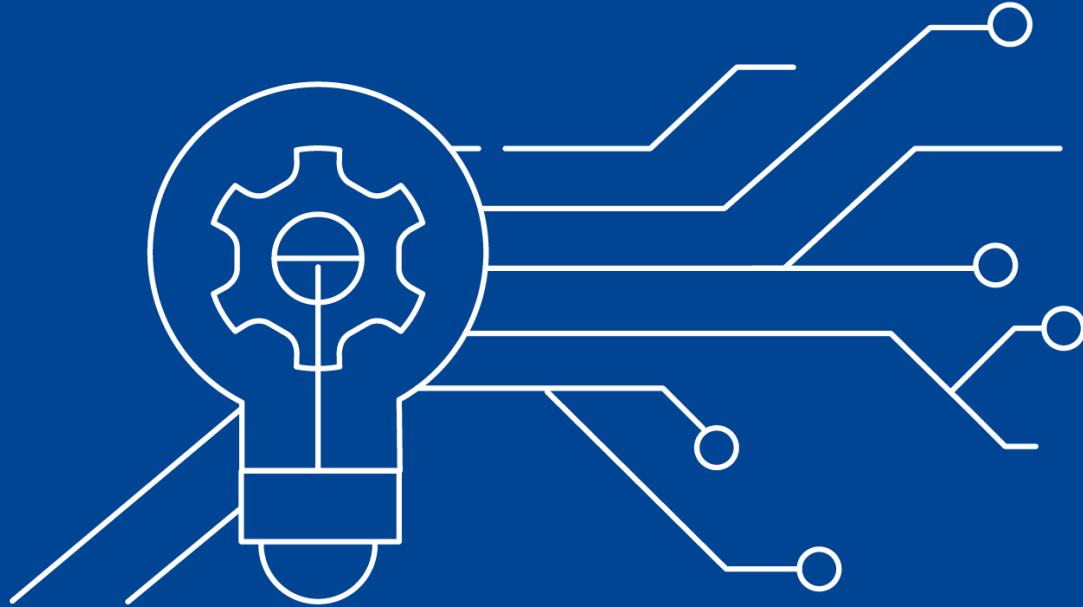
- During the **online check-in**, carriers may decide to ask the passenger if he/she **is out of scope before submitting the query** to the carrier interface
- Carriers may decide to submit or not queries with out of scope passengers. If the carrier sends a query for out of scope passengers, the query should **include the out of scope indicator**



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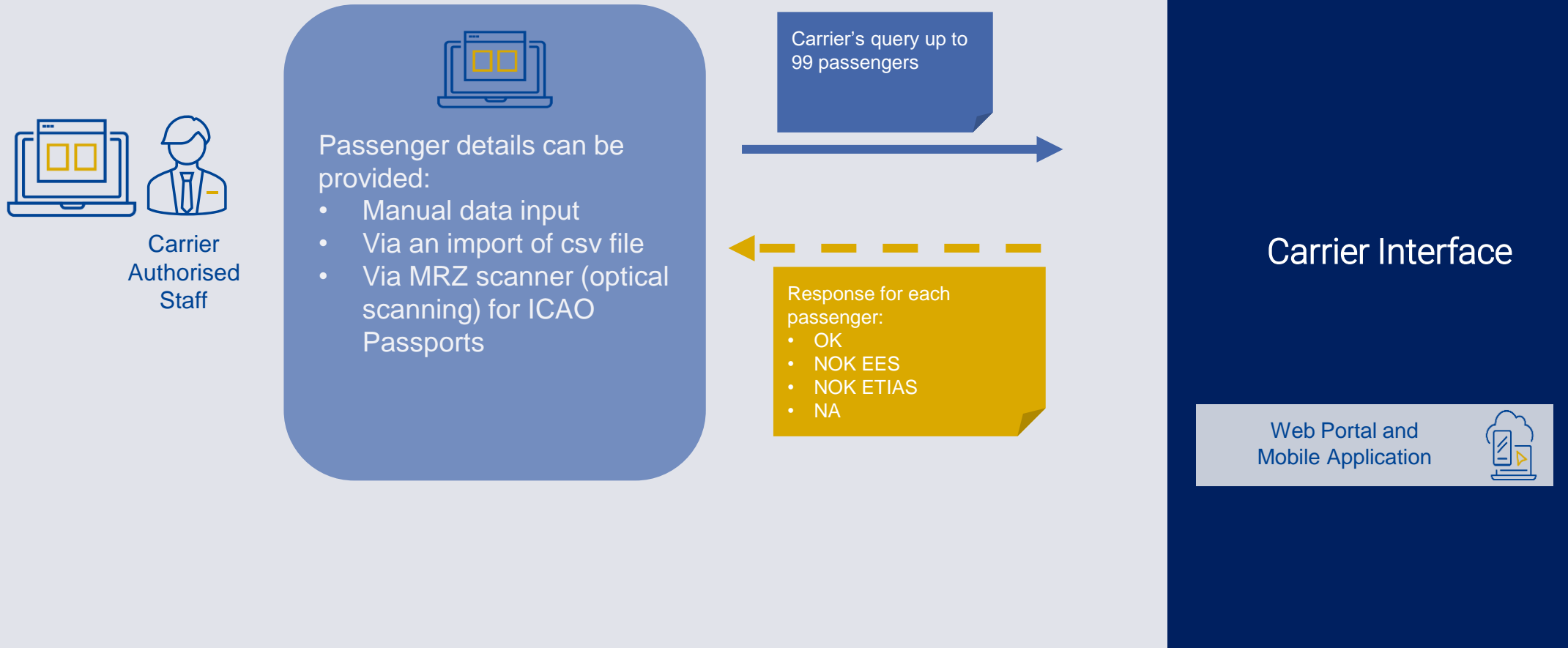
# Carrier Interface

## Web portal and Mobile Application



# Carrier Web Portal and Mobile Application

## Input Data



# Carrier Web Portal and Mobile Application

## Option 1: Manual Data Input



Carrier  
Authorised  
Staff

*\*All screenshots are not be considered as final version*

### Travel information

The carrier authorised users provide manually the Travel information for all concerned passengers:

- Passenger Data 1
- Passenger Data 2
- Passenger Data 3
- Passenger Data 4

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# Carrier Web Portal and Mobile Application

## Option 1: Manual Data Input



The desktop screenshot shows the 'Add manually' page with the following fields:

- 1 Travel information** (with an 'Edit' link)
- 2 Passengers** (97 available spots)
- Passenger 1** (Jonatan Doe) (with an 'Edit' link)
- Passenger 2** (Dominic Frank) (with an 'Edit' link)
- Passenger 3** form with fields: Surname\* (Maria), First name\* (Utopia), Date of birth\* (22 FEB 92), Sex\* (Female), Nationality\* (Indian), Number of travel document\* (3623628646), Type of travel document\* (Passport), Issuing country of travel document\* (IND), and Date of expiry of the validity of the TD\* (22 APR 23).
- Buttons: '+ Add passenger', 'Save', and 'Add to list'.

The mobile screenshot shows the 'Add manually' page with the following fields:

- 1 Travel information** (with an 'Edit' link)
- 2 Passengers** (97 available spots)
- Passenger 1** (Jonatan Doe) (with an 'Edit' link)
- Passenger 2** (Dominic Frank) (with an 'Edit' link)
- Passenger 3** form with fields: Surname\* (Maria), First name\* (Utopia), Date of birth\* (22 FEB 92), Sex\* (Female), Nationality\* (Indian), Number of travel document\* (Optional) (3623628646), Type of travel document\* (Passport), Issuing country of travel document\* (IND), and Date of expiry of the validity of the TD\* (22 APR 23).
- Buttons: '+ Add passenger', 'Save', and 'Add to list'.

