MINISTÈRE DE L'ACTION ET DES COMPTES PUBLICS / DOUANES & DROITS INDIRECTS	**Detailed Service Contract** **InterBrexit Interfaces**
Version 1.1 **State** Validated **Published date :** 21/12/2018	**Référence** : DCS_BREXIT_PartnersInterfaces_v1.1.doc

Description	Detailed service contract for InterBrexit solution
Transmitter(s)	InterBrexit

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1.

1. GLOSSARY

Term	Definition
Transport unit	Vehicle (truck, van…) or trailer that can carry merchandises.
Unit transport pairing	Pairing is the operation by which a transport unit is associated to: - Its content, - One or more declaration(s) linked to its content.
Boarding notification	Logistic notification sent by the transport company after transport units are loaded in the shuttle or a ferry that leaves its departure point.
Custom office of importation	Custom office where merchandise is brought into the customs territory of the Community.
SPS merchandise	Sanitary and phytosanitary goods. Those kind of goods have to go through a specific control (SIVEP) in order to be released in EU.
Disembarking notification	Logistic notification sent by the transport company when the shuttle or ferry arrives to its destination and the transport units are unloaded.
Transportation mean	Shuttle or ferry carrying transport unit.
Importation	Goods entering European Union: Channel crossing from UK to EU
Exportation	Goods leaving European Union: Channel crossing from EU to UK

2. INTRODUCTION

2.1 DOCUMENT PURPOSE

This document aims to describe possible interactions between French custom application InterBrexit and transport companies crossing the Channel to facilitate custom formalities and controls for goods entering or leaving European Union.

For each company interacting with InterBrexit, a configuration sheet will be given in order to describe specific values and settings for the company.

2.2 USEFUL DOCUMENTS

Réf. n°	Titre / Nom fichier	Date	Version
[1]	api-brexit-InterBrexit-1.0.0_en.yaml	21/12/2018	V 1.0.0
[2]	DCS_BREXIT_ConfigurationSheet_<COMPANY_NAME>.doc		V 1.0

2.3 DOCUMENT USAGE

2.3.1 Description

This document contains the description of exchanges between InterBrexit and its partners.

For each service offered by InterBrexit, it describes:

- The sequence ;
- The use case ;
- Specific functional rules ;
- Errors returned ;
- The plan in case of error.

2.3.2 Convention

- Company depending values

Some values may depend on the company calling InterBrexit. Those parameters follow the nomenclature $<PARAMETER_NAME> in this document. Possible values will be described in the company specific configuration sheet.

- Management rules

Data management rules are named:
<TYPE OF USE>_<SERVICE SHORT NAME>_RG<XX>, where:

- TYPE OF USE is set to IMP for rule concerning IMPORTATION and EXP for rule concerning EXPORTATION
- SERVICE SHORT NAME is a trigram used to identify the service to which applies the rule
- XX is an incremental number

2.3.3 Technical specification

This document must be read along the technical specification [1]. The “Service name” in the service description matches with the “operationId” in the OpenApi document. For example, the “UNIT TRANSPORT PAIRING” correspond to the the ***ajouteAppairage*** operation in the technical document.

The yaml file can be read with an editor such as http://editor.swagger.io/ .

The technical specification will detail the URL, the properties of the endpoint and the data format for both sent and received data. The current document will explain the context of the called and add some accuracies about the functional rules.

2.4 CHARACTERISTICS APPLYING TO ALL EXCHANGES

2.4.1 Communication channel

The exchanges described in this document are using HTTP and data are serialized to JSON. This document does not describe the technical aspect of these exchanges. You can read the technical specification for more detailed explanations [1].

2.4.2 Specific data format

2.4.2.1 Date format and timezone

The exchanged date are formatted using the format YYYY-MM-DDTHH:mm:SSZ where :

- YYYY stands for year
- MM stands for month
- DD stands for day
- HH stands for hour
- mm stands for minute
- SS stands for second

The date are all in the French time zone (UTC +1).

For example, if the boarding takes place in Dover at 08:37 (local time) the 14/12/2018, the string to be sent should be: 2018-12-14T09:37:00Z .

2.4.2.2 Identifier format

The API accept several type of identifier depending of the context (import, export, transit …).

2.4.2.2.1 Movement Reference Number (MRN)

This identifier is used for export and shipping in transit.
The MRN contains 18 characters - letters used must be upper case - and is composed of following elements:

Field	Content	Field type	Examples
1	Last two digits of year of formal acceptance of a movement (YY)	Numeric 2	12
2	Identifier of the country from which the MRN originates.	Alphabetic 2 (ISO alpha 2 country code)	LV
3	Unique identifier for a movement per year and country	Alphanumeric 13	9876AB8890123
4	Check digit	Alphanumeric 1	5

Field 1 and 2 as explained above.

- Field 3 has to be filled in with an identifier for a transaction. The way that field is used is under the responsibility of national administration but each transaction handled during one year within the given country must have a unique number. National administrations that want to have the office reference number of the competent authorities included in the MRN, could use up to the first 6 characters to insert the national number of the office.
- Field 4 has to be filled with a value that is a check digit for the whole MRN. This field allows for detection of an error when capturing the whole MRN.

2.4.2.2.2 MRN validity detection

To secure the process, a check on the MRN can be proceeded, contact us to get more information.

