Economic Commission for Europe

Inland Transport Committee

Working Party on Customs Questions affecting Transport

Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure

Thirtieth session
Budapest, 18-19 September 2019
Item 6 (c) of the provisional agenda
eTIR conceptual, functional and technical documentation Amendments

Amendments to the eTIR conceptual, functional and technical documentation - v.4.2a

Note by the secretariat

I.   Introduction

1.   At its 140th session (June 2015), the Working Party on Customs Questions affecting Transport (WP.30) considered and supported document ECE/TRANS/WP.30/2011/4/Rev.1, containing version 4.1 of the eTIR Reference Model, as a basis for future work of the Group of Experts on Legal Aspects of Computerization of the TIR Procedure (GE.2) as well as for pilot projects. At the same time, WP.30 recalled that the eTIR Reference Model is not "carved in stone". WP.30 agreed that the eTIR Reference Model might require further improvements, in particular as a follow-up to pilot projects and the outcome of the work of the legal Expert Group.

2.   Further to the decisions taken by the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) at previous sessions and questions/issues raised in the course of the eTIR pilot project between Iran (Islamic Republic of) and Turkey, including improvements of the eTIR international system, the secretariat prepared this document, containing a revised list of issues for consideration by GE.1 and possible amendments to the eTIR specifications.

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II.   Considerations and possible amendments

(a)   Accompanying document and fallback procedure

3.   At its twenty-eighth session (June 2018), GE.1 considered the draft accompanying document and the summary description of its usage, as contained in Annex I of this document, and requested the secretariat to propose a revised text of Chapter 1.2 of the eTIR functional specifications and, in particular, to remove the possibility to begin an eTIR transport under the fallback procedure and finding alternatives to the envisaged eTIR website. Annex II contains a draft revision of Chapter 1.2.

4.   At its twenty-ninth session (November 2018), GE.1 welcomed a demonstration of the Custom Portal developed by IRU and extensively discussed revised Chapter 1.2 of the eTIR functional specifications. The Expert Group agreed with the proposed fallback procedure and, consequently, mandated the secretariat to update the fallback part of the use case descriptions contained in Chapter 3 of the eTIR concepts document. Annex III contains the proposals by the secretariat to amend Chapter 3 of the eTIR concepts document.

5.   Additionally, in the eTIR concepts document, GE.1 might also want to request the secretariat to:

- remove the eTIR website as an international deliverable in the eTIR concepts document, i.e. delete Chapter 1.3.2.3 (eTIR website);

- amend the footnote on page 13 as follows "The eTIR international system, as introduced in 1.1.2, is composed of the central databases and the web services.

- Amend the text of Chapter 1.2.8 (Fallback solutions) as follows:

  In case, once a TIR transport has begun, customs administrations are not in a position to communicate with the eTIR international system, they will rely on the accompanying document to obtain or provide the required information.

  Detailed fallback solutions for individual use cases are contained in the functional specifications document.

- Amend the text of Chapter 1.3.2.10 (Authentication database) as follows:

  In order to technically restrict access to the eTIR international system to those users who have been authorized, an authorization database is used. This database is used to secure the web services. Consequently, it will contain the credentials of the IT systems of guarantee chains as well as the customs central systems. Furthermore, holders who would request the use of the centralized declaration mechanism will also have their credentials included.

6.   Moreover, at the same session, the Expert Group proposed the inclusion of activity diagrams or tables to further clarify the fallback procedure. The Expert group might want to continue its deliberations on the subject and instruct the secretariat on how to proceed further.

7.   Finally, in the course of its discussion on the fallback procedure, GE.1 might want to recall that the accompanying document contains national references transmitted during the notification process by each country along the itinerary. Those national references make the accompanying document very difficult to falsify, in particular if the customs authorities have a way to ensure that this refence has indeed been generated by them. GE.1 might also want to consider the latest proposal submitted to AC.2 regarding the wording of Article 10 (Fallback procedure), as contained in ECE/TRANS/WP.30/AC.2/2019/9/Rev.2:

1. Where the eTIR procedure cannot be started for technical reasons at the customs office of departure, the TIR Carnet holder may revert to the TIR procedure.

2. Where an eTIR procedure has started but its continuation is impeded for technical reasons, the competent authorities shall accept the accompanying document and process it in line with the procedure described in the eTIR specifications, subject to the availability of additional information from alternative electronic systems as described in the functional and technical specifications.

3. The competent authorities of Contracting Parties are also entitled to request national guaranteeing associations to confirm that the guarantee is valid, that a TIR transport is carried out under the eTIR procedure and provide other relevant information.

4. The procedure described in paragraph 3 shall be established in the agreement between the competent customs authorities and the national guaranteeing association, as stipulated by Annex 9, Part I, paragraph 1 (d).

(b) Reconciliation procedure

8.   At its twenty-eighth session, GE.1 discussed the various options to introduce a reconciliation procedure in eTIR, as contained in Informal document GE.1 No. 5 (2018), and was of the view that expanding the reconciliation procedure to all eTIR messages would go beyond the scope of Annex 10 and, thus, the appropriate provisions would have to be added in Annex 11 or in the eTIR specifications. GE.1 also pointed out that any request to start a reconciliation procedure should be addressed to national helpdesks.

9.   At its twenty-ninth session, GE.1 discussed the three levels of reconciliation foreseen by the European Union New Computerized Transit System (NCTS): (1) NCTS allows for resending messages; (2) direct contact (email or phone) with focal points from other administrations is used in cases where messages cannot be resent by the system (this network of focal points is also used to authorize the start of a procedure under fallback); (3) the European Union help desk assists in solving systemic issues. GE.1 also welcomed the offer by the representative of the European Commision to submit, for its next session, a copy of the guidelines that set the obligations of the European Union network of focal points.

