



Economic Commission for Europe**Administrative Committee for the TIR Convention, 1975****Technical Implementation Body****Fourth session**

Geneva, 6–7 June 2023

Item 5 (b) (i) of the provisional agenda

eTIR conceptual, functional and technical specifications:**Version 4.4****Concrete amendment proposals*****Note by the secretariat****I. Background and mandate**

1. At its previous sessions, the Technical Implementation Body (TIB) considered various amendment proposals for inclusion in version 4.4 of the eTIR specifications. This document contains revisions of the amendment proposals under discussion, in line with the comments made and decisions taken at the previous sessions. Amendments proposals on which TIB already agreed are contained in Annex I and those that have been rejected are listed in Annex II.

II. Detailed proposals**A. Requirements of the Eurasian Customs Union****1. Languages for text fields**

2. At its first session, TIB mandated the secretariat to present a detailed proposal, at one of its future sessions, on possible technical solutions which would allow the submission by holders of text fields in more than one language (see ECE/TRANS/WP.30/AC.2/TIB/1, para. 21).

3. From a technical perspective, the most straightforward option to allow for the provision of the text fields in multiple languages would be to transform text fields from attributes to classes with an unbounded maximum cardinality (*). However, in many cases this would first require significant changes in the World Customs Organization (WCO) data model as well as in all customs systems designed on the basis of the WCO data model.

* This document was submitted late for processing since clearance in finalizing this document took longer than anticipated.



4. Therefore, and considering that translations are currently not written directly on the TIR Carnet, the Remarks class in the AdditionalInformation class, at the level of the declaration, could be used to provide translations if:

(a) The maximum cardinality of the AdditionalInformation class would be set at unbounded;

(b) The attribute statementType,coded would be included and a new type (translation) would be added to the UN/EDIFACT code list 4451 (e.g. TRN);

(c) The class Pointer would be included (with cardinality 0..1) to allow the translation to point at the element which is translated. Its status would be dependant (D) and the following condition should be added:

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IF statementType,coded ="TRN
THEN NOT EMPTY (POINTER)
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5. As an example, if the description of the goods of the first consignment item of the first consignment is provided in English as “Apples”, its translation in French could be provided as follows:

AdditionalInformation

Sequence = 1

Remark

Text.Content = “Pommes”

Language identifier = “FR”

statementType,coded = “TRN”

Pointer

Location = “Message/Consignment[1]/ConsignmentItem[1]/Goods/Description

6. Such mechanism would allow the provision by the holder of the required translations along the itinerary (for any text field of the advance TIR data), while ensuring that they could easily be identified as translation by the country of departure, which does not need them.

7. At its second session, at the request of a member of the Eurasian Customs Union present at the session, TIB decided to continue the discussion on this issue at its next session.

8. At its third session, the delegate of Belarus, being a member State of the Eurasian Customs Union, while stating that the proposed solution seemed rather complicated, proposed, instead, to create blocks of data dedicated to specific countries or customs unions, in which holders could not only provide any required translations but also any additional data required by those countries or customs unions. Other delegations stressed that the usage of codes could further reduce the need for translations and recalled that advance TIR data and advance amendment data are sent to countries of departure, where they become declaration data, once verified and accepted. They further stressed that countries of departure will, in most cases, not be in a position to verify text fields in foreign languages or data elements that are not standard and are only required by another country. Finally, they recalled that, in line with Article 9 of Annex 11, countries have the possibility to request additional information via their national declaration mechanisms.

9. TIB decided to continue discussing all requirements of the Eurasian Customs Union at one of its next sessions, on the basis of detailed proposals by the countries concerned (see ECE/TRANS/WP.30/AC.2/TIB/6, paras. 14–16).

B. Generation of the accompanying document

10. At its second session, TIB noted that the TIR secretariat was working on the generation of accompanying documents and would present a concrete proposal at a future session (see ECE/TRANS/WP.30/AC.2/TIB/4, para. 24).

11. Using the open-source Jasper format, the secretariat has prepared a template which allows to generate the accompanying document in pdf format using a set of variables that need to be filled with the declaration data and the data on seals. The template and the variables

can then either used directly by the JAVA Jasper library or through the open source JasperReports® Server utility.

12. The secretariat could make this template available, together with the relevant instructions on how to use it, to any customs administration interested in using it to speed up their interconnection with the eTIR international system. TIB might also wish to consider if this could constitute a first step towards the inclusion of a new deliverable in version 4.4.

C. Exchanging attached documents

13. The secretariat will present a proposal at the session.

D. Access to TIR transport data by holders

14. At its third session, TIB welcomed a presentation by the secretariat on the proof of concept for the possible access of TIR transport data by holders via the web and mobile applications dedicated to holders. It noted that the demonstrated functionalities have not yet been integrated in the applications in production but could be integrated and activated as soon as mandated by AC.2 and TIB as well as serve as a basis to prepare the relevant amendments for version 4.4 of the eTIR specifications (see ECE/TRANS/WP.30/AC.2/TIB/6, para. 23).

15. As a first step, the secretariat will present the changes required to the eTIR concepts.

E. Structure of the eTIR specifications

16. At its second session, TIB welcomed the proposals related to the structure of the eTIR specifications, presented in chapter II.C of document ECE/TRANS/WP.30/AC.2/TIB/2022/13 and mandated the secretariat to prepare a detailed proposal for one of its next sessions.

