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Simple, Transparent and Effective Processes
For Global Commerce

**BUSINESS REQUIREMENTS SPECIFICATION
(BRS)**

Business Domain: Environmental Management

Business Process: Transfrontier Movements of Waste

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Business Requirements Specification

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2008-01-24	<p>Draft for 1.0 – V20080124</p> <p>Changes marked in green. Paragraphs for deletion marked in red</p> <ul style="list-style-type: none"> • Clarification concerning the relationship between consignee and facility (if facility and consignee are the same legal entity the consignee may act on behalf of the facility; if not it is recommended to send movement announcement and cancelation document also to the facility even not legally required) • In a few cases the document mentioned the consignee to be responsible for sending certificate of waste receipt or certificate of waste recovery/disposal. Changed “consignee” to “facility”. • Clarification on interim recovery (only one certificate of waste receipt is sent by the facility of the first interim recovery; this facility is also responsible for sending all the interim and the final recovery/disposal information) • According to the previous bullet we changed the business collaboration protocol in 5.2.1.4 and removed the recursive flow of notify waste receipt. • Explanation before the cancelation in 5.1.2 was misleading, because it was talking about notification – corrected. The figure below this paragraph unintentionally showed the wrong interaction – corrected. • Clarification added: the business entity life cycle one shows the regular case. • Changed business process activity model in 5.1.4. The partition of the facility is new to reflect legal requirements; before the activities of the facility were part of the consignee’s partition. • Clarification on unintentionally sending a certificate of waste receipt or one of recovery/disposal – requires withdrawal by a cancelation document, but we do not include this in the flow for reasons of simplicity • The previous version used the term “message broker” which is specific to the EUDIN project. Instead we use the more general term “messaging system”. • In the previous version the third business collaboration realization in 5.2.1.3 was between competent authority of destination and consignee. However, the inbound role is not only performed by the consignee. It is a mix between consignee and facility. Thus we use the abstract “receiving party” which is consignee in case of announcement and cancelation and facility in case of confirming receipt and recovery/disposal. • An explanation of the business collaboration realization in 5.2.3.3 was missing – added. • The general description of the business transaction is always the same as of the business transaction use case. It makes sense to keep the information in an on-line tool, but repeating it in the following section in a text document is not useful. Thus these general descriptions are marked in red for deletion. • The row “affected business entities” in the business transaction use case worksheets always mentioned the business entity “waste movement”. It is corrected to “waste transport” according to the business entity lifecycle in 5.1.3 • The time values in the business transactions were incorrect due to an error in the report from the UMM tool. We corrected the time values for all exchanged document as follows: Time to respond: null (because there is no return document in notifications); Time to Ack Receipt: 5 Minutes; Time to Ack Processing: 24 Hours • The “intelligible check” is required for all business transactions – we corrected the “false” to “true” in case of notify waste receipt and in case of notify waste recovery/disposal. Furthermore, we added the clarification that in all cases “intelligible check” includes only syntax and grammar validation. Sequence validation is not useful, because documents must be accepted even if previous ones in the flow are missing. • The previous version included a special “waste movement cancelation envelope”. However, the underlying document type may be reused for multiple purposes. Thus, we changed “waste movement cancelation envelope” to “cancelation envelope”. Accordingly, the business transaction activity diagram in 5.3.4.3 and the class diagram in 5.4.4 had to be replaced. • Clarification added: a cancelation (of a waste movement) cannot be withdrawn. It requires a new announcement of the waste movement.