10. GE.1 is invited to continue its discussion and the basis of the following document kindly provided by the European Commission:

- Quick-guide for new members of National Service Desks (NSD);

- Guidelines for National Service Desk Set-up and Operation for Customs Trans-European Systems;

- Service Level Agreement for the Service Desks of the Customs Trans-European Systems between National Administrations and DG TAXUD.

11.   The three documents are available on the meeting web page (http://www.unece.org/trans/bcf/etir/30_session.html).

(c) Pointers

12.   At its twenty-ninth session, GE.1 decided on the use of xPath for error and amendment pointers (see Informal document GE.1 No. 4 (2019), para 12). As a consequence of this decision, the secretariat proposes to delete code lists 18 and 19, which were used for an alternative pointer mechanism.

(d)   Hash code

13.   At its twenty-eighth session, GE.1 decided to add a footnote to Chapter I.4.3.b of the eTIR concepts document stating that "GE.1 was of the view that the inclusion of the hash code would complicate the submission of advance cargo information for transport operators. Furthermore, it underlined that, upon registration of the declaration by the custom office of departure in the eTIR international system, the data was not only forwarded to all customs offices en route and of destination but also to the guarantee chain. Thus, the information could easily be shared with transport operators to ensure that the data are identical to the data contained in the advance cargo information they submitted originally, but could also be used as evidence in case of claims or court cases. (ECE/TRANS/WP.30/2018/22, para. 21)".

14.   With that in mind and in case WP.30 would agree with removing this functionality, the following amendments should also be made in Annex I of the eTIR concepts document:

- Delete footnote 12 on page 47.

- Delete "After having generated the "key" to ensure the integrity of the advance cargo information," from point 5 on page 48.

- Delete ", allowing the holder to verify the integrity of the data by comparing the "key" of the declaration with the one originally generated." from point 13 on page 49.

- Delete ", allowing the holder to verify the integrity of the data by comparing the "key" of the declaration with the one originally generated." from point 8 on page 51.

- Delete "After having generated the "key" to ensure the integrity of the advance cargo information," from point 2 on page 52.

- Delete ", allowing the holder to verify the integrity of the data by comparing the "key" of the declaration with the one originally generated." from point 10 on page 53.

(e)   Refusal to start

15.   At its twenty-eighth session, GE.1 requested the secretariat to prepare a text to further clarify when and how the refusal to start a TIR operation message should be used. In line with this request, the secretariat proposes to make the following changes to the eTIR concepts document:

- Add a "refusal to start a TIR operation" use case in the use case diagram in Figure 10 (used by "Customs authorities" and "using" the "notify guarantee chain" use case.

- In Chapter 3.2. add a new sub chapter "Refusal to start of a TIR operation use case description" containing the following table:

Table x
Refusal to start a TIR operation use case description

Name	Refusal to start a TIR operation use case
Description	Customs authorities provide the eTIR international system with information regarding the refusal to start a TIR operation.
Actors	Customs authorities
Performance Goals	-

Name	Refusal to start a TIR operation use case
Preconditions	-
Postconditions	-
Scenario	Customs authorities send a message to the eTIR international system notifying that they have refused to start a TIR operation (including the reason). The eTIR system saves the information and notifies the Guarantee Chain of the refusal to start a TIR operation.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be exchanged with the eTIR international system, the information regarding the refusal to start should be provided on the accompanying document. Customs authorities will nevertheless send the refusal to start message at a later stage.
Special requirements	-
Extension Points	-
Requirements Covered	-

- In Chapter 3.2. add a new sub chapter "Refusal to start a TIR operation activity diagram" containing the refusal to start activity diagram.

- In Figure 19 (General eTIR class diagram) add an association class "refusal to start" between the classes "TIR operation" and "Customs office".

16. Furthermore, the following changes should be included in the eTIR functional specifications document:

- In Figure 1.18 (Data exchange class diagram), add an association class "refusal to start" between the classes "TIR operation" and "Customs office" with links to "Control results" and" additional information classes".

- In Chapters 2.5.1.3, 2.5.2.3 and 2.5.3.3, the refusal to start message should be amended to include a "customs office" class containing a "customs office, code" attribute to allow to indicate which customs office has refused to start the TIR operation.

(e) Accident or incident

17. At its twenty-eighth session, GE.1 requested the secretariat to prepare a text to further clarify when a termination message should be sent with type "Accident or incident". In line with this request, the secretariat proposes to make the following changes to the eTIR concepts document:

- Add a "Accident or incident" use case in the use case diagram in Figure 10 (used by "Customs authorities" and "using" the "Terminate TIR operation" and "Update Consignment information" use cases.

- In Chapter 3.2. add a new sub chapter "Accident or incident use case description" containing the following table:

Table x
Accident or incident use case description

Name	Accident or incident use case
Description	An accident or incident happens en route.
Actors	Customs authorities, other authorities en route (e.g. police)
Performance Goals	-
Preconditions	-
Postconditions	-
Scenario	Authorities en route fill in the certified report at the back of the accompanying document. At the first opportunity, customs authorities provide the eTIR international system with information regarding the Accident or incident, either by updating the TIR transport information, if the TIR transport could continue, or by sending a termination message with type "Accident or incident" in case the TIR transport could not be resumed.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be exchanged with the eTIR international system, the information regarding the accident or incident is already available in the certified report and customs authorities shall amend the accompanying document accordingly. Customs authorities will nevertheless send the required messages at a later stage.
Special requirements	-
Extension Points	-
Requirements Covered	-

- In Chapter 3.2. add a new sub chapter "Accident or incident activity diagram" containing the accident or incident activity diagram.