\*All screenshots are not be considered as final version

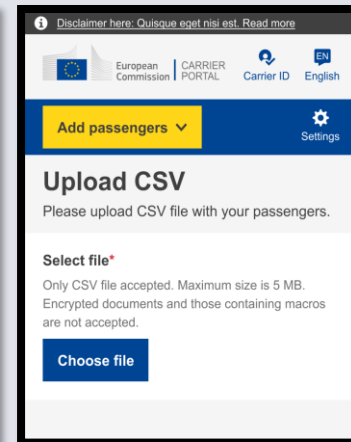
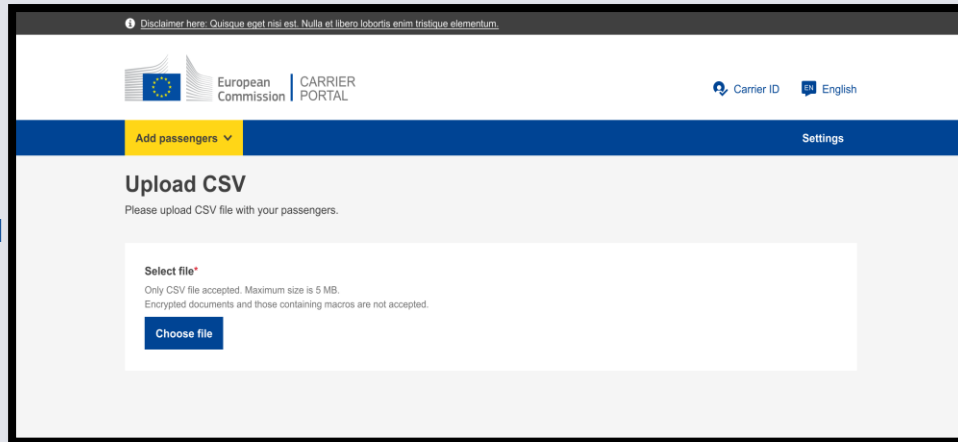
### Passenger information

The carrier authorised users provide manually the passenger travel document details:

- Surname, First name
- Date of birth
- Sex
- Nationality
- Number of travel document
- Type of travel document
- Issuing country
- Date of expiration

# Carrier Web Portal and Mobile Application

## Option 2: Import Passenger List From a File



\*All screenshots are not be considered as final version

Maximum of 99 passengers are allowed to be submitted in one CSV file



```
Surname;Given_names;Date_of_birth;Sex;Nationality;Travel_document_number;Travel_document_type;Issuing_country_of_travel_document;Expiry_date_of_travel_document;Target_country;Arrival_scheduled_date;Transport_identification_number;Departure_scheduled_datetime;Transit;Out_of_scope;Double_entry_required
```





# Carrier Web Portal and Mobile Application

## Browse Results of Verification



Carrier  
Authorised  
Staff

Disclaimer here: Quisque eget nisi est. Nulla et libero lobortis enim tristique elementum.

European Commission | CARRIER PORTAL

Carrier ID English

Add passengers Settings

Passenger list

Italy | 10 OCT 22 | 3546216363  
5 passengers - verified at 10:34:30 AM

Search passenger Search Export results

Passenger name	Nationality	Document ID	Status	Details
Julianna Morales	Argentina	46572648262	OK	View
Johnatan Doe	United States	46572648262	Not OK ETIAS	View
Maria Utopia	India	46572648262	OK	View
Donovan Marks	China	46572648262	Not OK EES	View
George Morgan	France	46572648262	NA	View

Load more (243)

Re-submit list

*\*All screenshots are not be considered as final version*

Italy, 10 OCT 22, 43264571  
5 passengers - verified at 10:34:30 AM

Search passenger

Name	Julianna Morales
Country	Argentina
Document ID	46572648262
Status	OK
Details	View
Name	Johnatan Doe
Country	United States
Document ID	46572648262
Status	Not OK ETIAS
Details	View
Name	Maria Utopia
Country	India
Document ID	46572648262
Status	OK
Details	View
Name	Donovan Marks
Country	China
Document ID	46572648262
Status	Not OK EES
Details	View
Name	George Morgan
Country	France
Document ID	46572648262
Status	NA
Details	View

Re-submit list

Home + Settings

Results of the verification can be exported to a CSV file by the Carrier Authorised users

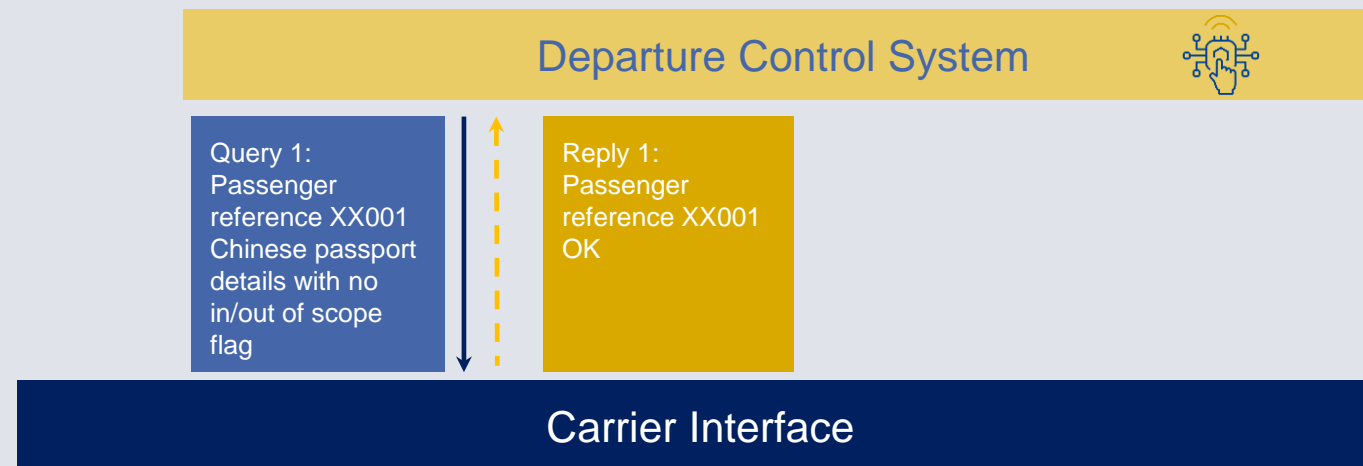
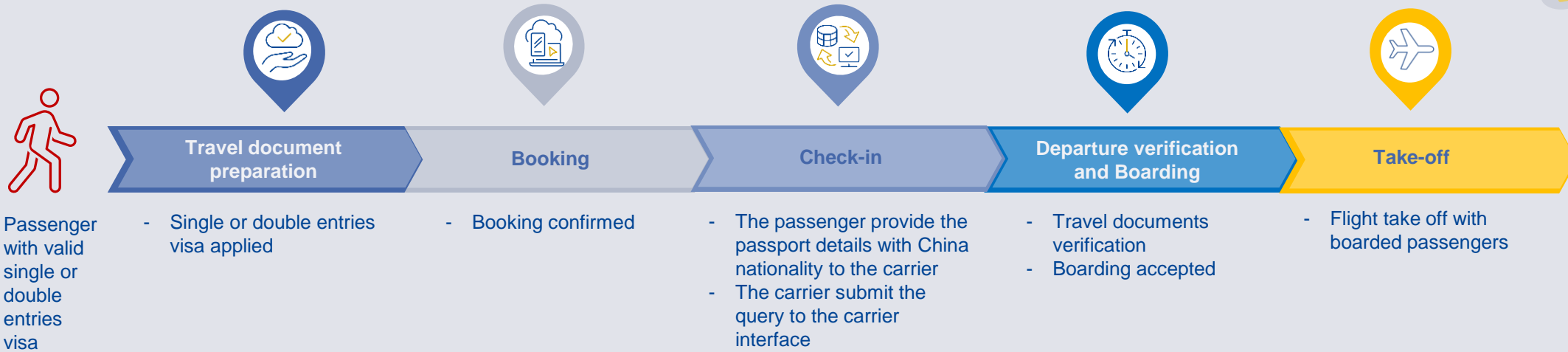
New list could be submitted overwriting the previous one

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# Illustrations – Air regular flights

# Illustrations

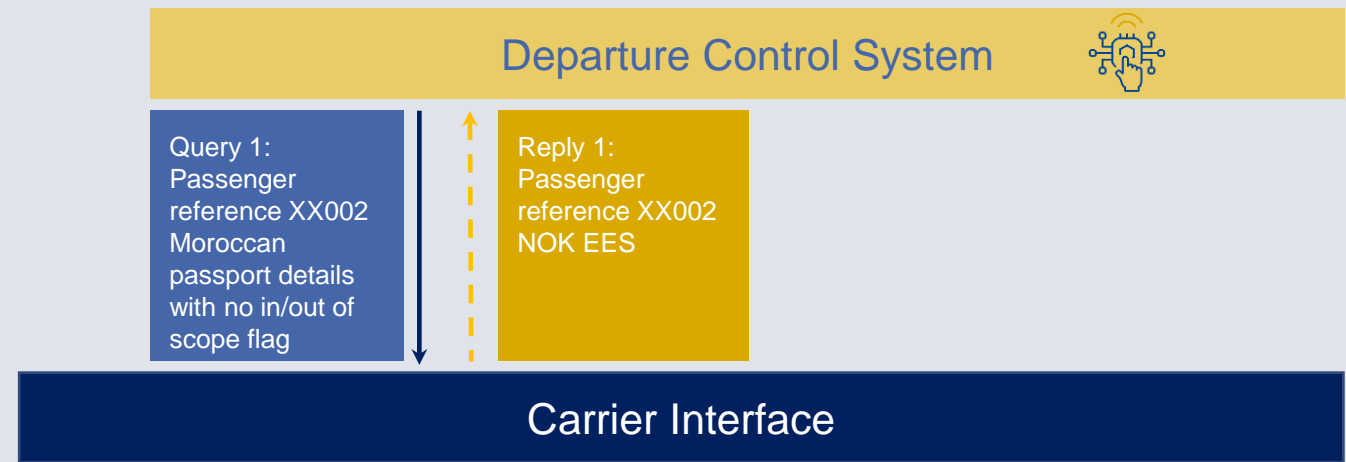
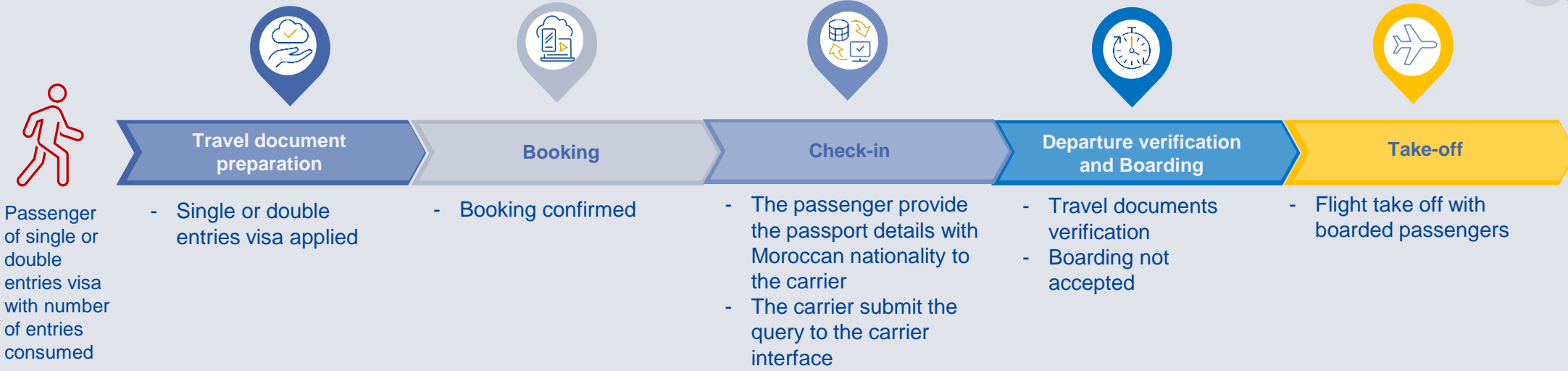
## Use Case 1: Passenger with single or double entries visa