2.4.2.2.3 Import identifier

This identifier is a 10 numeric long string. There is no check digit.

2.4.2.2.4 InterBrexit token

The InterBrexit API generates token which will be provided by the French Customs to authorized partners.

2.4.3 Availability

Level of service	
Period :	7d/7, 24h/24
Availability	99%

2.4.4 Authentication

The network and security aspect are out of the scope of this document. However in order to identified the company calling a webservice, a header should be present in every HTTP request. The detail of this header can be found in the technical specification [1] in the “securitySchemes” part.

The header “Authorization” must contain a specific static key defined in the configuration sheet [2] depending on the environment.

2.4.5 Error handling

When a web service call failed, several HTTP code can be returned:

- 400 – There is an error in the data format. The data sent to the webservice does not match with the API documentation. There is no fallback to this kind of error. A change should be made before trying to send the data again in the correct format ;
- 500 –There has been a technical error on the InterBrexit side. Depending on the webservice, another try can be executed few minutes later or the call should be dropped. The process to follow while be described in the “Fallback” part of each service chapter ;
- 403 – You cannot access this webservice. Either you try to access an unauthorized URL or the header “Authorization” does contain a valid value (cf. 2.4.4).

3. IMPORTATION

3.1 GENERAL PROCESS

3.1.1 Description

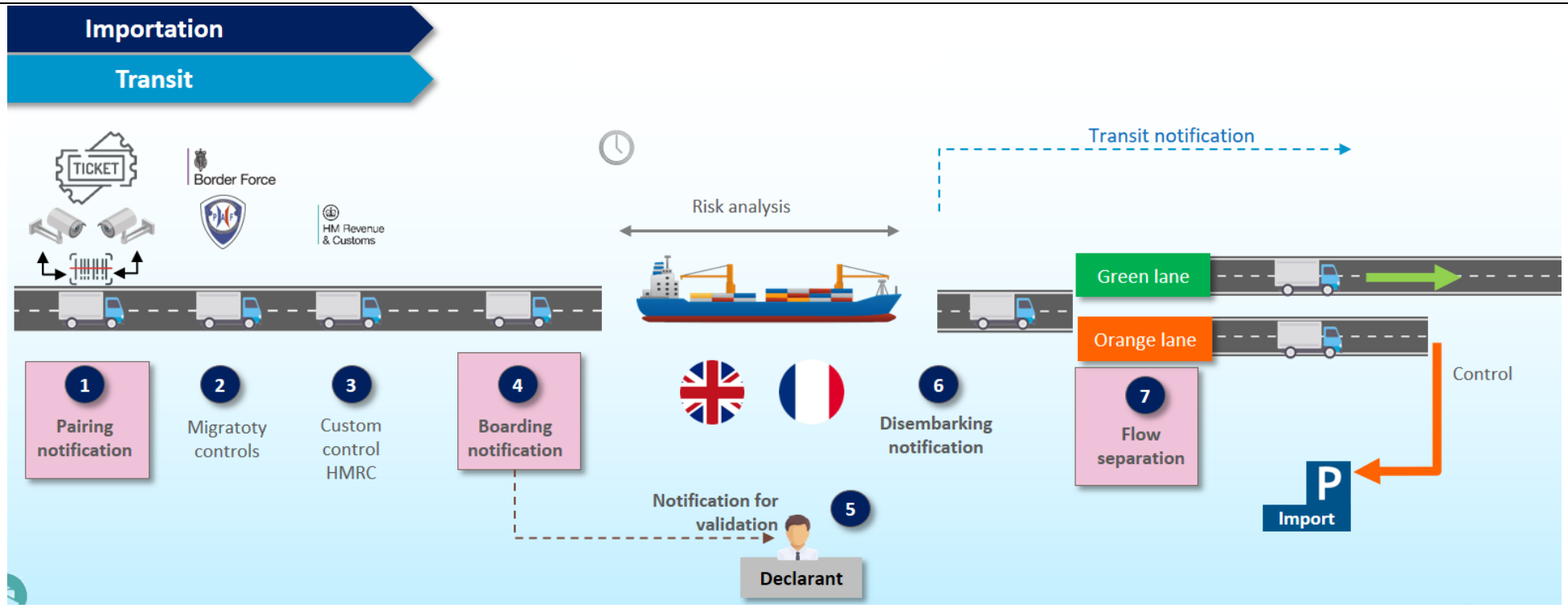

Figure 1 : Importation general process

3.1.2 Sequence diagram

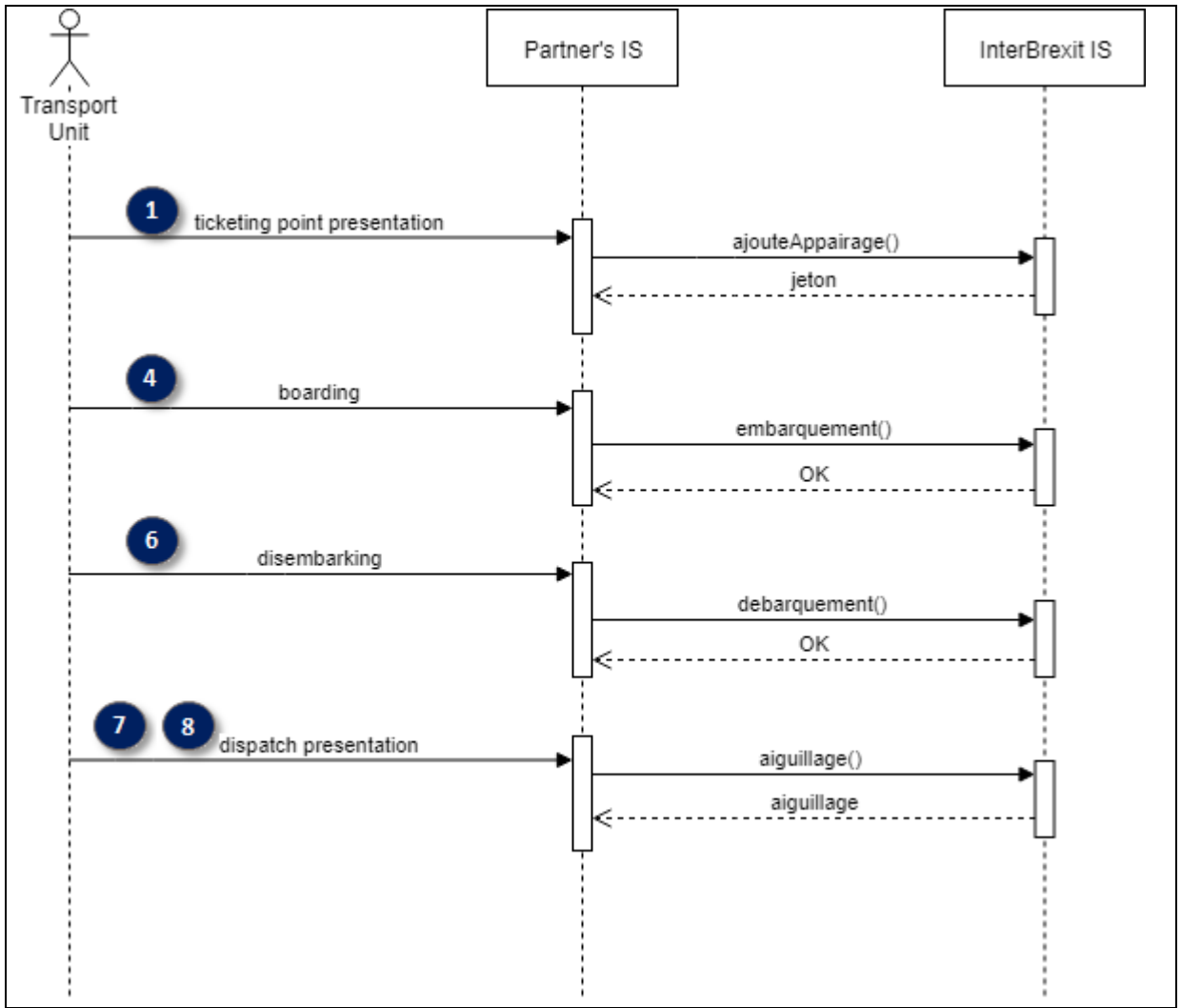

Figure 2 : Sequence diagram of importation general process

3.2 UNIT TRANSPORT PAIRING

3.2.1 Service description

The pairing step gives following information's on a transport unit to InterBrexit:

- Kind of transport unit: full truck, empty truck or TIR truck ;
- Declarations linked to the transport unit ;
- Merchandises kind (SPS or fishing products).

Service name	*ajouteAppairage*			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☐ Get	☒ Post	☐ Delete

3.2.2 Sequence diagram

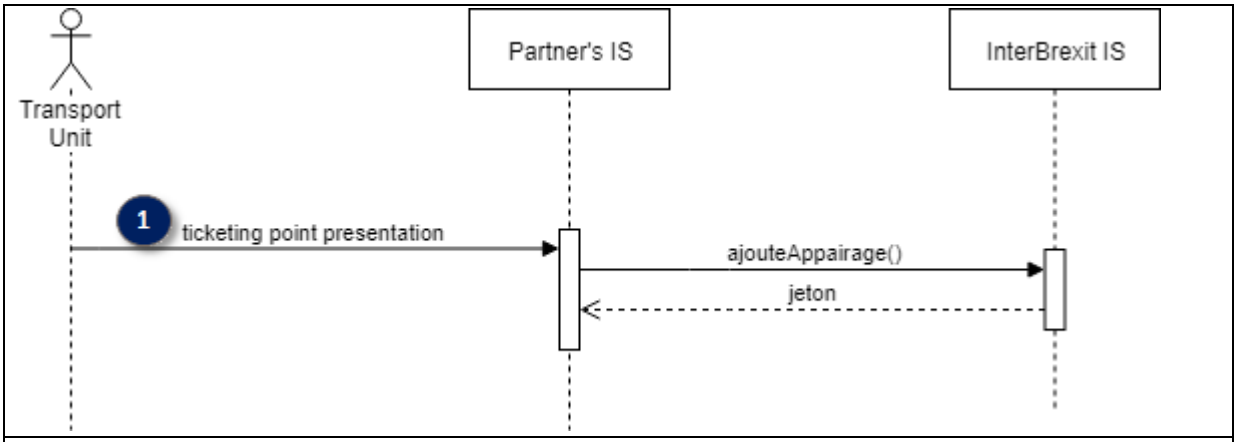

Figure 3 : Sequence diagram of unit transport pairing (import case)

3.2.3 Service use case

Use case name	Description
Pre-conditions :	Transport unit has passed the ticketing point and required information have been asked.
Usual case :	Partner's IS calls pairing service with transport unit information. Pairing service sends back corresponding pairing token.
Error case 1: received message format is not valid	Partner's IS calls pairing service with a non-valid message format. Pairing service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls pairing service with transport unit information. A technical error occurs in InterBrexit. Pairing service sends back a technical error.