(f) Validations performed by the eTIR international system

18. In the course of the development of the eTIR international system, the secretariat came across a question with regard to the role of the system when it comes to the validation of the data sent by customs administrations or the guarantee chain. According to the sequence diagrams contained in the eTIR functional specifications, which have been developed in line with the use case description and activity diagrams contained in the eTIR concepts document, the eTIR international system will only perform its tasks if some conditions are met.

19. Consequently, validations could lead to data being refused by the eTIR international system and error messages returned. GE.1 might want to go through the sequence diagram, use case descriptions and activity diagrams and confirm that the validations foreseen should indeed be performed by the eTIR international system, in particular those related to the status of the holder.

(g)   Error codes

20.   In the course of the development of additional functionalities in the eTIR international system, software developers pointed out to possible need to revise the error code list (CL99). They are of the view that the current code list is rather limited and focuses mainly on the validation of parameters and structure of XML messages (e.g. cardinalities). They suggest to differentiated error codes by type or error (e.g. validation, functional, rules, …) and include additional error codes specific to eTIR. GE.1 might want to consider the need to revise the code list CL99 on the basis of a presentation by the secretariat.

(h)   Customs offices database

21.   In the eTIR concept document, one of the international deliverables foreseen is a customs offices database (chapter 1.3.2.8). However, since this document was first prepared, a customs offices database has been added to the ITDB. With that in mind, GE.1 might want to request the secretariat to delete the customs offices database from the eTIR international deliverables and add instead a new chapter to Chapter 1.3.3 (Other required systems), as it is the case for the database on TIR Carnet holders contained in the ITDB. The new chapter could read as follows:

1.3.3.2 Customs offices database

To ensure that customs offices are approved for eTIR, the eTIR international system retrieves the necessary information from the ITDB using a web service.
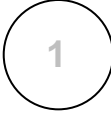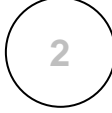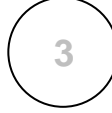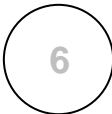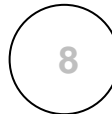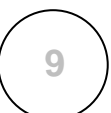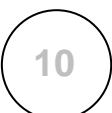
22.   Additionally, in the eTIR functional specifications document, all references to "CL13 Customs offices database (eTIR/to be developed)", should be replaced by "CL13 Customs offices database (TIRExB/ITDB)". And for the sake of clarity, "CL15 International TIR database (TIRExB/ITDB)", should be replaced by "CL15 TIR Carnet holders database (TIRExB/ITDB)".

23.   GE.1 might want to instruct to insert those changes into the eTIR specifications and additionally propose an interface between the eTIR international system and the ITDB, like the one used to extract TIR carnet holder data (messages I3/I4).

III.   Next steps

22.   GE.1 is invited to discuss the considerations and amendments presented in this document and provide the secretariat with detailed instructions on how to further proceed.

Annex I eTIR accompanying document
(recto)

	1. eTIR guarantee number and barcode/QR
	MX51000000
2. Customs office(s) of departure	3.(a) Name of the international organization
	3.(b) Name of the issuing association
Itinerary and national references	4. Holder identification number
	5. Country/Countries of departure 6. Country/Countries of destination
7. Registration No(s). of road vehicle(s)	8. Documents attached to the manifest

GOODS MANIFEST

9. (a) Load compartment(s) or container(s) (b) Marks and Nos. of packages or articles	10(a) Number and type of packages or articles; description of goods, customs office(s) of destination	10(b) HS Code	11. Gross weight in kg	16. Seals or identification marks applied, (number, identification)

FOR FALLBACK PROCEDURE

Officer's signature and customs office date stamp: New seals:	1	Officer's signature and customs office date stamp: New seals:	2	Officer's signature and customs office date stamp: New seals:	3	Officer's signature and customs office date stamp: New seals:	4
Officer's signature and customs office date stamp: New seals:	5	Officer's signature and customs office date stamp: New seals:	6	Officer's signature and customs office date stamp: New seals:	7	Officer's signature and customs office date stamp: New seals:	8
Officer's signature and customs office date stamp: New seals:	9	Officer's signature and customs office date stamp: New seals:	10	Officer's signature and customs office date stamp: New seals:	11	Officer's signature and customs office date stamp: New seals:	12
Officer's signature and customs office date stamp: New seals:	13	Officer's signature and customs office date stamp: New seals:	14	Officer's signature and customs office date stamp: New seals:	15	Officer's signature and customs office date stamp: New seals:	16

(verso)

Certified report
Drawn up in accordance with Article 25 of the TIR Convention
(See also Rules 13 to 17 regarding the use of the TIR Carnet)

1. Customs office(s) of departure	2. **TIR CARNET** N
	3. Name of the international organization

4. Registration No(s). of road vehicle(s) Identification No(s). of container(s)	5. Holder (identification number, name, address and country)

6. The customs seal(s) is/are intact ☐ not intact ☐	8. Remarks
7. The load compartment(s) or intact ☐ not intact ☐	

9. ☐ No goods appeared to be missing   ☐ The goods indicated in items 10 to 13 are missing (M) or have been destroyed (D) as indicated in column 12