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# Illustrations

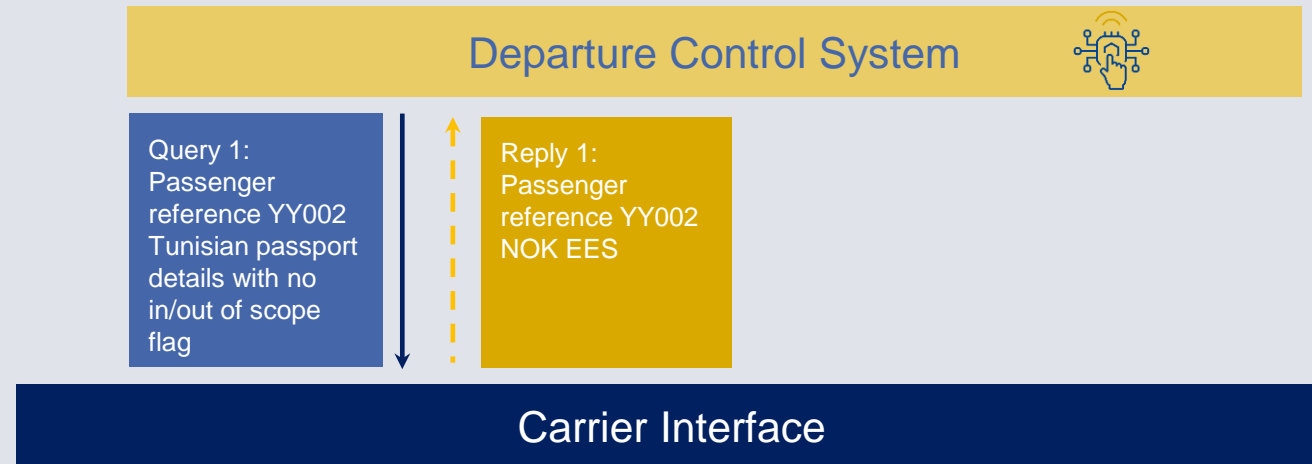
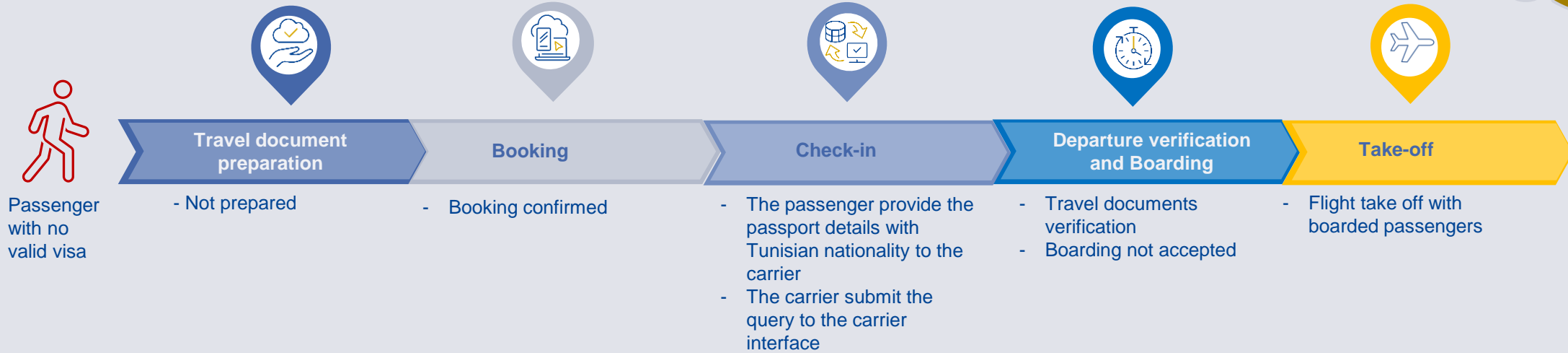
## Use Case 2: Passenger with short stay Schengen visa with number of entries consumed



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# Illustrations

## Use Case 3: Passenger with no valid visa



# Illustrations

## Use Case 4: Passenger from Visa holders countries with Resident Permit



Option 1: The carrier decides to not send the “out of scope” flag in the query



Passenger from Visa required country with Resident Permit



The carrier send a query to the Carrier Interface for all passengers



Before the departure, the agent verify the passenger Travel documents



The Passengers is “Out of scope”, no need to send a new query to the Carrier Interface

Option 2: The carrier decides to send the “out of scope” flag in the query after the Travel document verification



Passenger from Visa required country with Resident Permit



The carrier send a query to the Carrier Interface for all passengers



Before the departure, the agent verify the passenger Travel documents



The Passengers is “Out of scope”, the carrier send a new query to the Carrier Interface with the “Out of scope” flag

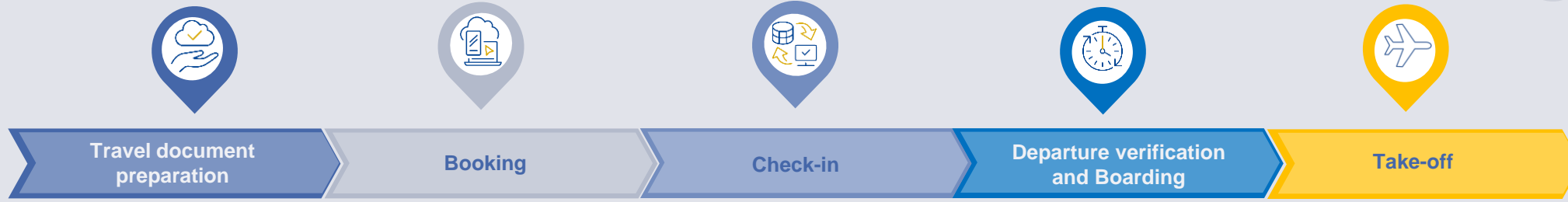
# Illustrations

## Use Case 4: Passenger from Visa holders countries with Resident Permit

Option 1: The carrier decides to not send the "out of scope" flag in the query



Passenger from Visa required country with Resident Permit



- Valid resident permit issued by EU member state

- Booking confirmed

- The passenger provide the passport details with Indian nationality to the carrier
- The carrier submit the query to the carrier interface

- Travel documents verification with presence of valid Resident Permit
- Boarding accepted as passenger is considered out of scope of EES and ETIAS verifications

- Flight take off with boarded passengers



Query 1:  
Passenger reference AA001  
Indian passport details with no in/out of scope flag