17. TIB may wish to consider the proposal for a revised structure as contained in document ECE/TRANS/WP.30/AC.2/TIB/2023/3.

F. Procedure for drawing samples and additional control types

18. The Group of Experts (WP.30/GE.1), at its first session, discussed the procedure described in Explanatory Note 0.21-3 of the TIR Convention, regarding the notification of the drawing of samples of goods by customs authorities in the course of an examination. This issue was left to version 4.4 of the eTIR specifications (ECE/TRANS/WP.30/GE.1/2, paras. 55 and 56).

19. The option proposed by the secretariat to WP.30/GE.1 to increase the cardinality of the “Control” class, contained within the “I9 – start TIR operation” and “I11 – terminate TIR operation” messages and introducing “drawing samples” as an additional control type could possibly resolve this issue. TIB might wish to discuss the relevance of including additional control types.

20. Furthermore, the control results could also be expanded to include attached documents that could, for example, be the result of the analysis of a sample or the image of an Xray in case countries would feel like sharing this kind of information with the countries remaining on the itinerary.

21. At its third session, TIB acknowledge the need to include additional control types, inter alia to deal with the procedure related to drawing samples and mandated the secretariat to prepare a detailed proposal for one of its next sessions.

22. In addition to the type, coded attribute, the WCO data model “Control” class contains, inter alia, the following classes and attributes:

- A Control quantity attribute (WCO ID 490 – WCO Description : The quantity used for control or quarantine purposes), which could be used to report the quantity of goods used for the purpose of a control,
- An AdditionalInformation class (WCO ID 03A – WCO Description : Special request to government from declarant to take or not to take action), which contains a Pointer class (WCO ID 97A – WCO Description : Details to refer to a functional attribute within a declaration), which could be used to point, in the declaration to the goods item from which goods have been taken.

23. Consequently, in order to allow for the reporting of samples taken for the purpose of controls, the following changes¹ could be included in the “Control” class:

	Control	0 .. unbounded	O
	Type, coded	1 .. 1	R
	Control quantity	0 .. 1	O
	AdditionalInformation	0 .. 1	O
	Pointer	1 .. 1	R
	ControlResult	1 .. 1	R
	Result, coded	1 .. 1	R

24. A new code (e.g. 002 – Control on goods sample) could be added to the code list 25 (Control, type).

25. TIB might also wish to consider if the two codes contained in code list 24 (Control results), i.e. 001 – Satisfactory and 002 -Non satisfactory, are sufficient for the purpose of controls on samples of goods.

26. Furthermore, TIB might also want to take this opportunity to consider the inclusion of additional control types and consider how the results of those controls could be reflected. For that purpose, in addition to the Control Result, coded attribute, the WCO data model Control results class contains three attributes which could be used in the eTIR messages:

- Control result text (WCO ID 497 – WCO Description : Description of the control results),
- Control count (WCO ID 415 – WCO Description : A control quantity to report the results of an inspection, carried out by Cross Border Regulatory Agencies) and
- Examination Image (WCO ID 405 – WCO Description : The digital image resulting from an inspection or examination. For example the x-ray scan of a container).

27. TIB might wish to propose new controls types to be included in code list 25 and which attributes should be included in the control results class.

G. Preventing the amendment of customs offices already visited

28. It is understood that when sending an “E11 – advance amendment data” message for changing the itinerary, the itinerary that is subject to change is being re-sent in its entirety, including the customs offices that have already been visited.

29. At its third session, TIB welcomed the idea to introduce a testable rule, preventing the amendment of customs offices already visited and mandated the secretariat to prepare a detailed proposal for one of its next sessions.

30. A rule to be included in message E11 at the level of Consignment/TransportMeans/Itinerary could read as follows:

Number and Name: R0xx
 Description: Data on elements of the itinerary prior to the country receiving the E11 message cannot be changed.

¹ Changes are in italics

H. Termination data for heavy or bulky goods

31. In case of partial or final unloading, message I11 (terminate TIR operation) should contain the number of packages unloaded. In case there are unpacked heavy or bulky goods that are unloaded it is unclear how this field should be filled-in and how customs could specify either a number of items (e.g. for cars) or a weight (e.g. for wheat).

32. At its third session, TIB considered the potential issue related to the termination data for heavy or bulky goods and mandated the secretariat to prepare a description of the usage of the number of packages field for one of its next sessions.

33. A first solution for resolving the issue would be to make the number of packages optional (and change its cardinality), as shown below:

Number of packages		0 .. 1
eTIR Description	Number of packages unloaded	
WCO Id	144	
WCO Description	Number of individual items packaged in such a way that they cannot be divided without first undoing the packing	
Format	n..8	
Status	O	

34. While it would be tempting to make the field dependent on the packaging type, as is the case in messages E9 or I7, message I11 does not contain the information on the packaging type and therefore a condition cannot be used (see the definition of a conditions as contained in Chapter 2.6 of ECE/TRANS/WP.30/AC.2/TIB/2022/4/Rev.2). Instead, a testable rule could be used as presented below:

Number of packages		0 .. 1
eTIR Description	Number of packages unloaded	
WCO Id	144	
Rule	R019	
WCO Description	Number of individual items packaged in such a way that they cannot be divided without first undoing the packing	
Format	n..8	
Status	O	

Number and Name: R019
 Description: If the declared packaging type is not "VQ", "VG", "VL", "VY", "VR" or "VO" then the number of packages is required

I. Consignor at consignment level

35. At its third session, TIB mandated the secretariat, in collaboration with the European Commission, to present a detailed proposal on the inclusion of the consignor (possibly also consignee) at consignment level at one of its next sessions.