10. (a) Load compartment(s) or container(s) (b) Marks and Nos. of packages or articles	11. Number and type of packages or articles; description of goods	12. M or D	13. Remarks (give particulars of quantities missing or destroyed)

14. Date, place and circumstances of the accident

15. Measures taken to enable the TIR operation to continue
☐ affixing of new seals: number _____ description _____
☐ transfer of load (see item 16 below)
☐ other

16. If the goods have been transferred: description of road vehicle(s)/container(s) substituted

	Registration No.	Approved Yes No	No. of certificate of approval	Number and particulars of seals affixed
(a) vehicle	_____	☐ ☐	_____	____ / ____
	Identification No.			____ / ____
(b) container	_____	☐ ☐		____ / ____
	_____	☐ ☐		____ / ____

17. Authority which drew up this certified report	18. Endorsement of next Customs office reached by the TIR transport
_____ _____ Place/Date/Stamp Signature	_____ Signature

☐ Mark the appropriate boxes with a cross

Summary description of the usage of the accompanying document

At the customs office of departure (first)

As the final step of the procedure to start the first TIR operation at the first customs office of departure, the customs system will print the accompanying document in line with the model above. The customs officer will provide the transport operator with the accompanying document (without stamping it).

At the customs office of departure (intermediate)

As the final step of the procedure to start a TIR operation at an intermediate customs office of departure, the customs system will print the accompanying document in line with the model above. The customs officer will provide the transport operator with the new accompanying document containing an updated version of the goods manifest (without stamping it).

In case the customs officer cannot complete the termination of the TIR operation or the start of the next TIR operation electronically, he will date, stamp and sign the first available box on the "FOR FALLBACK PROCEDURE" part of the accompanying document (and indicate the newly affixed seals, if an inspection took place).

At the customs office of exit

At the customs office of exit, the customs officer will scan the bar code on the accompanying document (or enter manually the TIR guarantee reference in the customs system) to identify the eTIR transport and access the related information from the national system.

In case of inspection, the customs officer will print a new accompanying document containing a reference to the newly affixed seals.

In case the customs officer cannot complete the termination of the TIR electronically, he will date, stamp and sign the first available box on the "FOR FALLBACK PROCEDURE" part of the accompanying document (and indicate the new seals affixed if an inspection took place).

At the customs office of entry

At the customs office of entry, the customs officer will scan the bar code on the accompanying document (or enter manually the TIR guarantee reference in the customs system) to identify the eTIR transport and access the related information from the national system.

In case of inspection, the customs officer will print a new accompanying document containing the reference to the newly affixed seals.

In case the customs officer cannot complete the start of the TIR operation electronically, he will date, stamp and sign the first available box on the "FOR FALLBACK PROCEDURE" part of the accompanying document (and indicate the newly affixed seals, if an inspection took place).

At the customs office of destination (intermediate)

At the customs office of intermediate destination, the customs officer will scan the bar code on the accompanying document (or enter manually the TIR guarantee reference in the

customs system) to identify the eTIR transport and access the related information from the national system.

In case of inspection, the customs officer will print a new accompanying document containing a reference to the newly affixed seals.

In case the customs officer cannot complete the termination of the TIR operation or the start of the next TIR operation electronically, he will date, stamp and sign the first available box on the "FOR FALLBACK PROCEDURE" part of the accompanying document (and indicate the newly affixed seals, if an inspection took place).

At the customs office of destination (final)

At the customs office of final destination, the customs officer will scan the bar code on the accompanying document (or enter manually the TIR guarantee reference in the customs system) to identify the eTIR transport and access the related information from the national system.

In case the customs officer cannot complete the termination of TIR operation electronically, he will date, stamp and sign the first available box on the "FOR FALLBACK PROCEDURE" part of the accompanying document and return the document to the transport operator (and indicate the newly affixed seals if an inspection took place).

En route (e.g. police)

Authorities en route can request the accompanying document from the transport operator. In case of doubts, authorities en route should contact the customs administration in their country to verify the authenticity of the document provided on the basis of the data contained in the customs system.

In case of accident or incident

In case of accident or incident, authorities en route will fill in the certified report at the back of the accompanying document.

Upon reception of the certified report, in case the TIR transport cannot continue, customs authorities shall terminate the TIR operation indicating the termination type "Accident or incident". If the TIR transport can continue, customs will amend the TIR transport/operation data in line with the measures taken by the authorities present at the accident or incident (in line with boxes 15 and 16 of the certified report).

Annex II Revision of Chapter 1.2 of the eTIR functional specifications (Fallback scenarios)

1.2   Fallback scenarios

The aim of this Chapter is to provide specific fallbacks for every use case involving the eTIR international system. The fallback scenarios are based on three major elements:

(a)   Accompanying document;

(b)   Local information;

(c)   A web application and web services developed by the guarantee chain

The accompanying document is a piece of paper provided by the customs office of departure after the declaration has been accepted. It contains all relevant information regarding the TIR transport.

It is important to note that the underlying fallbacks are of a functional nature. The systems at stake (i.e. the eTIR international system, national systems and guarantee chain systems) should also be equipped with technical fallbacks which allow systems to run smoothly in case of failure. Functional fallbacks have to be used only when all technical fallbacks have failed.

The use of functional fallbacks may not provide the same level of facilitation to both the holder and customs. As a consequence, their use should not be mandatory for the holder, who should always have the possibility to wait for the systems to be restored. Similarly, customs may establish delays before starting functional fallbacks, allowing for the technical fallback to be started or for the systems to be repaired.