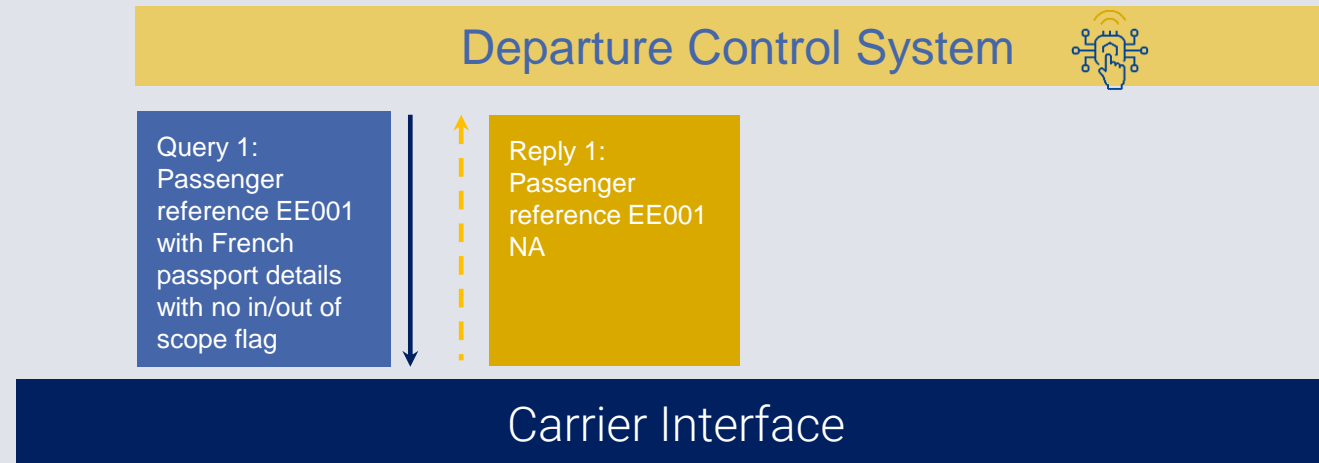
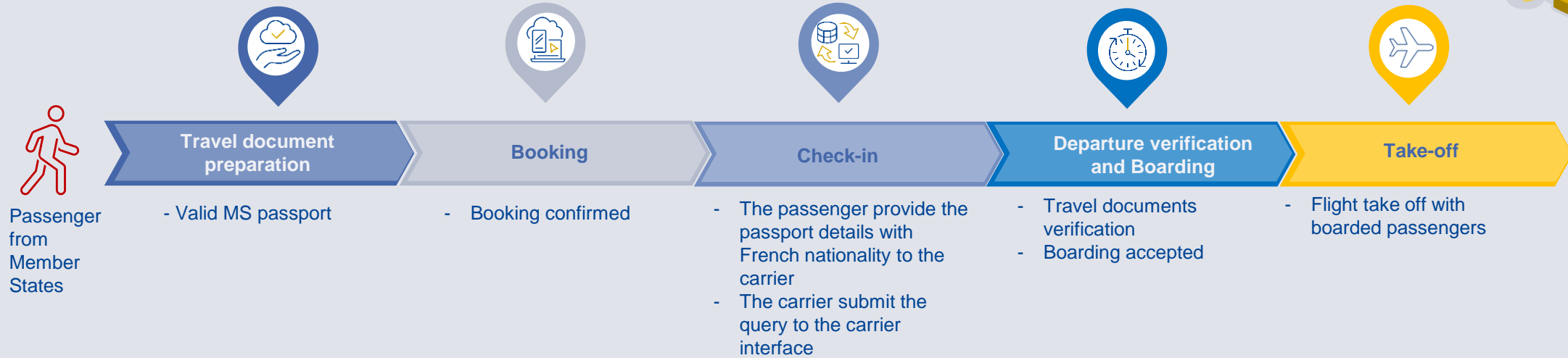
Reply 1:  
Passenger reference AA001  
NOK EES



No need to send a new query to the Carrier Interface as the passenger is considered "Out of scope" after travel documents verification

# Illustrations

## Use Case 5: Passenger from Member States



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# Illustrations – Business Aviation Operators

# Illustrations

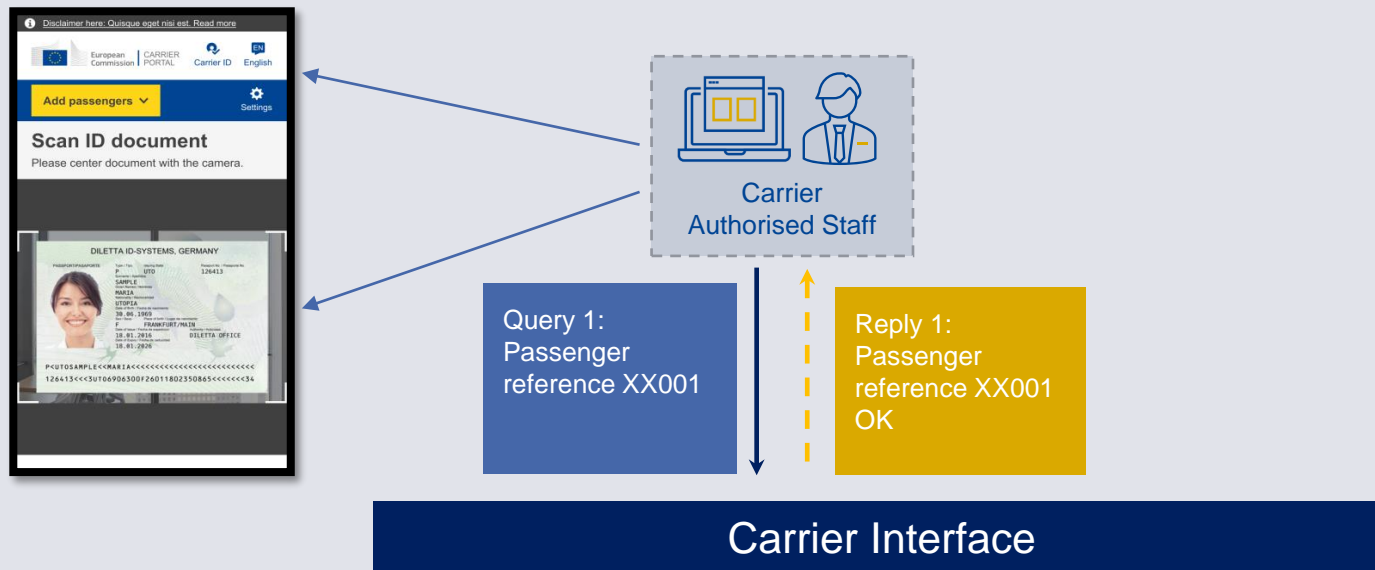
## Use Case 1: Passenger with single or double entries visa



Passenger with valid single or double entries visa



• No check-in process  
• No Departure Control System



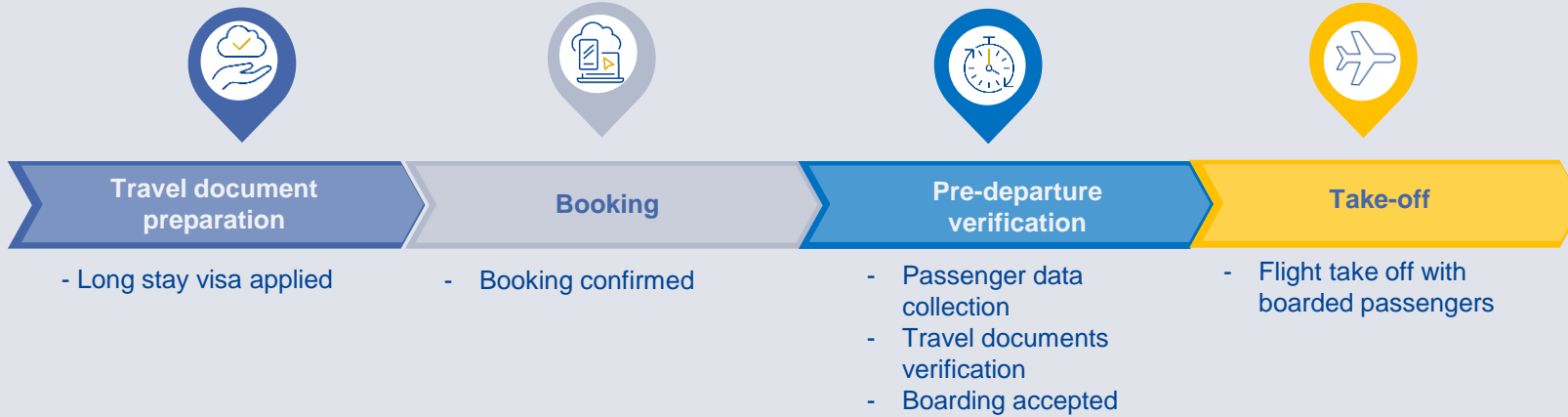
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# Illustrations

## Use Case 2: Passenger with long stay Visa



Passenger with valid long stay Visa



- No check-in process
- No Departure Control System

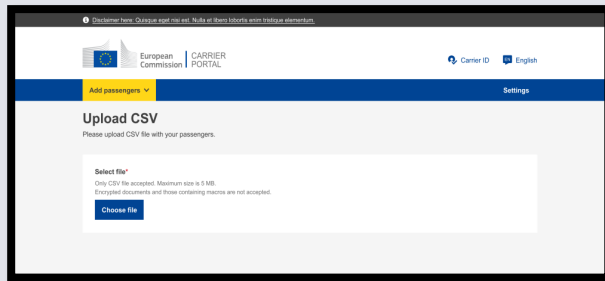
- After travel document verification, the traveller is considered out of the scope for EES and ETIAS obligations
- Therefore, the carrier do not send any query to the Carrier Interface for this passenger