36. The following change could be made to the eTIR messages E6, E9, E11, I6, I7 and I15:

Consignment	1 .. unbounded
Consignee	0 .. 1
Address	0 .. 1
Consignor	0 .. 1
Address	0 .. 1
AttachedDocuments	0 .. unbounded
BinaryFile	0 .. 1
ConsignmentItem	1 .. unbounded
AdditionalInformation	0 .. unbounded
Goods	1 .. 1
Classification	0 .. unbounded
Consignee	0 .. 1
Address	0 .. 1
Consignor	0 .. 1
Address	0 .. 1

37. At both levels the Consignee and Consignor classes would be optional, and the following rules would be added:

Number and Name: R0XX
Description: If all consignment items have the same consignee the consignee shall be reported under Consignment/Consignee, otherwise they shall be reported under Consignment/ConsignmentItem/Consignee.

Number and Name: R0XX
Description: If all consignment items have the same consignor the consignor shall be reported under Consignment/Consignor, otherwise they shall be reported under Consignment/ConsignmentItem/Consignor.

III. Considerations by TIB

38. TIB may wish to consider the proposals above and provide guidance to the secretariat on how to proceed.

Annex I

Amendment proposals agreed on by TIB

A. Notifications to countries when the transport will not reach a country

1. The eTIR international system already notifies customs administrations by means of the I15 message that a transport will not reach their country. The message function code contained in the message allows customs administrations to know what kind of information to expect in the I15 message, i.e., Amended declaration data, Refusal to start operation guarantee, Seals information (Start) or Seals information (Terminate).
2. An easy notification mechanism in case a transport will not reach a country could be implemented on the basis of an I15 message by including two additional message function codes, i.e., “transport interrupted due to an accident or incident” and “transport rerouted through other countries”. The I15 message would in that case only need to contain a reference to the guarantee or the declaration data, in order to allow customs to identify the TIR transport.
3. At its second session, TIB considered and agreed on the inclusion of the above-described mechanism to notify countries when a TIR transport will not reach a country, pending the inclusion of the cancellation of the guarantee as a third reason for a transport not to reach a country.

B. Overview of changes

4. At its second session, TIB agreed that the tables presenting the overview of changes for all eTIR messages could be kept on the eTIR website and removed from the eTIR functional specifications.

C. Prescribed national itinerary

1. Additional data field

5. When starting a TIR operation, customs authorities can prescribe a national itinerary. In the TIR Carnet; this information is written by the customs officer in box 22 of vouchers 1 and 2 as well as in box 5 of the first counterfoil.
6. At its first session, TIB considered the need to allow customs administrations to prescribe a national itinerary, different from indicating a customs office, and mandated the secretariat to prepare a proposal, for one of its future sessions, which would provide flexibility to customs administrations, e.g., by introducing a free text field.
7. In the WCO data model, under the class used in eTIR for the national itinerary (Itinerary), while not yet activated, a class AdditionalInformation, with its free text attribute “Statement”, could allow, if added to the I9 message, to provide a national itinerary different from indicating a customs office. Considering that customs could either provide an itinerary as a customs office or use the new statement to include free text, the classes AdditionalInformation and NationalItineraryCustomsOffice would be conditional, with a condition ensuring that, one or both of those classes should be present in the message if the class NationalItinerary is present.
8. At its second session, TIB noted the interest to have the possibility for customs unions to indicate the itinerary at the level of countries, e.g., by providing the country codes of the countries that would need to be part of the itinerary. TIB further noted that in the TIR Carnet the prescribed national itinerary is called “route prescribed” and expressed a preference towards this terminology as it would also better apply to customs unions.
9. In the WCO data model, the “Itinerary” class contains an “Address” class which contains a “CountryCode” field. Should TIB agree, the class and attribute could be added as

dependent to the I9 message. Considering all the changes above, the I9 message would look as follows (changes are underlined>):

<i>eTIR class and data element name</i>	<i>Min / Max occurrence</i>	<i>Status</i>
Message	..	
Message function, coded	1 .. 1	R
Message identifier	1 .. 1	R
Type, coded	1 .. 1	R
Guarantee	1 .. 1	R
Reference	1 .. 1	R
TIROperation	1 .. 1	R
Sequence number	1 .. 1	R
Registration number	1 .. 1	R
Start	1 .. 1	R
End date time	1 .. 1	R
Time limit date time	0 .. 1	O
AdditionalInformation	0 .. 1	O
Remarks	1 .. 1	R
Consignment	0 .. 1	O
TransportEquipment	1 .. unbounded	R
Identifier	1 .. 1	R
Seal	1 .. unbounded	R
Sequence number	1 .. 1	R
Seal number	1 .. 1	R
Seal type, coded	0 .. 1	O
Control	1 .. 1	R
Type, coded	1 .. 1	R
ControlResult	1 .. 1	R
Result, coded	1 .. 1	R
PrescribedRoute	0 .. 1	O
PrescribedRouteCustomsOffice	0 .. 1	D
Identifier	1 .. 1	R
Address	0 .. 1	D
CountryCode	1 .. 1	R
AdditionalInformation	0 .. 1	D
Statement	1 .. 1	R
CustomsOffice	1 .. 1	R
Identifier	1 .. 1	R