1.2.1   Management by customs of data on guarantees

Guarantee-related information is crucial for the well-functioning of the eTIR system, in particular for the customs office of departure. Therefore, particular emphasis is put on the use cases where the eTIR international system is not in a position to provide the required up-to-date guarantee data.

1.2.1.1   Register guarantee

Potential problems:

(a)   The guarantee chain system is not functioning;

(b)   The connection between the guarantee chain system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning.

Fallbacks:

(a)   No functional fallback is foreseen;

(b)   The guarantee chain will transmit the information to the eTIR international system as soon as the connection is restored. If the connection problem extends to custom administrations and an unregistered guarantee is used for a TIR transport, customs administrations can use the web services or consult the web application developed by the guarantee chain;

(c)   The guarantee chain will transmit the information to the eTIR international system as soon as the system is restored. In the meantime, if an unregistered guarantee is

used for a TIR transport, customs administrations can use the web services or consult the web application developed by the guarantee chain;

1.2.1.2   *Cancel guarantee*

Potential problems:

(a)   The guarantee chain system is not functioning;

(b)   The connection between the guarantee chain system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning.

Fallbacks:

(a)   Within the opening hours of the eTIR helpdesk, the guarantee chain can contact the eTIR helpdesk to transmit the cancellation information;

(b)   The guarantee chain can contact the eTIR helpdesk to transmit the cancellation information or will transmit the cancellation information to the eTIR international system as soon as the connection is restored. If the connection problem extends to custom administrations, customs administrations can use the web services or consult the web application developed by the guarantee chain;

(c)   The guarantee chain will transmit the cancellation information to the eTIR international system as soon as the system is restored. In the meantime, customs administrations can use the web services or consult the web application developed by the guarantee chain;

1.2.1.3   *Accept guarantee*

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning.

Fallbacks:

(a)   The eTIR procedure cannot start when the customs system in the first country of departure is not functioning;

(b)   As soon as the connection is restored, the customs system will send the accept guarantee message. In the meanwhile, the following customs administration will rely on the accompanying document to ascertain that the guarantee has been accepted;

(c)   As soon as the system is restored, the customs system will send the accept guarantee message. In the meanwhile, the following customs administration will rely on the accompanying document to ascertain that the guarantee has been accepted;

1.2.1.4   *Get holder information*

Potential problems:

(a)   The ITDB is not functioning;

(b)   The connection between the ITDB and the eTIR international system is broken.

Fallbacks:

      (a)   The eTIR international system will use a local replica of the ITDB and include a warning code, informing that a replica of the ITDB is the source of the information and that the information might not be up to date;

      (b)   Same as (a).

1.2.1.5   *Query guarantee*

The query guarantee use case has three functions:

      (a)   allowing customs to obtain information on a guarantee (e.g. status or type);

      (b)   allowing customs to obtain information related to TIR transports; and

      (c)   allowing customs to obtain information related to TIR operations.

Potential problems:

      (a)   The customs or guarantee chain system is not functioning;

      (b)   The connection between the customs system and the eTIR international system is broken;

      (c)   The eTIR international system is not functioning;

      (d)   A previous country in the TIR transport used a fallback procedure.

Fallbacks:

      (a)   (a) To request the status of a guarantee, customs authorities can consult the web application developed by the guarantee chain. (b) In order to obtain TIR transport information (mainly the declaration), the accompanying document will be used and, if necessary, the web application developed by the guarantee chain can be consulted. (c) The information on previous TIR operations can be obtained from the web application developed by the guarantee chain.

      (b)   (a) To request the status of a guarantee, customs authorities can use the web services or consult the web application developed by the guarantee chain. (b) In order to obtain TIR transport information (mainly the declaration), the accompanying document will be used and, if necessary, customs authorities can use the web services or consult the web application developed by the guarantee chain. (c) To obtain information on previous TIR operations, customs authorities can use the web services or consult the web application developed by the guarantee chain.

      (c)   Same as (b)

      (d)   (a) No fallback required (b) No fall-back required. (c) Information related to previous TIR operations that were handled under the fallback procedure (including potential changes of the seals) can be found on the accompanying document.

1.2.2   *Data exchange*

The exchange of TIR transport data is a key element of the eTIR system. Customs authorities provide the holder with a paper accompanying document as reference. The paper accompanying document will also be used in case the information cannot be exchanged electronically. The information on TIR operations is also important but is considered of secondary importance and, therefore, will not be subject to fallback procedures other than stamping the accompanying document.

If a fallback procedure is used in a country of pure transit (no loading or unloading of goods), the following countries can still use the standard procedure but information

regarding the operation carried out under the fallback procedure will only be available on the accompanying document until the information is transmitted at a later stage.

1.2.2.1   *Record consignment information*

Potential problems:

(a)   The customs system of the country of departure is not functioning;

(b)   The connection between the customs system of the country of departure and the eTIR international system is broken;

(c)   The eTIR international system is not functioning;

(d)   Subsequent countries could not be notified.

Fallbacks:

(a)   The eTIR procedure cannot start when the customs system in the first country of departure is not functioning. At the following customs of departure, if the declaration is changed, customs authorities will manually amend the paper accompanying document, sign and stamp the changes. The information will be sent to the eTIR international system as soon as the customs system is restored;

(b)   The accompanying document produced by the customs system becomes the primary source of information for the TIR transport. The holder is informed that countries along the itinerary will not receive advance cargo information. The holder remains responsible to comply with advance information requirements in subsequent countries;

(c)   Same as (b);

(d)   The eTIR international system informs the customs system that some subsequent countries could not be notified of the registration of this consignment. The customs system will specifically mention (print) on the accompanying document that some countries did not receive the adequate information. The holder is therefore informed that countries along the itinerary will not receive the advance cargo information. The holder remains responsible to comply with advance information requirements in subsequent countries.