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1 Preamble

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2 References

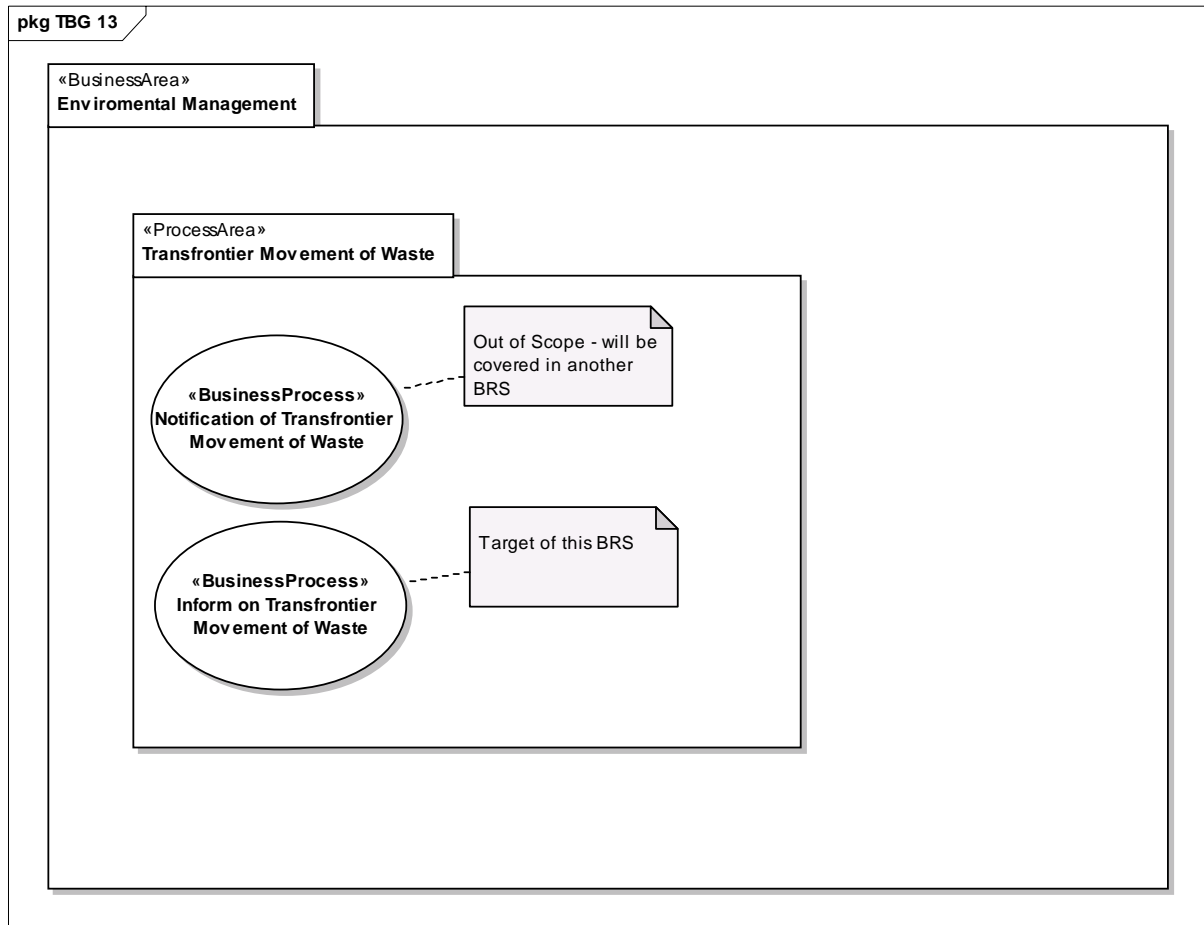
- UN/CEFACT Modeling Methodology Foundation Module 1.0
http://www.unece.org/cefact/umm/UMM_Foundation_Module.pdf
- UN/CEFACT – ebXML Core Components Technical Specification Version 2.01
http://www.unece.org/cefact/ebxml/CCTS_V2-01_Final.pdf
- UN/CEFACT Business Requirements Specification Documentation Template
Version1 Release 5
<http://www.uncefactforum.org/ICG/Documents/ICG%20Home/Business%20Requirements%20Specification%20V1r5%20approved.zip>
- UN/CEFACT Core Components Library (UN/CCL), Version 07A
<http://www.unece.org/cefact/codesfortrade/unccl/CCL07A.zip>
- UML ISO Version 1.4.2
<http://www.omg.org/cgi-bin/doc?formal/05-04-01>
- Basel Convention on Transfrontier Movement of Waste
- EUDIN Waste Project:
<http://www.eudin.org>

3 Objective

This project aims to standardize business process and information entity in the area of Tracking of Waste Movements as required by the ratified parties of the United Nations Environment Program's Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

4 Scope

4.1 Business Domain View



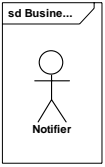
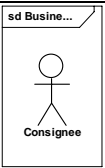

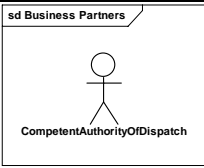
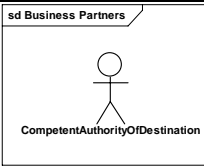
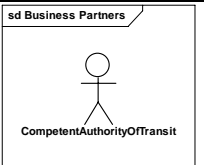
4.2 Context Classification Scheme