Carrier Interface

# Illustrations – Charter Airlines

# Illustrations

## Use Case 1: Group of passengers transported by a charter flight

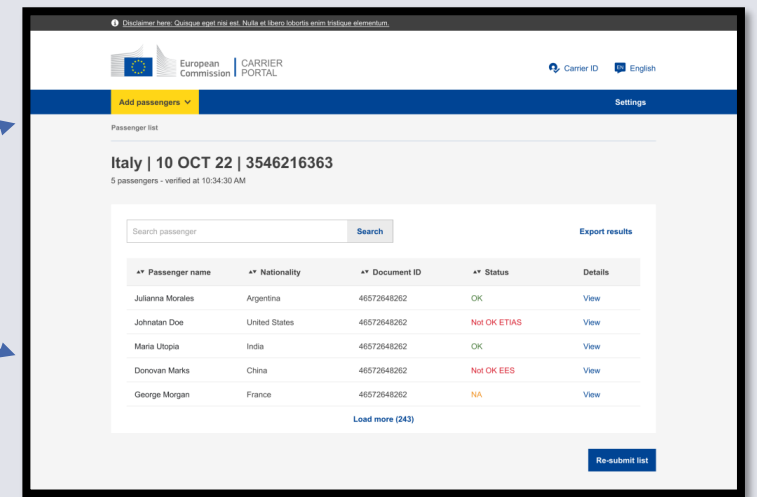


The query could be submitted between 48h before the departure and the time of the departure



Query:  
Collected list of passengers' details under EES and ETIAS obligations

Reply:  
OK  
NOT OK ETIAS  
NOT OK EES  
NA



Carrier Interface

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# Illustrations

## Use Case 2: Group of EU nationals transported by a charter flight



Group of EU nationals



- Valid EU passports for all passengers

- Booking confirmed

- Passenger data collection
- Travel documents verification
- Boarding accepted for all passengers

- Flight take off with boarded passengers

- After travel document verification, all the travellers are considered out of the scope for EES and ETIAS obligations
- Therefore, the carrier do not send any query to the Carrier Interface for this passenger

Carrier Interface

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# Illustrations – Cruise Lines

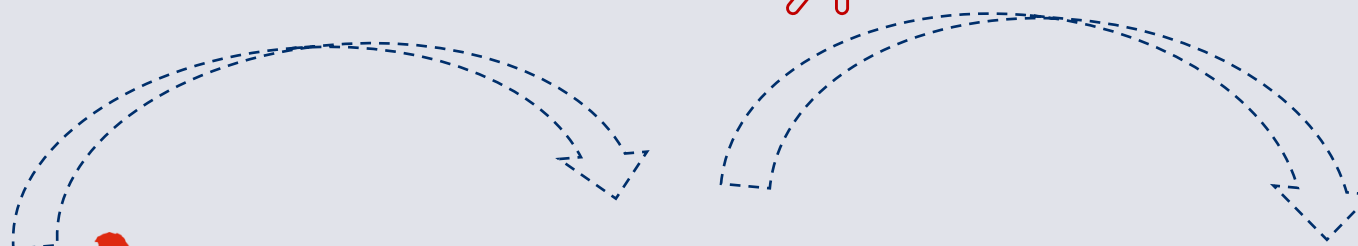
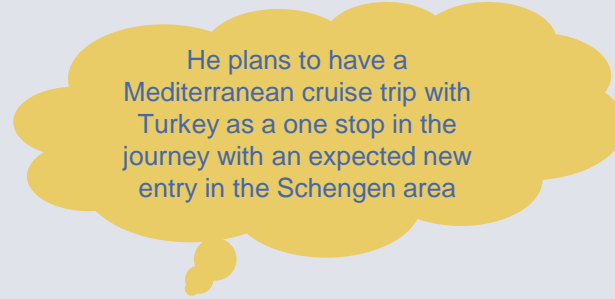
# Illustrations

## Use Case 1: Passenger with Visa single entry consumed



Passenger with valid single-entry Visa – China nationality

1. The passenger takes the flight from China to Spain
2. The Single Visa entry is consumed when entering in Spain



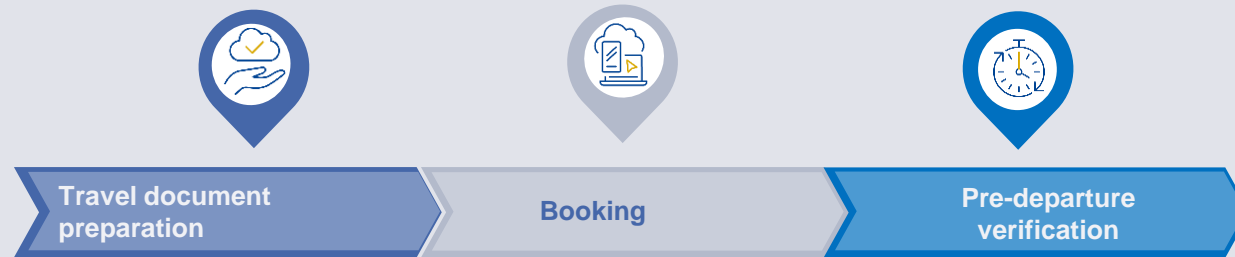


# Illustrations

## Use Case 1: Passenger with Visa single entry consumed



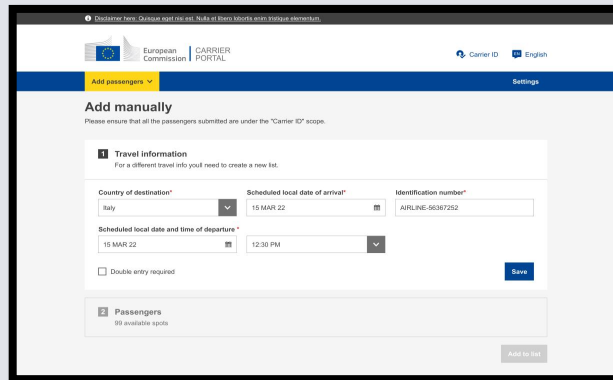
Passenger with valid single-entry Visa – China nationality



- Visa single entry consumed during the first entry in Spain

- Booking confirmed

- Passenger data collection
- Travel documents verification
- Embarkation not authorized



Query:  
Passenger  
reference XX001

Reply:  
Passenger  
reference XX001  
NOK EES

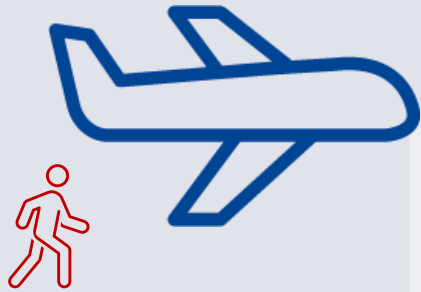
Carrier Interface

The query could be submitted between 48h before the departure and the time of the departure

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# Illustrations

## Use Case 2: Passenger with Visa double entries not consumed



1. The passenger takes the flight from China to Spain
2. The Single Visa entry is consumed when entering in Spain



Passenger with valid double entries Visa – China nationality

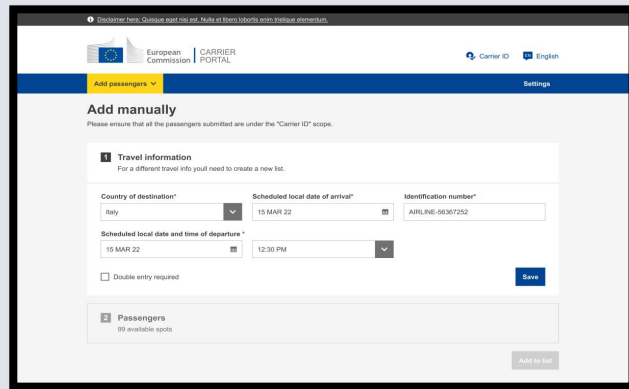
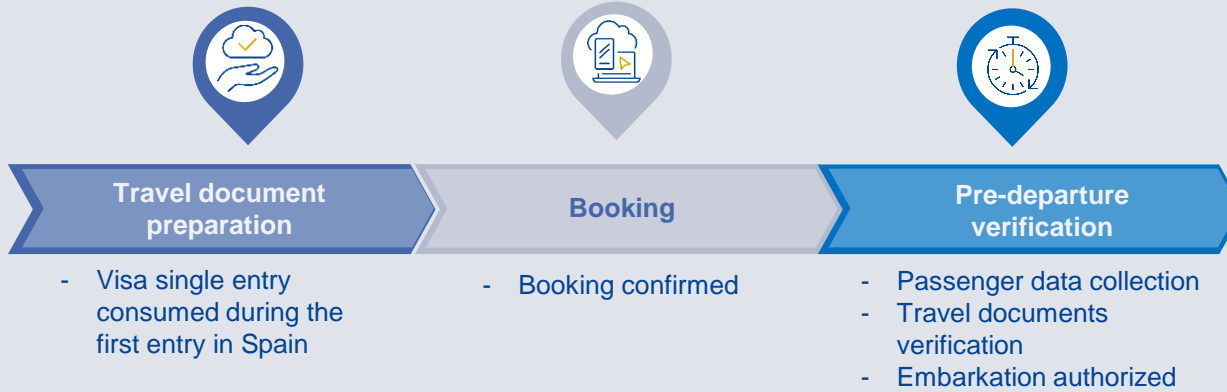