1.2.2.2   *Update consignment information*

The same potential problems and fallbacks as those of the record consignment use case apply.

1.2.2.3   *Start of TIR operation*

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning;

Fall-backs:

(a)   Customs authorities (other than at the first customs office of departure) accept the accompanying document as source for the declaration, sign and stamp it (and indicate the new seals if required). The start information will be keyed-in and transmitted to the eTIR international system once the customs system is restored.

(b)   Customs authorities (other than at the first customs office of departure) accept the accompanying document as source for the declaration, sign and stamp it (and indicate the new seals if required). The start information will be transmitted to the eTIR international system once the connection is restored.

(c)   Customs authorities (other than at the first customs office of departure) accept the accompanying document as source for the declaration, sign and stamp it (and indicate the new seals if required). The start information will be transmitted to the eTIR international system once the system is restored.

1.2.2.4   Terminate TIR operation

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning;

Fallbacks:

(a)   Customs authorities accept the accompanying document, sign and stamp it (and indicate the new seals if required). The termination information will be keyed-in and transmitted to the eTIR international system once the customs system is restored.

(b)   Customs authorities accept the accompanying document, sign and stamp it (and indicate the new seals if required). The termination information will be transmitted to the eTIR international system once the connection restored.

(c)   Customs authorities accept the accompanying document, sign and stamp it (and indicate the new seals if required). The termination information will be transmitted to the eTIR international system once the system is restored.

1.2.2.5   Discharge TIR operation

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning;

Fallbacks:

(a)   Customs authorities postpone the transmission of the discharge information until the customs system is working;

(b)   Customs authorities postpone the transmission of the discharge information until the connection is re-established.

(c)   Customs authorities postpone the transmission of the discharge information until the system is working;

1.2.2.6   Refusal to start of TIR operation

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning;

Fallbacks:

(a)   Customs authorities (other than at the first customs office of departure) amend the accompanying document with the refusal to start operation information, sign and stamp it. The refusal to start information will be keyed-in and transmitted to the eTIR international system once the customs system is restored;

(b)   Customs authorities (other than at the first customs office of departure) amend the accompanying document with the refusal to start operation information, sign and stamp it. The refusal to start information will be transmitted to the eTIR international system once the connection is restored;

(c)   Customs authorities (other than at the first customs office of departure) amend the accompanying document with the refusal to start operation information, sign and stamp it. The refusal to start information will be transmitted to the eTIR international system once the system is restored.

1.2.2.7   *Notify guarantee chain*

Potential problems:

(a)   The guarantee chain system is not functioning;

(b)   The connection between the guarantee chain system and the eTIR international system is broken.

Fallbacks:

(a)   The eTIR international system puts the messages in a cue and will sent them when the guarantee chain system is restored;

(b)   The eTIR international system puts the messages in a cue and will sent them when the connection is restored.

1.2.2.8   *Notify subsequent countries*

Potential problems:

(a)   The customs system of one country along the itinerary is not functioning;

(b)   The connection between the customs system of one country along the itinerary and the eTIR international system is broken.

Fallbacks:

(a)   The eTIR international system puts the message in a cue and will sent it as soon as the customs system is working. If the holder presents himself at a customs office, whose system is not functioning, the accompanying document will be used as source of information (see also 1.2.2.1 and 1.2.2.2);

(b)   Same as (a).

1.2.2.9   *Advance cargo information*

Potential problems:

(a)   The customs system is not functioning;

(b)   The connection between the customs system and the eTIR international system is broken;

(c)   The eTIR international system is not functioning.

Fallbacks:

(a)   The eTIR international system notifies the holder or any system using the advance cargo information web service that the advance cargo information could not be sent and that an alternative declaration mechanism should be used;

(b)   Same as (a);

(c)   The holder or any system using the advance cargo information web service must try to use alternative declaration mechanisms.

Annex III Amendments to Chapter 3 of the eTIR Concepts document (Fallback scenarios only)

3.1.5   *Register guarantee use case description*

Table 3
Register guarantee use case description

Name	Register guarantee use case
Description	The Guarantee Chain registers each guarantee issued to a holder in the eTIR international system by sending an electroni???c message.
Actors	Guarantee Chain
Performance Goals	Any guarantee, issued to a holder, shall be registered in the eTIR international system before it can be used by a holder to accompany a declaration.
Preconditions	The holder, to whom the Guarantee Chain has issued a guarantee, must be authorized and registered in the ITDB and the eTIR international system should not contain a prior registration of the guarantee.
Postconditions	The guarantee information is stored in the eTIR international system with status "issued".
Scenario	**Registration** The Guarantee Chain issues a guarantee to a holder and sends a secure electronic message with all information regarding the guarantee to the eTIR international system. The eTIR international system checks if the guarantee has not yet been registered. Then it gets holder information, including its current status. In case the guarantee has not yet been registered and the holder is authorized, the system registers the guarantee and notifies the results of the registration of the guarantee to the Guarantee Chain. If the registration fails for any reason, the Guarantee Chain is informed accordingly.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be sent to the eTIR international system by means of the web services, no functional fallback is foreseen, and the information should be sent as soon as it is possible.
Special requirements	The Guarantee Chain cannot update any information it has registered in the eTIR international system. Only the cancellation of the guarantee is possible.
Extension Points	-
Requirements Covered	-