Categories	Description and Values
Business Process	Transfrontier Movement of Waste
Product Classification	Waste
Industry Classification	Waste Management
Geopolitical	Global
Official Constraint	Basel Convention on Transfrontier Movement of Waste
Business Process Role	undefined
Supporting Role	undefined
System Capabilities	Not applicable

5 Business Requirements Section

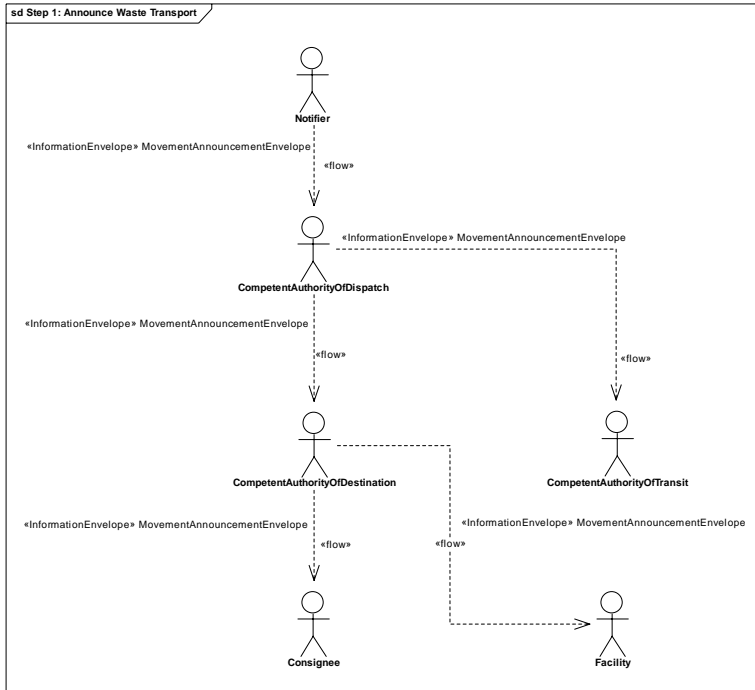
5.1 Business Process Elaboration

5.1.1 Business Partners

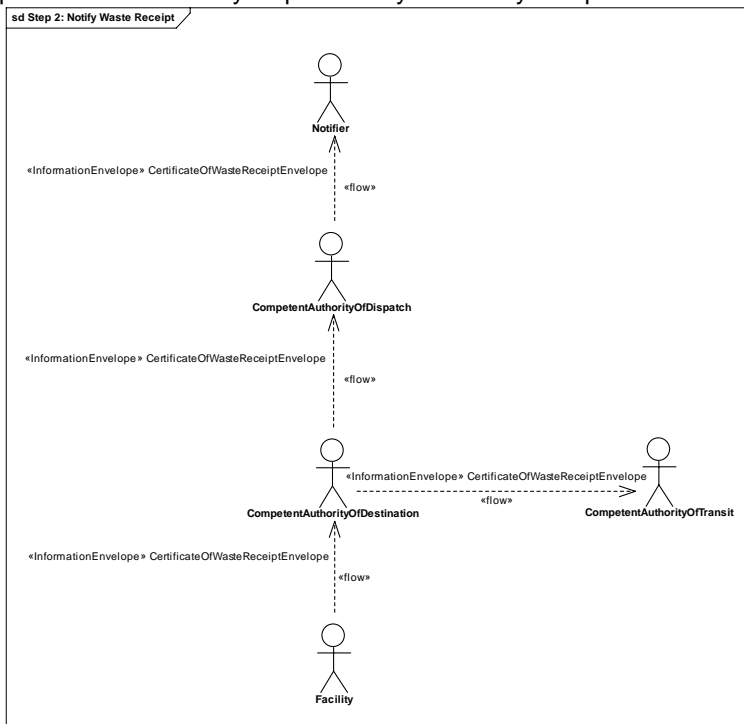
	<p>The notifier is one of the persons or bodies:</p> <ol style="list-style-type: none"> i. the original producer ii. the licensed new producer who carries out operations prior to shipment iii. a licensed collector who, from various small quantities of the same type of waste collected from a variety of sources, has assembled the shipment which is to start from a single notified location iv. a registered dealer who has been authorized in writing by the original producer, new producer or licensed collector specified in (i), (ii) and (iii) to act on his/her behalf as notifier, v. a registered broker who has been authorized in writing by the original producer, new producer or licensed collector specified in (i), (ii) and (iii) to act on his/her behalf as notifier, vi. where all of the persons specified in (i), (ii), (iii), (iv) and (v) if applicable, are unknown or insolvent, the holder.
	<p><i>Consignee</i> means the person or undertaking under the jurisdiction of the country of destination to whom or to which the waste is shipped for recovery or disposal;</p> <p>It should be noted that if the Consignee and the Facility are the same legal entity, the Consignee may act on behalf of the Facility.</p>
	<p>The facility which carries out the collection, recovery, or disposal of the waste.</p>
	<p><i>Competent Authority of Dispatch</i> means the competent authority for the area from which the shipment is planned to be initiated or is initiated;</p>
	<p><i>Competent Authority of Destination</i> means the competent authority for the area to which the shipment is planned or takes place, or in which waste is loaded prior to recovery or disposal in an area not under the national jurisdiction of any country;</p>
	<p><i>Competent Authority of Transit</i> means the competent authority for any country, other than that of the competent authority of dispatch or destination, through which the shipment is planned or takes place;</p>