# Illustrations

## Use Case 2: Passenger with Visa double entries not consumed



Passenger with valid double entries Visa – China nationality



Query:  
Passenger  
reference XX001

Reply:  
Passenger  
reference XX001  
OK

The query could be submitted between 48h before the departure and the time of the departure

Carrier Interface



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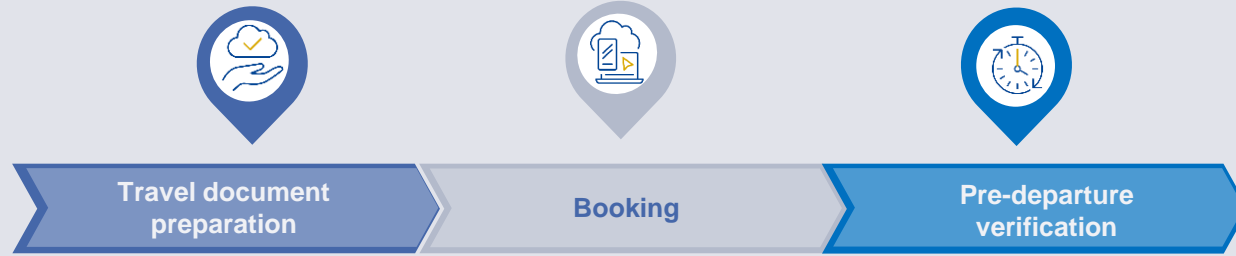
# Illustrations – Ferry Lines

# Illustrations

## Use Case 1: Passenger with valid single or double entries visa



Passenger with valid visa, with a car would like to take the Ferry from Morocco to Spain



- Single or double entries visa applied

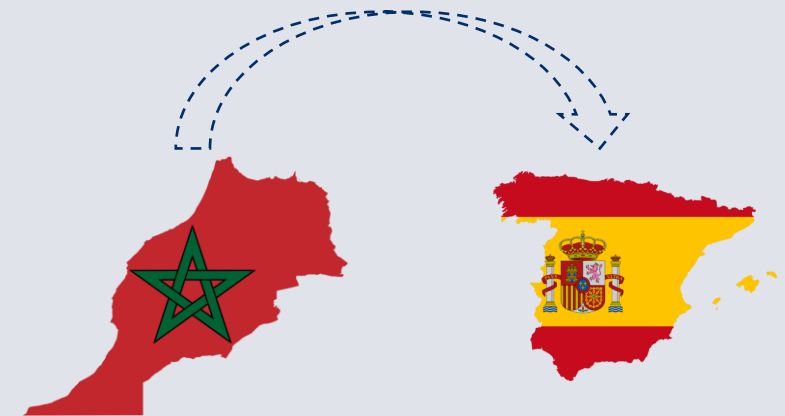
- Booking confirmed

- Passenger data collection
- Travel documents verification
- Embarkation authorized



Query 1:  
Passenger  
reference XX001

Reply 1:  
Passenger  
reference XX001  
OK

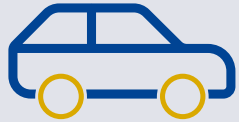


Carrier Interface

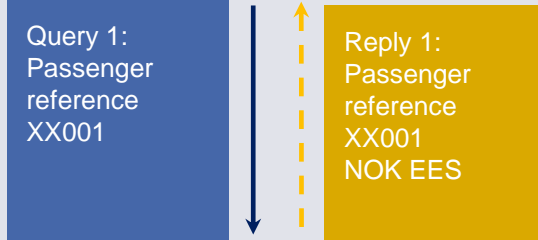
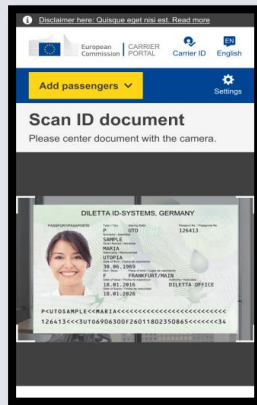
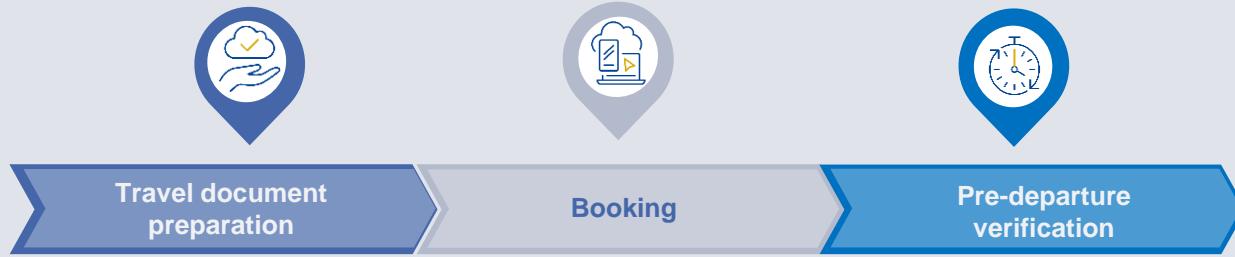
The passenger verification could be performed just before the entry in the Ferry via the Mobile application

# Illustrations

## Use Case 2: Passenger with single or double entries visa consumed



Passenger with no valid visa, with a car would like to take the Ferry from Morocco to Spain



The passenger verification could be performed just before the entry in the Ferry via the Mobile application

**Carrier Interface**

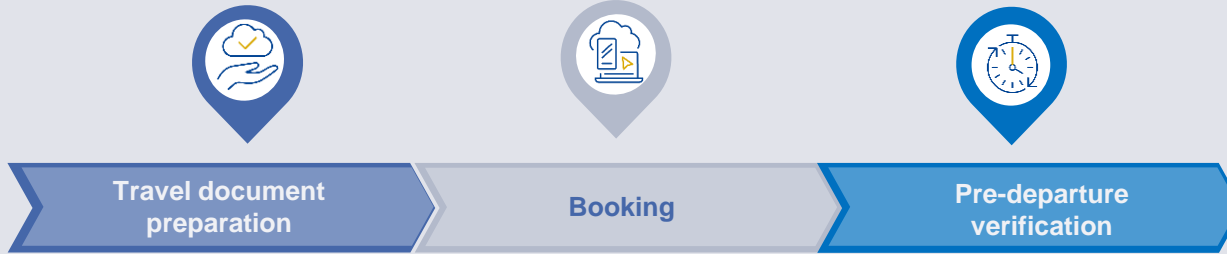
# Illustrations – International coaches

# Illustrations

## Use Case 1: Passenger with valid single or double entries visa



Passenger with valid single or double entries visa



Query 1:  
Passenger  
reference XX001

Reply 1:  
Passenger  
reference XX001  
OK

The passenger verification could be performed just before the entry in the coach via the Mobile application