10. The following condition should also be added :

IF NOT EMPTY(NATIONALITINERARY)
 THEN NOT EMPTY (NATIONALITINERARYCUSTOMSOFFICE)
 OR NOT EMPTY (ADDITIONALINFORMATION)
 OR NOT EMPTY (ADDRESS)

11. At its third session, TIB agreed to include the “additional information” and “address” fields as part of the prescribed route, in order to give countries the required flexibility in prescribing a route in their customs territory. TIB also agreed with the inclusion of the related condition.

2. Notification regarding a forced change in the itinerary

12. At its first session, TIB agreed that when customs administrations use the national itinerary to prescribe a different customs office of exit in order not to have to force the holder to amend the declaration data to indicate a new customs office of entry in the next country, the eTIR international system could make use of the information provided in the start TIR operation message (I9) to inform the following countries of the change of itinerary. TIB mandated the secretariat to present a detailed proposal, e.g., making use of the information about adjacent border customs offices in the International TIR Data Bank (ITDB).

13. The first prerequisite to allow such notification mechanism is to ensure that the information on adjacent border crossing points is adequately registered in ITDB for all countries having enabled the eTIR procedure on their territory.

14. In practice, on the basis of the NationalItineraryCustomsOffice sent by a country by means of an I9 message, the eTIR international system, using data contained in ITDB, would first check if the customs office is on the border with the next country of the itinerary. If so,

it would amend, in the declaration data, the customs office of exit of the current country and the customs office of entry of the next country, as contained in ITDB, and inform the following countries along the route by means of an I15 message that would contain the revised declaration data (with the new itinerary). The relevant new code would also have to be added to the code list CL16 (Message function code) which is used by the attribute Message function, coded in the I15 message.

15. At its second session, TIB welcomed the proposal regarding the notification mechanism, in case of a forced change in the itinerary. It also clarified that notifications would not be required when the change in customs office of exit would coincide with a change of mode of transport, e.g., at a port or intermodal terminal.

16. At its third session, TIB agreed with the inclusion of the notification mechanism (using the I15 message) in case a prescribed route would change the customs office of exit from a custom territory and, consequently, change the customs office of entry in the following customs territory.

D. Distribution of eTIR code lists

17. At its first session, TIB mandated the secretariat to prepare, for one of its future sessions, a document presenting a concrete proposal aimed at ensuring that, for each update cycle of the eTIR specifications, code lists are automatically disseminated to all stakeholders. At its second session, TIB was of the view that, if handled properly, both push and pull options would not pose significant security concerns and stressed that, regardless of the option chosen, a repository of code lists should be available and kept up to date at all times. TIB further decided to continue its discussions on the distribution of code lists to all stakeholders at its next session, on the basis of more detailed information about both options (push and pull) as well as possible hybrid solutions.

18. In order to push the code lists to customs administrations after each update cycle, dedicated webservices would be deployed by customs administrations. The messages exchanged on those webservices would be based on the update cycles and code lists class diagram presented in Figure 29 of the eTIR technical specifications.

19. The pull mechanism could be based either on webservices calls from customs administrations to the eTIR international system, or on a file repository. Customs administrations would then, at scheduled intervals (e.g. once a week), call the webservice or download the code lists from a file repository.

20. In order to avoid regular unnecessary downloads of the code lists, a hybrid approach, which would work on the basis of notifications sent to customs administrations' ICT systems (e.g., a call to a web service or an email to a dedicated email address) could allow customs administrations to only obtain the new code lists when they are changed. The notification would contain the date and time by which the customs system would have to obtain the new code lists from a repository or by means of a webservice call and have them deployed in production.

21. At its third session, TIB decided that the most efficient process to distribute code lists to all stakeholders would be on the basis of hybrid solutions, based on webservice notifications, and requested its inclusion in version 4.4. of the eTIR specifications.

E. Modelling diagrams

22. At its second session, TIB welcomed the proposals related to the usage of modeling diagrams to be used in the framework of the eTIR specifications, presented in chapter II.B of document ECE/TRANS/WP.30/AC.2/TIB/2022/13 and requested the secretariat to present an example comparing the existing diagrams (in Unified Modelling Methodology – UML) with the proposed new diagrams (in Business Process Model and Notation – BPMN) as well as simplified class diagrams. TIB also encouraged delegations to enquire about national practices/preferences with their relevant services before the next session.

1. Class diagrams

23. UML Class diagrams used in version 4.3 of the eTIR functional specifications contain not only classes, their relationships and their attributes, but also a set of methods that were aimed at facilitating the development of the eTIR international system. As such, these methods have little to no use for the countries that wish to amend their customs system to implement the eTIR procedure. Figures I and II below show the difference between the current and the simplified version of the customs management of guarantees class diagram (Figure 1.19 of the eTIR functional specifications).