3.2.4 Functional rules

Rule reference	Field	Description
IMP_PAI_RG01	immatriculationAvant immatriculationsArriere	If the transport unit is a truck: - immatriculationAvant must be filled - there must be at least one occurrence of immatriculationsArriere If the transport unit is an unaccompanied trailer: - there must be at least one occurrence of immatriculationsArriere

IMP_PAI_RG02	bureau	$ENTRY_OFFICE: this field indicates the destination of the transportation mean.
IMP_PAI_RG03	sens	Value is set to "**ENTREE**".
IMP_PAI_RG04	compagnie	Value is set to **$COMPANY**.
IMP_PAI_RG05	type	CAMION_VIDE if the unit transport is empty. TIR if the unit transport is under cover of a TIR Carnet. CAMION_PLEIN otherwise.
IMP_PAI_RG06	natureMarchandise	PRODUIT_PECHE if the unit transport contains fishery product. SPS if the unit transport contains sanitary or phytosanitary products.
IMP_PAI_RG07	declarations	Contain the list of identifier given by the driver (via barcode). The format is defined in 2.4.2.2.

3.2.5 Errors returned

Error code	Description
400	Message format is invalid.
500	A technical error occurred in InterBrexit.

3.2.6 Response time

The response time should be under 10 seconds.

3.2.7 Fallback

In case of error or unavailability, the pairing can be sent until the boarding with 1 minute between each call. If the call cannot go through, a manual procedure (to be determined) must start.

3.3 BOARDING

3.3.1 Service description

This message is sent by the partner's IS when the transportation mean (shuttle or ferry) leaves its departure point. It indicates to InterBrexit its destination and gives the list of transport units that are onboard.

Service name	*embarquement*			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☐ Get	☒ Post	☐ Delete

3.3.2 Sequence diagram

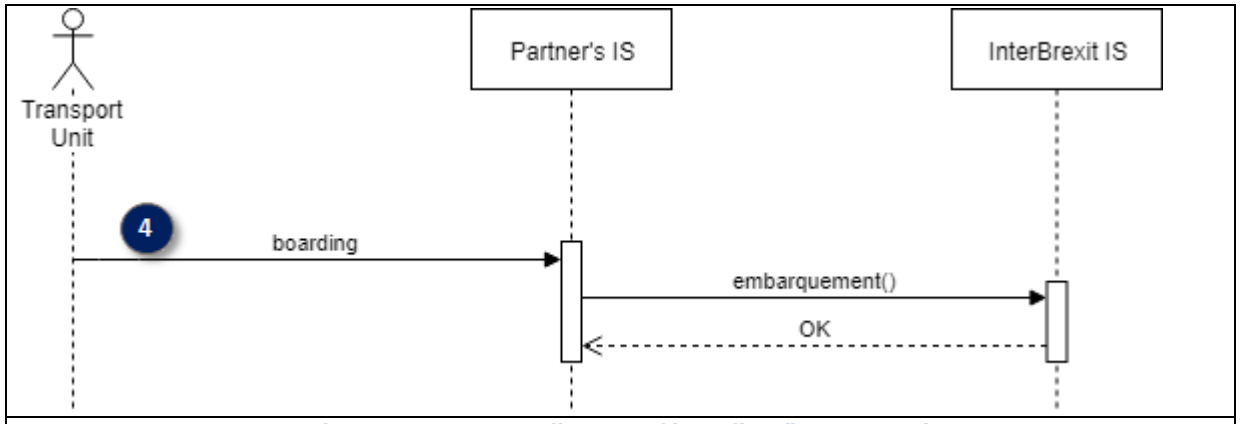

Figure 4 : Sequence diagram of boarding (import case)

3.3.3 Service use case

Use case name	Description
Pre-conditions :	Loading of transport unit on the transportation mean is finished and the transportation mean is leaving to its destination.
Usual case :	Partner's IS calls boarding service with following information: importation point and list of transport units. Boarding service sends back a success acknowledgement.
Error case 1: received message format is not valid	Partner's IS calls boarding service with a non-valid message format. Boarding service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls boarding service with following information: importation point and list of transport units A technical error occurs in InterBrexit. Boarding service sends back a technical error.

3.3.4 Functional rules

Rule reference	Field	Description
IMP_BOR_RG01	bureau	This field indicates the destination of the transportation mean. Value is set to **$ENTRY_OFFICE.**
IMP_BOR_RG02	sens	Value is set to "**ENTREE**".
IMP_BOR_RG03	compagnie	Value is set to **$COMPANY.**
IMP_BOR_RG04	immatriculation Avant immatriculation sArriere	Values should be the same as those communicated at the pairing step. If not all values can be determined: • For trucks, at least field immatriculationAvant must be filled. Filled values of immatriculationsArriere must be contained in pairing

<table>
<tr><td></td><td></td><td>values.
• For unaccompanied trailers, at least one occurrence of immatriculationsArriere must be filled. Filled values must be contained in pairing values.