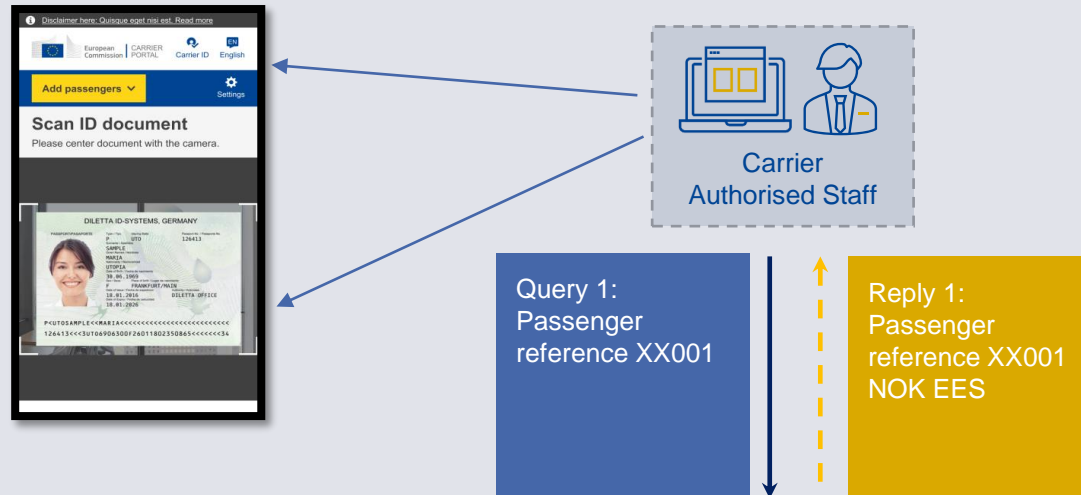
Carrier Interface

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# Illustrations

## Use Case 2: Passenger with single or double entries visa consumed

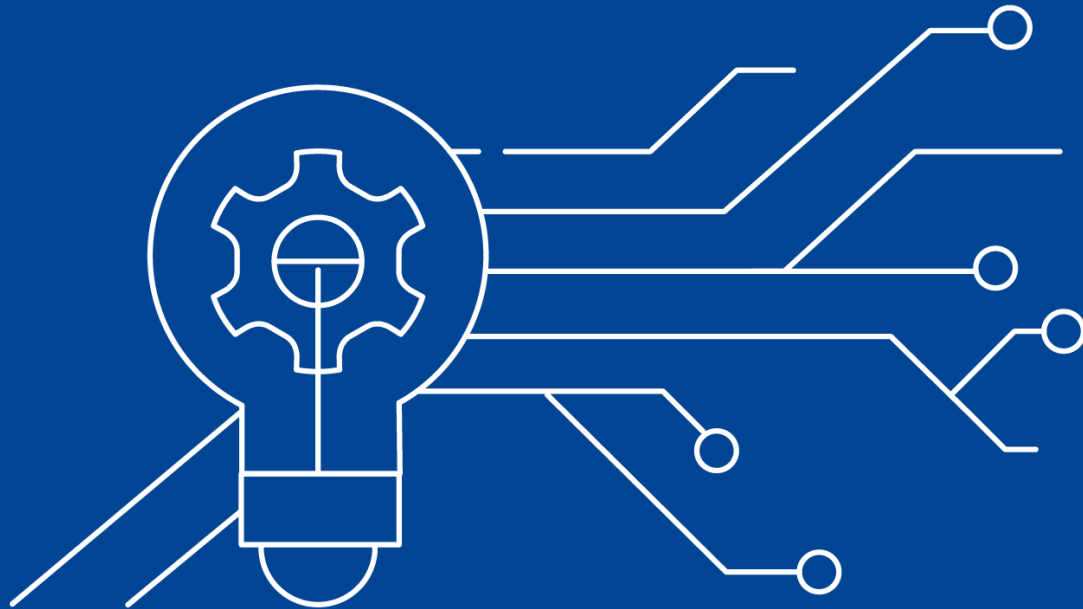


The passenger verification could be performed just before the entry in the coach via the Mobile application

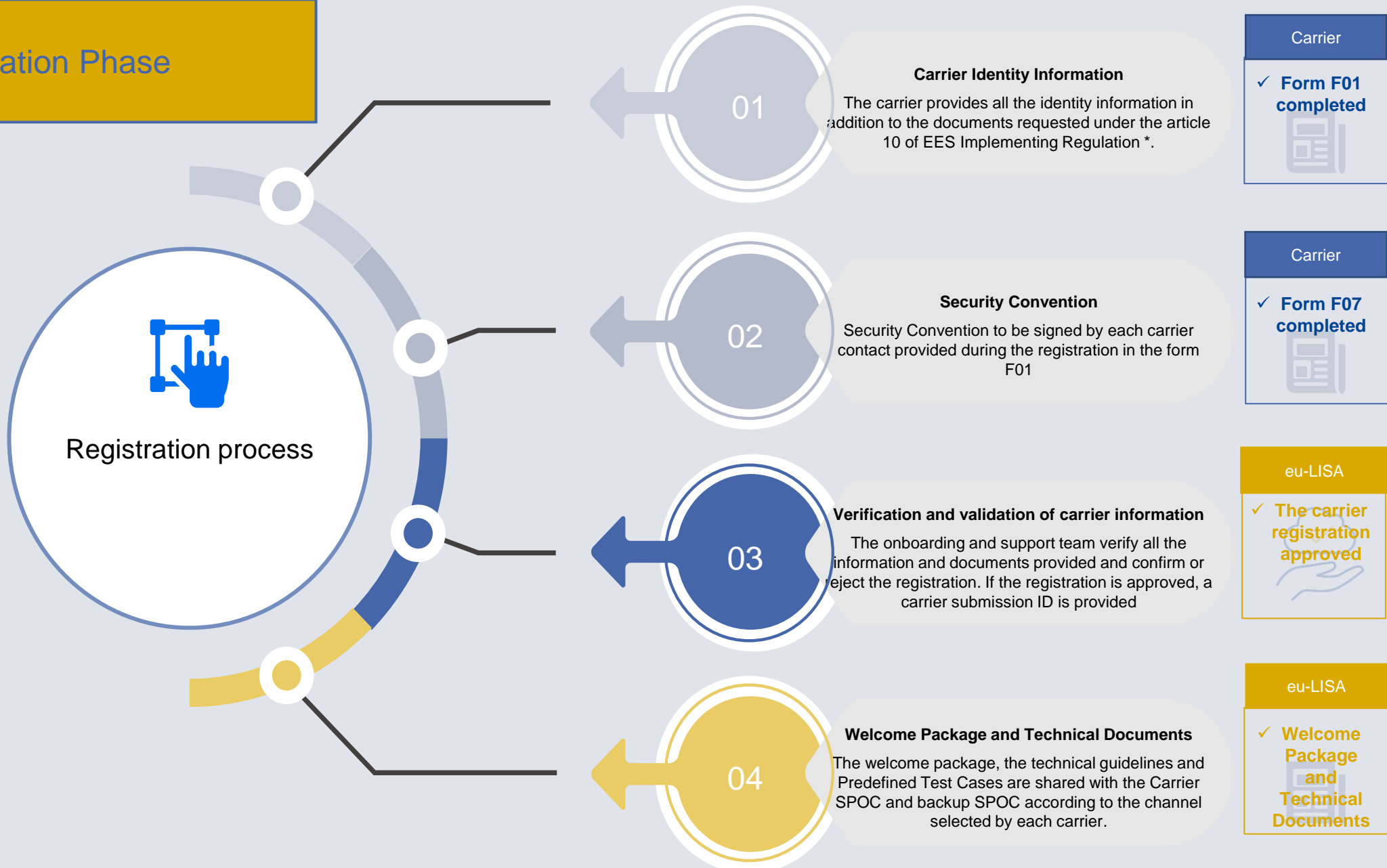
Carrier Interface

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# Carrier Implementation and registration Process



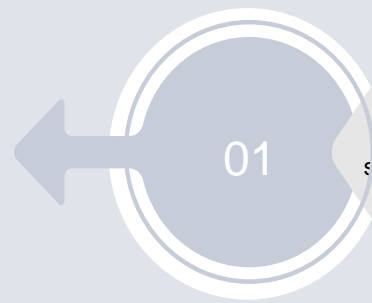
# 1- Registration Phase



2- Implementation Phase  
System to System (new implementation)  
A: Connectivity



Steps 02, 03 and 04 are repeated for each system environment connection

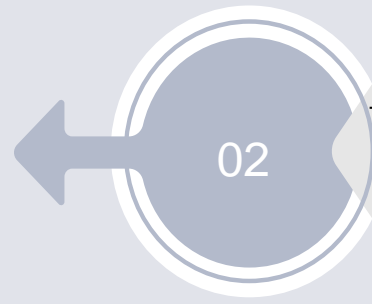


**Carrier System Information**

The carrier provides all the information about the system that needs to be connected in addition to system owner contact details. The System owner can be in the carrier organization or under a Service Provider. The form F03 needs to be completed for each system requesting a connection.

Carrier

✓ **Form F03 completed**

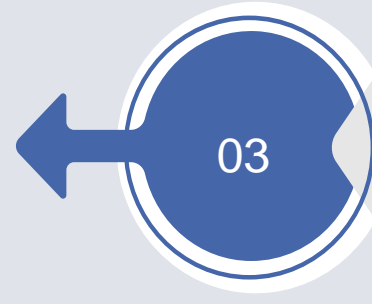


**Connection Information**

The carrier or System SPOCs provide all the system connection details under F04 and CI connectivity sheets for each system environment to connect. The form F04 with CI connectivity sheets are to be completed only once per system/environment.