3.1.7   Cancel guarantee use case description

Table 4
Cancel guarantee use case description

Name	Cancel guarantee use case
Description	The Guarantee Chain cancels a guarantee after it has been issued to a holder by sending an electronic message to the eTIR international system.
Actors	Guarantee Chain
Performance Goals	-
Preconditions	The guarantee must have been registered and have the status "issued". The guarantee can also have the status "in use".
Postconditions	The guarantee status is changed to "cancelled", "requested cancellation" or remains in its current status.
Scenario	**Cancellation** The Guarantee Chain sends a secure electronic message to the eTIR international system to request the cancellation of a guarantee. First the eTIR international system checks that the guarantee is registered. Then, in case the guarantee status is "issued", the eTIR international system changes the guarantee status to "cancelled". If the guarantee status is "in use", its status is turned to "requested cancellation".
Alternative Scenario	**Fallback scenario** If electronic messages cannot be sent to the eTIR international system by means of the web services, the Guarantee chain should contact the eTIR helpdesk to transmit the cancellation information.
Special requirements	
Extension Points	-
Requirements Covered	-

3.1.9   Accept guarantee use case description

Table 5
Accept guarantee use case description

Name	Accept guarantee use case
Description	The customs authorities notify the eTIR international system that the guarantee has been accepted.
Actors	Customs authorities
Performance Goals	-
Preconditions	The guarantee must be registered and its status must be "issued". The customs authorities at departure must also have received a TIR declaration. The holder must be registered in the database and authorized.
Postconditions	The guarantee status is changed to "in use" or remains at its current status.
Scenario	**Accept guarantee** Customs authorities send a secure electronic message to the eTIR international system informing that the guarantee has been accepted for a TIR transport.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be sent to the eTIR international system by means of the web services, the accompanying document will serve as a proof that the guarantee has been accepted.
Special requirements	-
Extension Points	-
Requirements Covered	-

3.1.13 *Query guarantee use case description*

Table 7
Query guarantee use case description

Name	Query guarantee use case
Description	Customs authorities or a Guarantee Chain request the eTIR international system information on issued guarantees.
Actors	Guarantee Chain, customs authorities
Performance Goals	-
Preconditions	-
Postconditions	-
Scenario	**Query the guarantee** A Guarantee Chain or customs authorities send a secure electronic query to the eTIR international system. The eTIR international system extracts all data from the database concerning the guarantee and combines them with data on the holder (get holder info) and sends all information to the customs authorities or to the Guarantee Chain. If the guarantee has not yet been registered, the customs authorities or the Guarantee Chain are informed accordingly.
Alternative Scenario	**Fallback scenario** Customs authorities can obtain information about the transport on the accompanying document and can use the web services or consult the web application developed by the guarantee chain.
Special requirements	A Guarantee Chain can only query information on those guarantees which it has issued and which have been registered by the eTIR international system. The eTIR international system also provides guarantee chains with information on TIR transports attached to the guarantees issued by them.
Extension Points	-
Requirements Covered	-

3.2.2   *Record consignment information use case description*

Table 8
Record consignment information use case description

Name	Record consignment information use case
Description	Information about the consignment is centrally stored.
Actors	Customs authorities
Performance Goals	
Preconditions	The guarantee must have been accepted (status "in use"). The holder should be authorized and not currently excluded from any country along the itinerary.
	The declaration has been accepted by the customs authorities.
Postconditions	-
Scenario	The first customs office of departure will send all data contained in the electronic declaration together with the information on seals affixed to the eTIR international system after having accepted the declaration and sealed the loading unit. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the information. Customs authorities will provide the holder with an accompanying paper document.
Alternative Scenario	**Fallback scenario**
	In case the transmission of information to the eTIR international system fails, the customs authorities nevertheless accept the holder to start the TIR transport. Customs authorities will transmit the electronic data to the eTIR international system at the first opportunity. In the meantime, other customs authorities will obtain the required information from the accompanying document.
Special requirements	
Extension Points	-
Requirements Covered	-

3.2.4   Update consignment information use case description

Table 9
Update consignment information use case description

Name	Update consignment information use case
Description	The information related to a declaration is updated after subsequent loading or partial unloading, after the truck and/or the goods have been submitted to checks, after the itinerary has been changed or after the vehicle has been changed.
Actors	Customs authorities, holder
Performance Goals	
Preconditions	The declaration updates have been accepted by the customs authorities. The holder should be authorized and not currently excluded from any country along the itinerary.
Postconditions	-
Scenario	**Intermediate loading points** The intermediate customs office of departure will send all data contained in the declaration to the eTIR international system together with the information on the new seals, after having accepted the declaration and resealed the vehicle or container. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the updated information.
Alternative Scenario	**Intermediate Unloading points** After having sent a termination message and unloaded the goods concerned, the intermediate customs office of destination will send information on the new seals affixed. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the updated information. Customs authorities provide the holder with an updated accompanying paper document. **Customs checks** Having removed the seals from the vehicle or container, performed the necessary checks and resealed the vehicle or container, customs authorities send a message to provide the eTIR international system with information on the new seals affixed. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the updated information. Customs authorities provide the holder with an updated accompanying paper document. **Change of itinerary** After having been informed by the holder that the routing of the transport has changed, customs authorities send a message to provide the eTIR international system with information on the new itinerary. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the updated information. It also informs the countries removed from the itinerary that the TIR transport will not transit their country. Customs authorities provide the holder with an updated accompanying paper document. **Vehicles change**

After having been informed by the holder that a new vehicle (usually the tractor unit) will be used, customs authorities send a message to provide the eTIR international system with information on the new vehicle. The eTIR international system provides all subsequent countries indicated in the itinerary and the Guarantee Chain with the updated information.