Figure I
Current customs management of guarantees class diagram

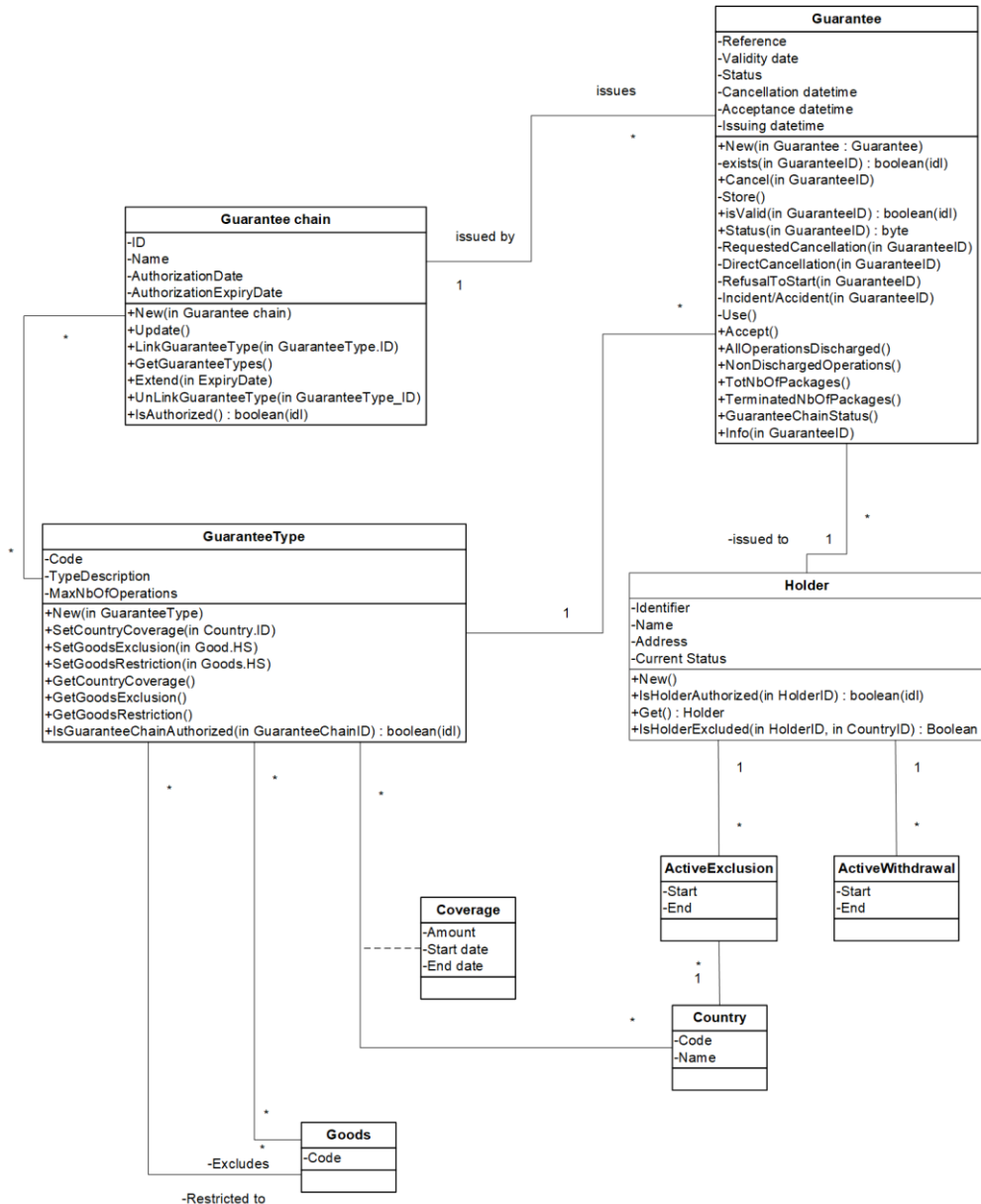
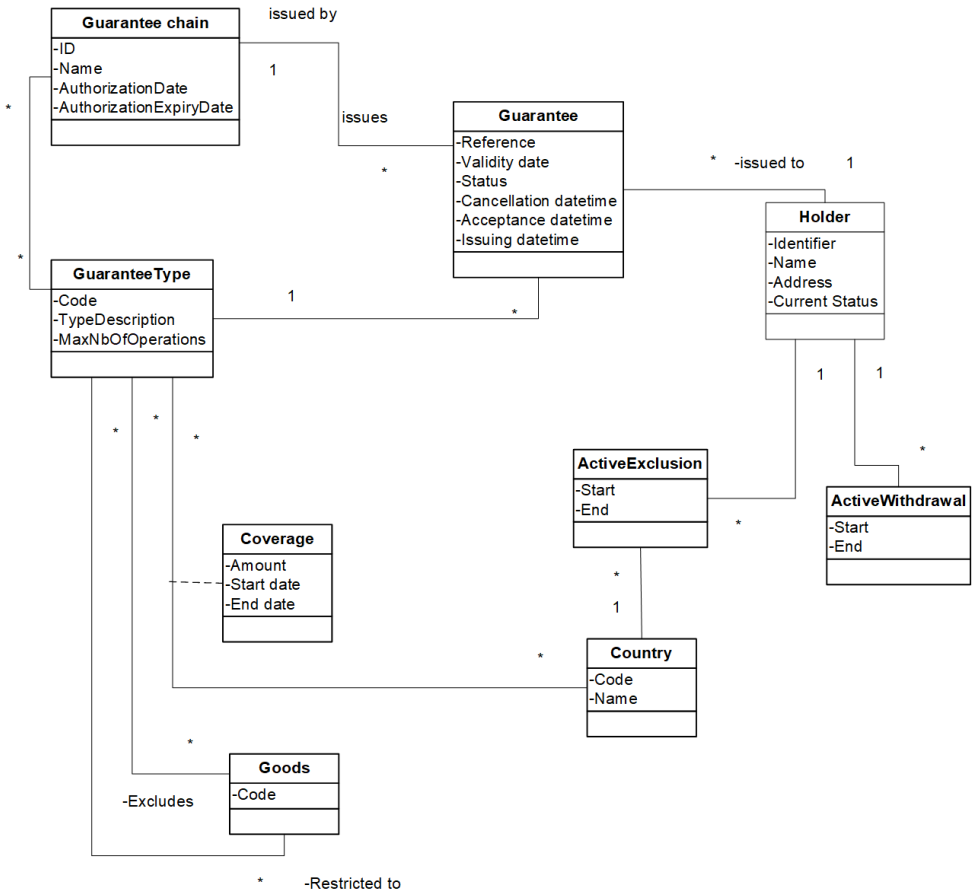