Example for trucks:
<table><tr><td></td><td>Pairing</td><td>Boarding - Example 1</td><td>Boarding - Example 2</td><td>Boarding - Example 3</td></tr><tr><td>Immatriculation Avant</td><td>AA111AA</td><td>AA111AA</td><td>AA111AA</td><td>AA111AA</td></tr><tr><td>Immatriculations Arriere</td><td>BB222BB
CC333CC</td><td>BB222BB
CC333CC</td><td>BB222BB</td><td></td></tr></table>
Example for unaccompanied trailers:
<table><tr><td></td><td>Pairing</td><td>Boarding - Example 1</td><td>Boarding - Example 2</td></tr><tr><td>Immatriculation Avant</td><td></td><td></td><td></td></tr><tr><td>Immatriculations Arriere</td><td>BB222BB
CC333CC</td><td>BB222BB
CC333CC</td><td>BB222BB</td></tr></table></td></tr>
<tr><td>IMP_BOR_RG05</td><td>dateEvenement</td><td>Effective boarding date and time.</td></tr>
</table>

3.3.5 Errors returned

Error code	Description
400	Message format is invalid.
500	A technical error occurred in InterBrexit.

3.3.6 Response time

The response time should be under 20 seconds.

3.3.7 Fallback

In case of error or unavailability, the boarding notification can be sent until the disembarking with 1 minute between each call. If the call cannot go through, a manual procedure (to be determined) must start.

3.4 DISEMBARKING

3.4.1 Service description

This message is sent by the partner's IS when the transportation mean (shuttle or ferry) arrives to its destination and transport units are disembarking. It indicates to InterBrexit its real destination (importation point) and gives the list of transport units that are unloaded.

Service name	*debarquement*			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☐ Get	☒ Post	☐ Delete

3.4.2 Sequence diagram

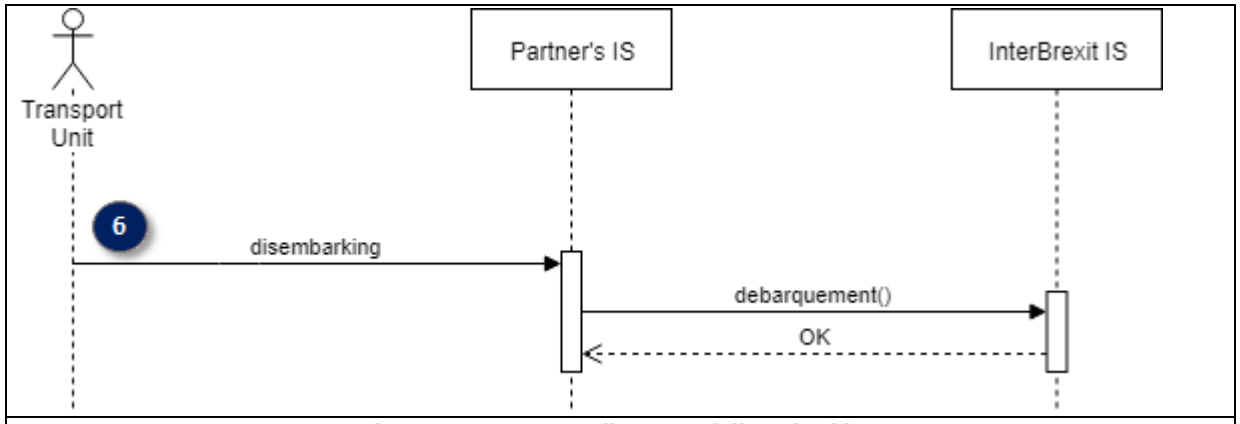

Figure 5 : Sequence diagram of disembarking

3.4.3 Service use case

Use case name	Description
Pre-conditions :	Transportation mean arrives to its real destination and transport unit are disembarking.
Usual case :	Partner's IS calls boarding service with following information: importation point and list of transport units. Disembarking service sends back a success acknowledgement.
Error case 1: received message format is not valid	Partner's IS calls boarding service with a non-valid message format. Disembarking service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls boarding service with following information: importation point and list of transport units A technical error occurs in InterBrexit. Disembarking service sends back a technical error.

3.4.4 Functional rules

Rule reference	Field	Description
IMP_DEM_RG01	bureau	This field indicates the real destination of the transportation mean. Value is set to **$ENTRY_OFFICE.**
IMP_DEM _RG02	sens	Value is set to "**ENTREE**".
IMP_DEM_RG03	compagnie	Value is set to **$COMPANY**.
IMP_DEM_RG04	immatriculationAvant	Values must be the same as those given in the

	immatriculationsArriere	boarding notification (see rule IMP_BOR_RG04).
IMP_DEM_RG05	dateEvenement	Effective disembarking date.

3.4.5 Errors returned

Error code	Description
400	Message format is invalid.
500	A technical error occurred in InterBrexit.

3.4.6 Response time

The response time should be under 20 seconds.

3.4.7 Fallback

In case of error or unavailability, the boarding notification can be sent again for 10 minutes with 1 minute between each call. If these calls cannot go through, a manual procedure (to be determined) must start.

3.5 DISPATCH

3.5.1 Service description

This service returns the state of dispatch for transport unit (green light or orange light) and in case of orange light the point where the unit transport has to go after disembarking (Custom office or SIVEP).