Carrier or System SPOC

✓ **Form F04**  
✓ **CI connectivity sheets completed**



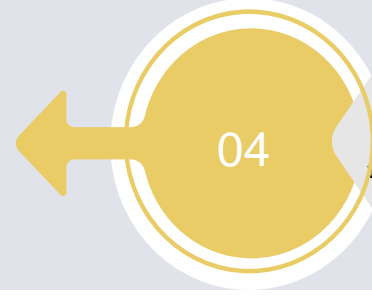
**Connectivity Setup**

Based on the connectivity information received, eu-LISA and system connectivity experts, exchange all the specific configurations to connect the environments.

eu-LISA

Carrier or System SPOC

✓ **Connectivity setup**



**System connection confirmed**

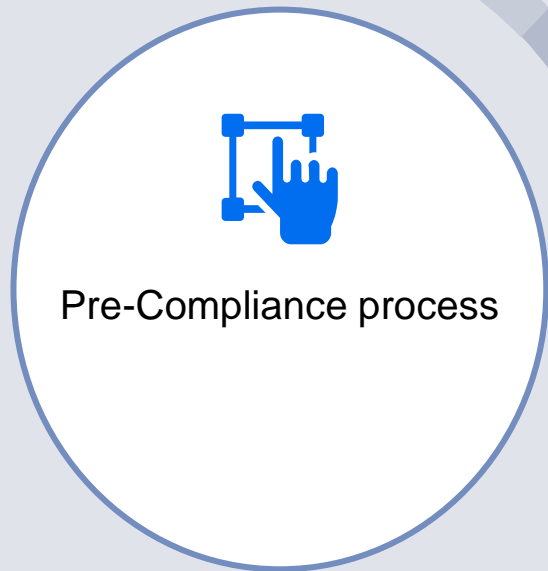
Eu-LISA and Carrier or System SPOCs confirm that the systems are successfully connected according to the configurations provided.

eu-LISA

Carrier or System SPOC

✓ **System connection confirmed**

2- Implementation Phase  
System to System (new implementation)  
B : Pre-Compliance (Optional)



01

**Carrier Pre-CT tests start**

The carrier or system SPOC confirms to eu-LISA onboarding team that the tests in the simulator start.

Carrier or System SPOC

✓ **Pre-CT tests start**



02

**Carrier Pre-CT tests completed**

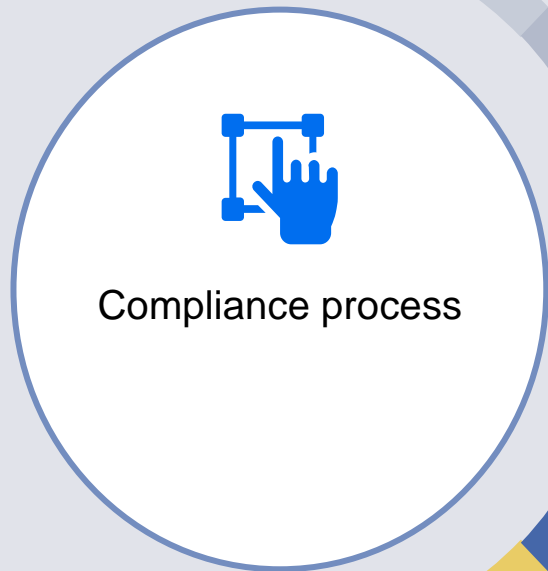
The carrier or system SPOC confirms to eu-LISA onboarding team that the test in the simulator are completed according to the Pre-CT test cases.

Carrier or System SPOC

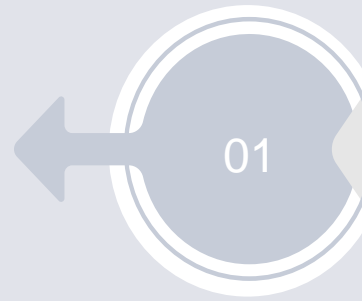
✓ **Pre-CT tests completed**



2- Implementation Phase  
System to System (new implementation)  
C: Compliance (Mandatory)



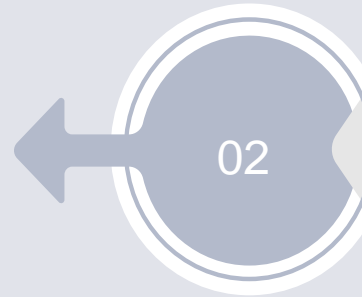
Steps 02 and 03 are repeated until all the CT scenarios are passed



**Carrier CT tests start**  
The carrier or system SPOC confirms to eu-LISA onboarding team that CT tests can start.

Carrier

✓ **Form F03 completed**

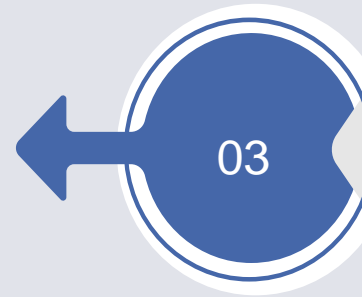


**Compliance slot confirmed**  
eu-LISA sends an available slot to run the Compliance test scenarios and the carrier or system SPOC confirm it.

eu-LISA

Carrier or System SPOC

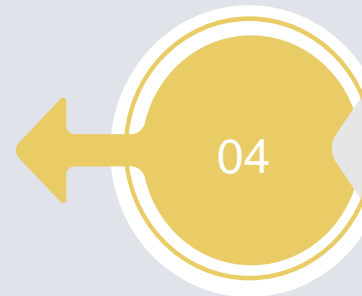
✓ **CT slot confirmed**



**Compliance tests execution**  
The carrier or system SPOC pass all the test cases detailed in the CT TDD document during the scheduled slot.

Carrier or System SPOC

✓ **CT tests executed successfully**

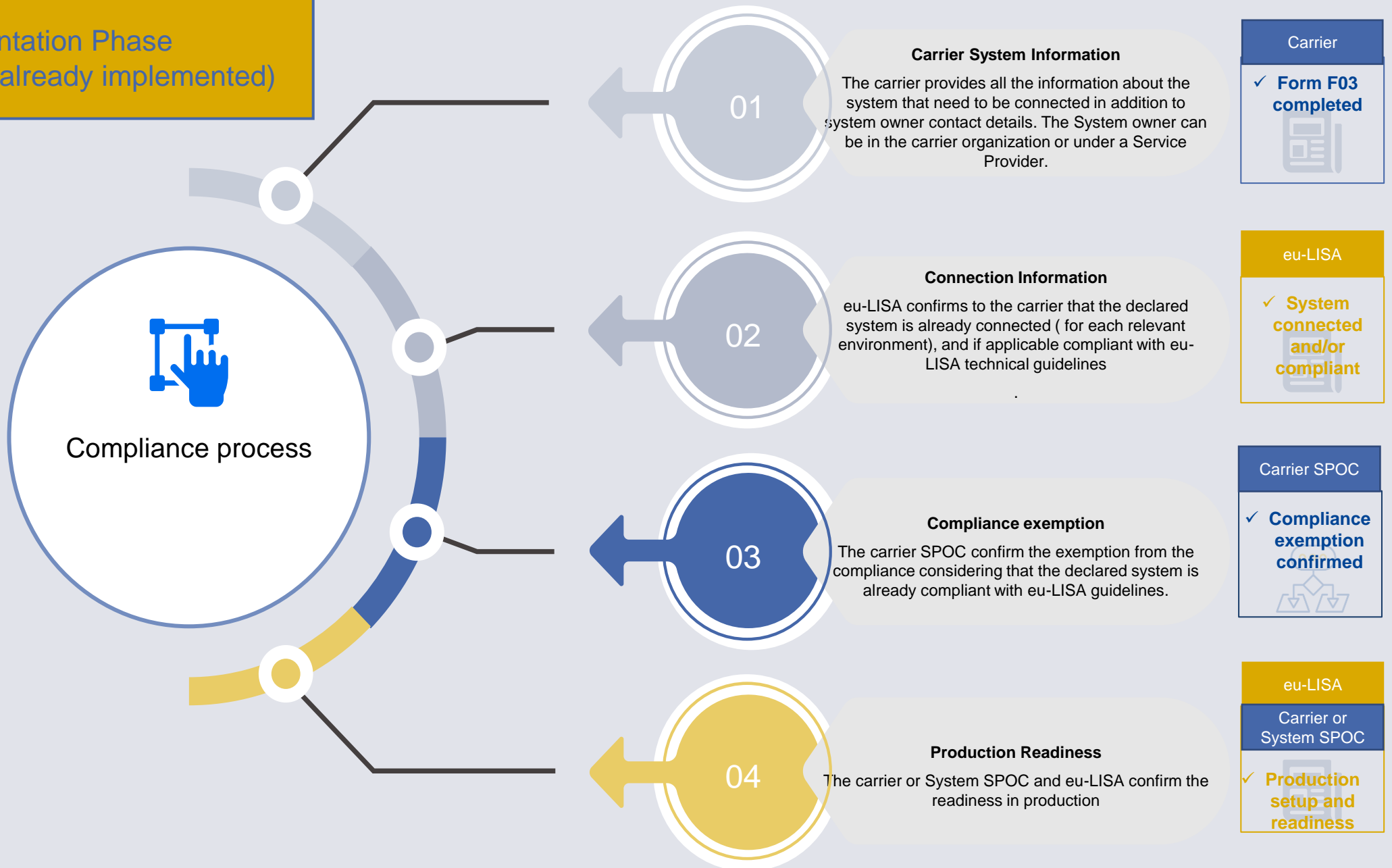


**System compliant**  
eu-LISA confirms that the system is compliant and ready for production activation.

eu-LISA

✓ **System compliant**

## 2- Implementation Phase System to System (already implemented)



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# Thank you!

## **eu-LISA**

European Union Agency for the Operational  
Management of Large-Scale IT Systems in  
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