Fallback scenario

In case the transmission of information to the eTIR international system fails, the customs authorities nevertheless accept the holder to continue the TIR transport. Customs authorities will transmit the electronic data to the eTIR international system at the first opportunity. In the meantime, other customs authorities will obtain the required information from the accompanying document.

Special requirements	
Extension Points	-
Requirements Covered	-

3.2.6 *Starting of TIR operation use case description*

Table 10
Starting of TIR operation use case description

Name	**Starting of TIR operation use case**
Description	Customs authorities provide the eTIR international system with information regarding the start of a TIR operation.
Actors	Customs authorities
Performance Goals	-
Preconditions	Ensure the validity of the guarantee and the authorization for the holder.
Postconditions	-
Scenario	Customs authorities send a message to the eTIR international system notifying that a TIR operation has started. If the holder is authorized and the guarantee status is "in use", the eTIR system saves the information and notifies the Guarantee Chain of the start of a TIR operation.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be exchanged with the eTIR international system, the information regarding the start should be provided on the accompanying document. The status of the guarantee can be queried using the web services or the web application developed by the guarantee chain. Customs authorities will nevertheless send the start message at a later stage.
Special requirements	-
Extension Points	-
Requirements Covered	-

3.2.8   *Terminate TIR operation use case description*

Table 11
TIR operation use case description

Name	**Terminate TIR operation use case**
Description	Customs authorities provide the eTIR international system with information regarding the termination of a TIR operation.
Actors	Customs authorities
Performance Goals	-
Preconditions	-
Postconditions	-
Scenario	Customs authorities send a message to the eTIR international system notifying that a TIR operation has terminated. The eTIR system stores the information, changes the status of the guarantee to cancelled in case the Guarantee Chain has requested cancellation and notifies the Guarantee Chain of the termination of all TIR operations, including the final termination, providing the data as required by Annex 10 of the TIR Convention.
Alternative Scenario	**Fallback scenario** If electronic messages cannot be exchanged with the eTIR international system, the information regarding the termination should be provided on the accompanying document. Customs authorities will nevertheless send the termination message at a later stage.
Special requirements	Termination can be made with reservations.
Extension Points	-
Requirements Covered	-

3.2.10 Discharge TIR operation use case description

Table 12
Discharge TIR operation use case description

Name	**Discharge TIR operation use case**
Description	Customs authorities provide the eTIR international system with information regarding the discharge of a TIR operation.
Actors	Customs authorities
Performance Goals	
Preconditions	-
Postconditions	-
Scenario	Customs authorities send a message to the eTIR international system notifying that a TIR operation has been discharged. The eTIR international system stores the information and notifies the Guarantee Chain of the discharge of the TIR operations constituting a single TIR transport. When all goods have reached their final destination and all TIR operations covered by the guarantee have been discharged, the status of the guarantee is changed to "discharged in all countries".
Alternative Scenario	**Fallback scenario** If electronic messages cannot be exchanged with the eTIR international system, the information will nevertheless send the discharge message at a later stage.
Special requirements	-
Extension Points	-
Requirements Covered	-

3.2.12 *Notify Guarantee Chain use case description*

Table 13
Notify Guarantee Chain use case description

Name	**Notify Guarantee Chain use case**
Description	The eTIR international systems notifies the Guarantee Chain of changes in the information related to a guarantee it has issued.
Actors	Guarantee Chain
Performance Goals	
Preconditions	-
Postconditions	-
Scenario	The eTIR international system notifies the Guarantee Chain of changes in the information related to a guarantee it has issued by sending an electronic message.
Alternative Scenario	**Fallback scenario** In case the computer system of any Guarantee Chain cannot be reached, the eTIR international system will continue to try sending the information. A monitoring system will detect problems and trigger prompt and appropriate reactions.
Special requirements	-
Extension Points	-
Requirements Covered	-

3.2.14   Notify subsequent Countries use case description

Table 14
Notify subsequent Countries use case description

Name	Notify subsequent Countries use case
Description	The eTIR international system notifies the customs authorities of information related to a consignment that will transit their territory.
Actors	Customs authorities
Performance Goals	
Preconditions	-
Postconditions	-
Scenario	The eTIR international system notifies customs authorities of information related to consignments that will transit their territory by sending them electronic messages.
Alternative Scenario	**Fallback scenario** In case a national system is not available, the eTIR international system will continue to try sending the information. A monitoring system will detect problems and trigger prompt and appropriate reactions.
Special requirements	-
Extension Points	-
Requirements Covered	-

3.2.16   *Advance cargo information use case description*

Table 15
Advance cargo information use case description

Name	Declaration use case
Description	The holder transmits advance TIR data to the eTIR international system, either directly of via a declaration mechanism provided by the Customs authorities of it country of residence or a private international declaration mechanism, that will then forwards the data to the customs authorities of the country of first customs office of departure.
Actors	Holder, customs authorities, private provider of an international declaration services (e.g. guarantee chain)
Performance Goals	
Preconditions	The holder, the customs system of the country of residence of the holder or the private provider of an international declaration services is registered in the authentication database (see 1.3.2.10)
Postconditions	-
Scenario	.
Alternative Scenario	**Fallback scenario** In case transmission by means of web services is not available, the holder should use other available declaration mechanisms.
Special requirements	-
Extension Points	-
Requirements Covered	-

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