Service name	***aiguillage***			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☒ Get	☐ Post	☐ Delete

3.5.2 Sequence diagram

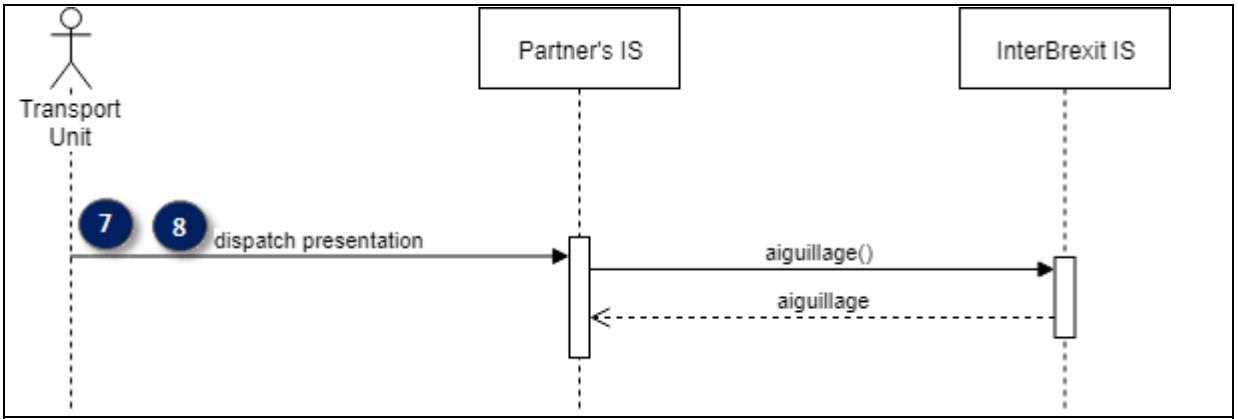

Figure 6 : Sequence diagram of dispatch

3.5.3 Service use case

Use case name	Description
Pre-conditions :	Partner's IS ask the state of dispatch for one or more transport units. The call has to contain following pieces of information: importation point and unit transport identification.
Usual case :	Partner's IS calls dispatch service. Dispatch service sends back the dispatch state for each transport unit of the call.
Error case 1: received message format is not valid	Partner's IS calls dispatch service with a non-valid message format. Dispatch service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls dispatch service. A technical error occurs in InterBrexit. Dispatch service sends back a technical error.

3.5.4 Functional rules

Rule reference	Field	Description
IMP_DIS_RG01	bureau	**$ENTRY_OFFICE**: indicates the dispatch location.
IMP_PAI_RG04	compagnie	Value is set to **$COMPANY**.
IMP_DIS_RG02	immatriculationAvant immatriculationsArriere	Same as IMP_BOR_RG04.
IMP_DIS_RG03	aiguillage	At the boarding of a unit transport, the dispatch is "**ORANGE**". During the crossing, the dispatch could become "**VERT**" if the unit transport meets all the conditions.

3.5.5 Errors returned

Error code	Description
400	Message format is invalid.
500	A technical error occurred in InterBrexit.

3.5.6 Response time

The response time should be under 20 seconds.

3.5.7 Fallback

In case of error or unavailability, a manual procedure (to be determined) must start.