Figure II
Simplified customs management of guarantees class diagram



24. At its third session, TIB agreed to simplify the class diagrams.

2. Business process model and notation

25. In version 4.3 of the eTIR specifications, in line with the Unified Modelling Methodology (UML) chosen originally for the eTIR project, the modelling of processes is done using UML activity and sequence diagrams. In recent years, the business process model and notation (BPMN) has gained in popularity in both the business and Information and Communication Technologies (ICT) communities and is, therefore, better understood by laymen and experts alike. With that in mind, TIB might wish to consider if, in version 4.4 of the eTIR specifications, BPMN should replace the activity and sequence diagrams used in version 4.3. Figures III, IV and V below show the UML activity diagram (Figure 12 of the eTIR concepts), UML sequence diagram (Figure 1.9 of the eTIR functional specifications) and the Business Process Diagram for the Start TIR operation process.

Figure III
 UML activity diagram for the Start TIR operation process

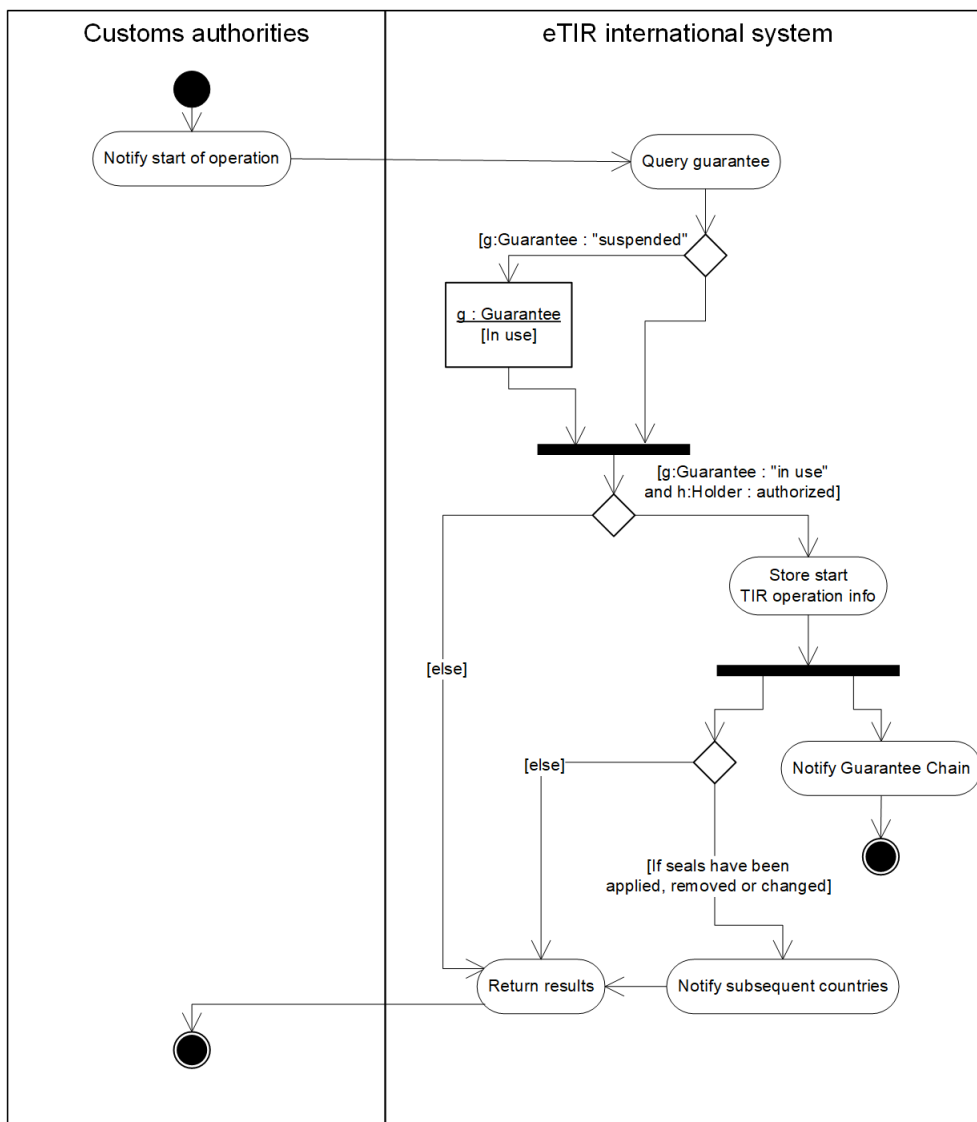


Figure IV
UML sequence diagram for the Start TIR operation process

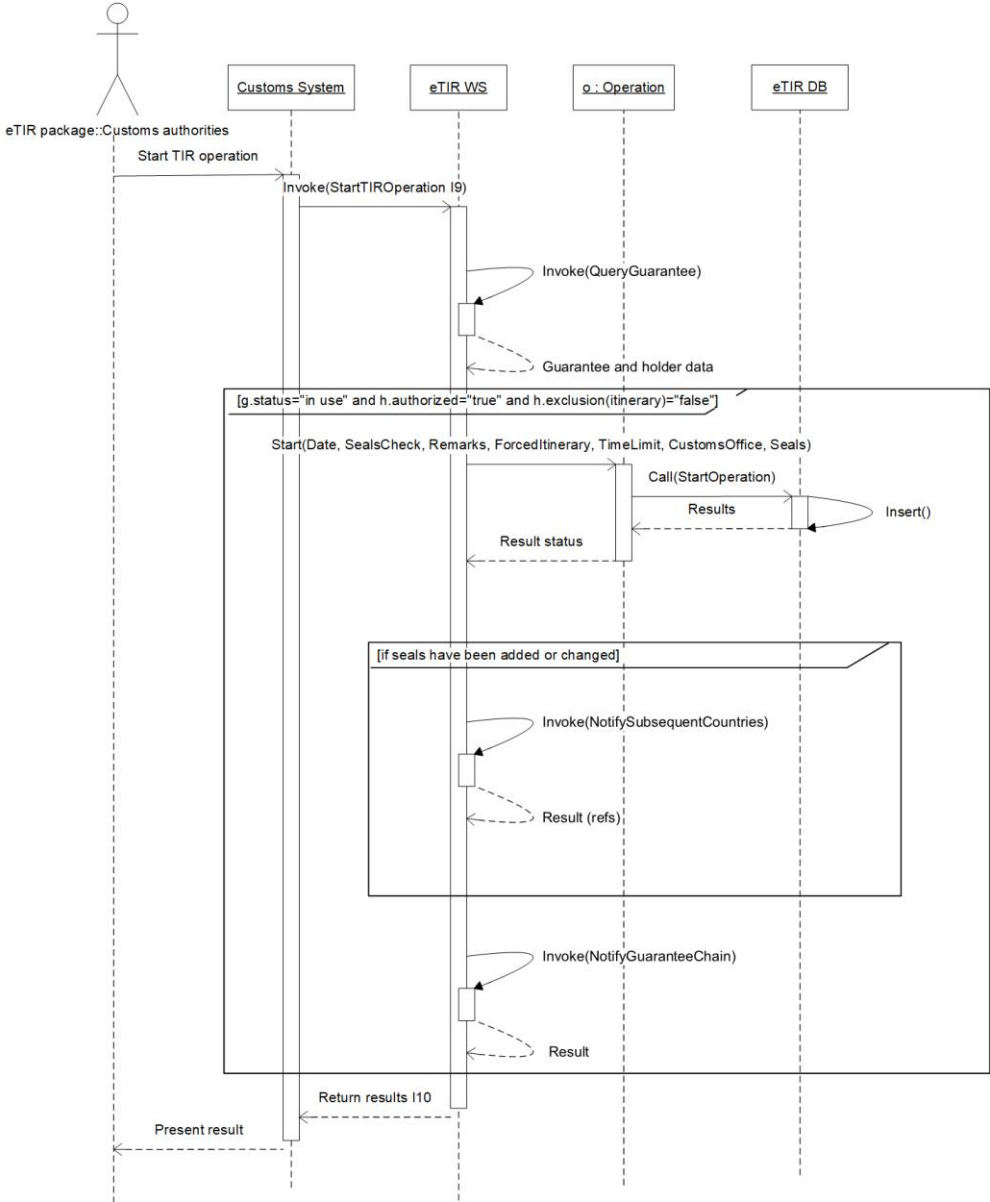
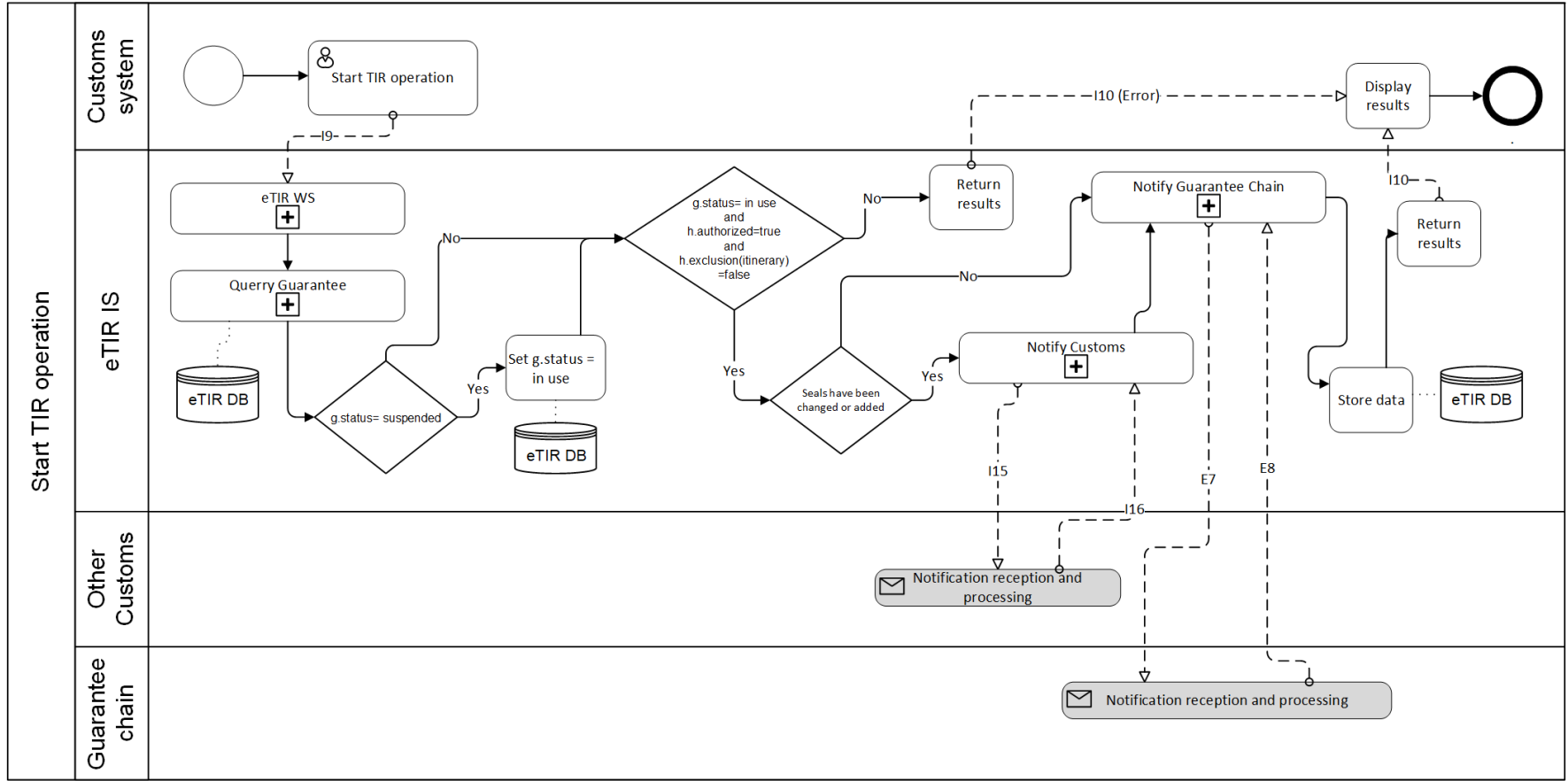