4. EXPORTATION

4.1 GENERAL PROCESS

4.1.1 Description

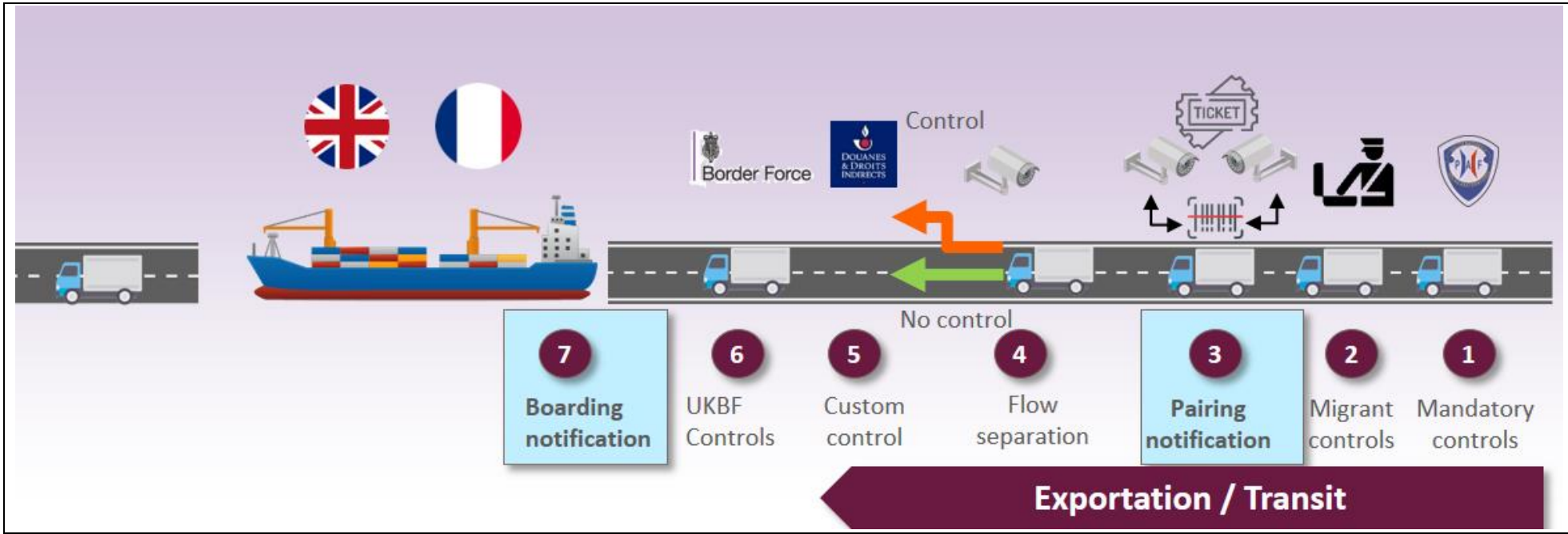

Figure 7 : Exportation general process

4.1.2 Sequence diagram

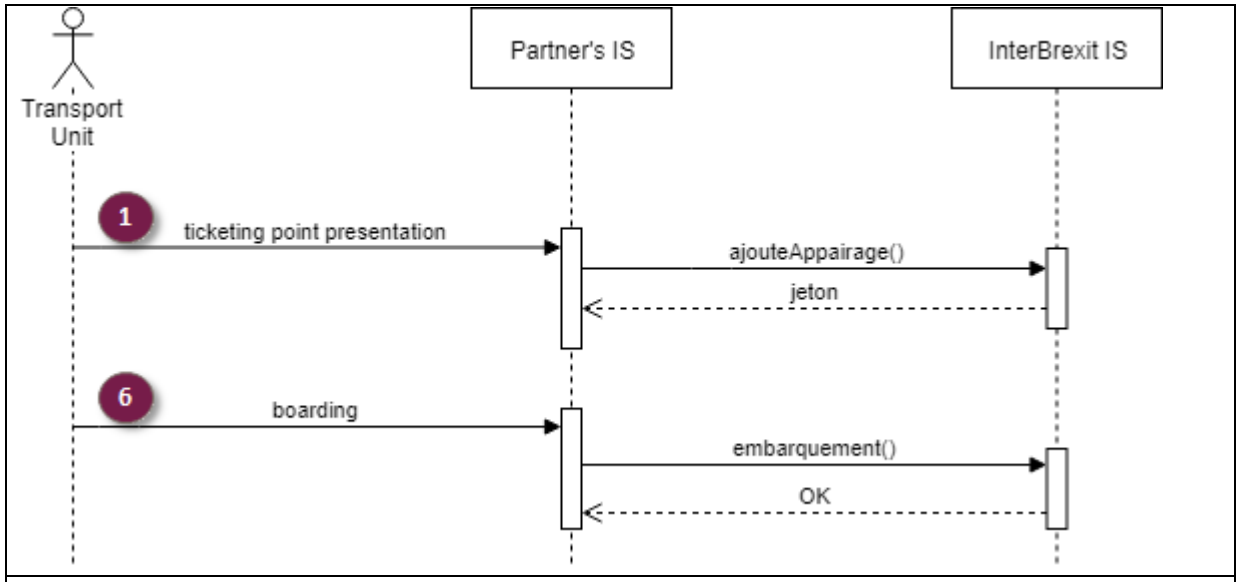

Figure 8 : Sequence diagram of exportation general process

4.2 UNIT TRANSPORT PAIRING

4.2.1 Service description

The pairing step gives following information's on a transport unit to InterBrexit:

- Kind of transport unit: full truck, empty truck or TIR truck,
- Declarations linked to the transport unit.

Service name	***ajouteAppairage***			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☐ Get	☒ Post	☐ Delete

4.2.2 Sequence diagram

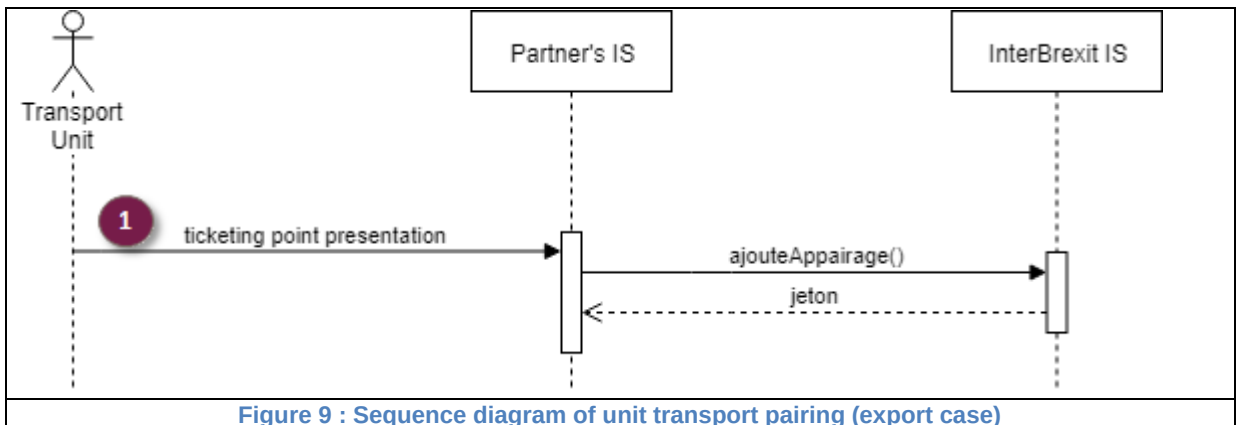

Figure 9 : Sequence diagram of unit transport pairing (export case)

4.2.3 Service use case

Use case name	Description
Pre-conditions :	Transport unit has passed the ticketing point and required information have been asked.
Usual case :	Partner's IS calls pairing service with transport unit information. Pairing service sends back corresponding pairing token.
Error case 1: received message format is not valid	Partner's IS calls pairing service with a non-valid message format. Pairing service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls pairing service with transport unit information. A technical error occurs in InterBrexit. Pairing service sends back a technical error.