Figure V
Business Process Diagram for the Start TIR operation process



26. At its third session, TIB agreed to replace the existing diagrams (in Unified Modelling Methodology – UML) in the conceptual and functional specifications with the newly proposed diagrams (in Business Process Model and Notation – BPMN), in line with the examples above.

F. Amending the “Total Gross Weight” Field

27. It is understood that the “Declaration/TotalGrossMassMeasure” field reflects the total sum of the weights of the consignment items declared by the holder. However, it is not clear how this value is dealt with in cases of amendments, unloading of goods and incident or accidents during which parts of the load are destroyed.

28. As the holder does not submit advance amendment data before partial unloading, nor in cases of incident or accident, if this field corresponds to the current total weight transported, it is unclear how the total gross weight will be dealt with.

29. A possible solution would be to include a field in the I11 message (terminate TIR operation) which should be filled in in case of partial discharge. This value could then be subtracted from the total gross weight. Additionally, the total gross weight value should be amended after an incident or accident that led to the goods being destroyed.

30. Alternatively, if the fields “Declaration/TotalGrossMassMeasure” and “ConsignmentItem/GoodsMeasure/GrossMassMeasure” are restricted to kilograms (see document ECE/TRANS/WP.30/AC.2/TIB/2022/16, para. 10), the total gross weight could be automatically amended after partial unloading.

31. At its third session, TIB mandated the secretariat to remove the “Declaration/TotalGrossMassMeasure” field from version 4.4 of the eTIR specifications.

G. Attached documents – Issuing date

32. At its third session, TIB agreed with the proposal by the European Commission, on behalf of its Member States, to make the issuing date of the attached document optional in all messages where it appears (i.e., E6, E9, E11, I6, I7 and I15).

Annex II

Amendment proposals rejected by TIB

At its third session, TIB, recalling that cases that would require to extend a guarantee are very rare and would require significant efforts to amend the eTIR specifications, rejected the idea to extend the scope of the guarantee, as proposed in chapter II.A of document ECE/TRANS/WP.30/AC.2/TIB/2022/18.