4.2.4 Functional rules

Rule reference	Field	Description
EXP_PAI_RG01	immatriculationAvant immatriculationsArriere	Same as IMP_PAI_RG01.
EXP_PAI_RG02	bureau	**$EXIT_OFFICE**: this field indicates the point of departure of the transportation mean.
EXP_PAI_RG03	sens	Value is set to "**SORTIE**".
EXP_PAI_RG04	compagnie	Value is set to **$COMPANY**.
EXP_PAI_RG05	type	Same as IMP_PAI_RG05.
EXP_PAI_RG06	natureMarchandise	Must be empty in case of export.
EXP_PAI_RG07	declarations	Contain the list of identifier given by the driver (via barcode). The format is defined in 2.4.2.2.

4.2.5 Errors returned

Error code	Description
400	Message format is invalid.
200	A technical error occurred in InterBrexit.

4.2.6 Response time

The response time should be under 10 seconds.

4.2.7 Fallback

In case of error or unavailability, the pairing can be sent until the boarding with 1 minute between each call. If the call cannot go through, a manual procedure (to be determined) must start.

4.3 BOARDING

4.3.1 Service description

This message is sent by the partner's IS when the transportation mean (shuttle or ferry) leaves is departure point and cannot go back. It indicates to InterBrexit its departure point and gives the list of transport units that are on board.

Service name	***embarquement***			
Actors	InterBrexit Partner's IS			
Exchange mode	☐ Put	☐ Get	☒ Post	☐ Delete

4.3.2 Sequence diagram

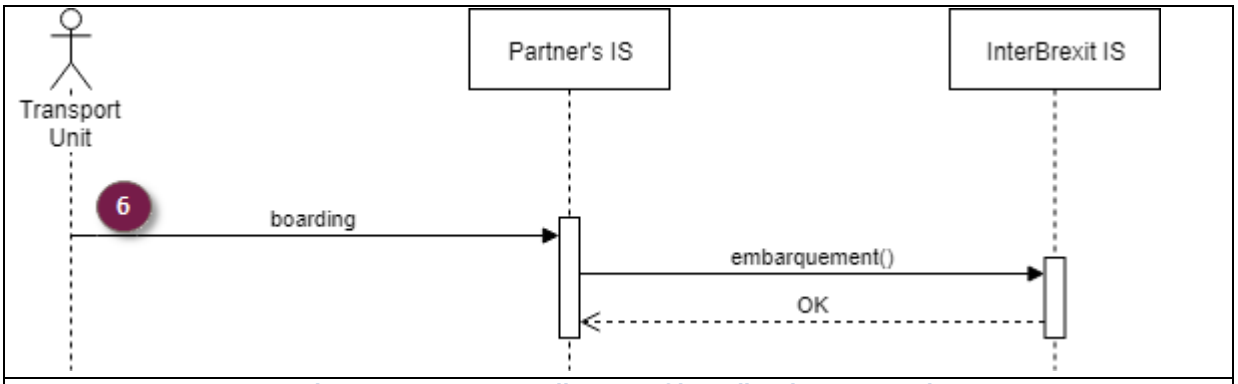

Figure 10 : Sequence diagram of boarding (export case)

4.3.3 Service use case

Use case name	Description
Pre-conditions :	Loading of transport unit on the transportation mean is finished and the transportation mean cannot go back to its leaving point.
Usual case :	Partner's IS calls boarding service with following information: exportation point and list of transport units. Boarding service sends back a success acknowledgement.
Error case 1: received message format is not valid	Partner's IS calls boarding service with a non-valid message format. Boarding service sends back a technical error.
Error case 2 : InterBrexit technical error	Partner's IS calls boarding service with following information: importation point and list of transport units A technical error occurs in InterBrexit. Boarding service sends back a technical error.

4.3.4 Functional rules

Rule reference	Field	Description
EXP_BOR_RG01	bureau	**$EXIT_OFFICE**: this field indicates the point of departure of the transportation mean.
EXP_BOR_RG02	sens	Value is set to "**SORTIE**".
EXP_BOR_RG03	compagnie	Value is set to **$COMPANY.**
EXP_BOR_RG04	immatriculationAvant immatriculationsArriere	Same as IMP_BOR_RG04.
EXP_BOR_RG05	dateEvenement	Effective boarding date.

4.3.5 Errors returned

Error code	Description
400	Message format is invalid.
500	A technical error occurred in InterBrexit.

4.3.6 Response time

The response time should be under 20 seconds.

4.3.7 Fallback

In case of error or unavailability, the boarding notification can be sent until the disembarking with 1 minute between each call. If the call cannot go through, a manual procedure (to be determined) must start.