5.1.2 Interactions between Actors

Prior information regarding actual start of shipment: the notifier shall send signed copies of the then completed movement document to the competent authorities concerned and to the consignee at least three working days before the shipment starts. In case that the consignee and the facility are not the same legal entity, we recommend sending this prior information also to the facility, which is later on responsible for confirming the receipt of the waste.

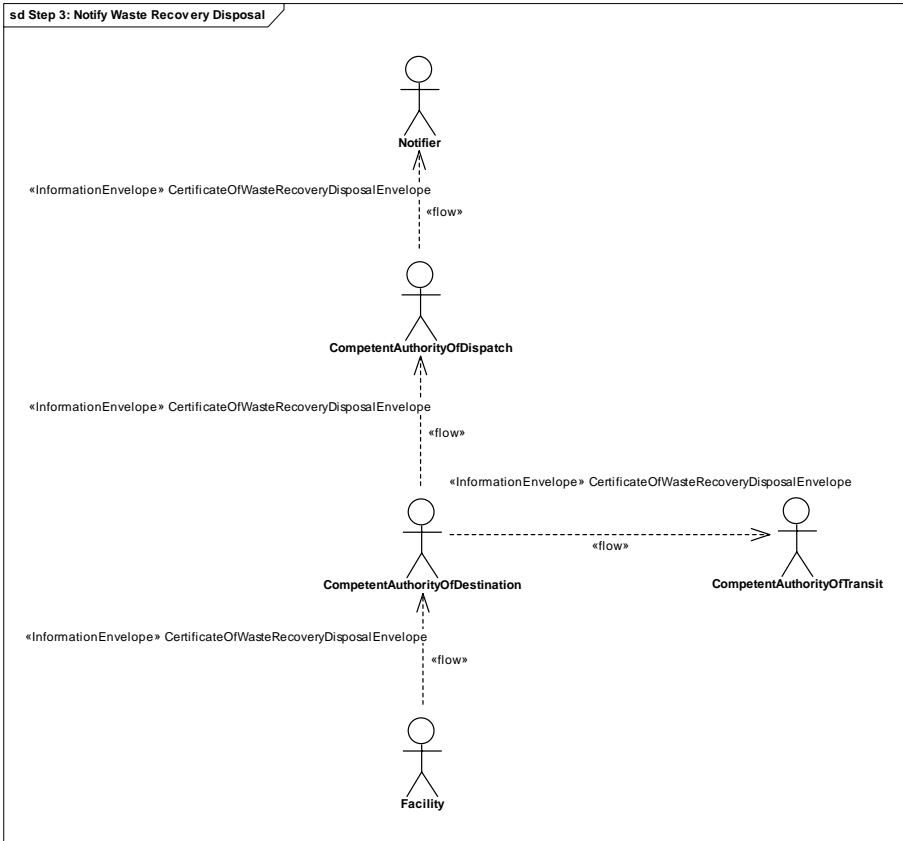


Written confirmation of receipt of the waste by the facility: within three days of receipt of the waste, the facility shall provide confirmation in writing that the waste has been received. In case of interim recovery, the facility which carries out this interim recovery or disposal operation shall provide confirmation in writing that the waste has been received within three days of the receipt of the waste. Note, there is only one confirmation of the receipt of the waste sent in total, either by the facility that performs the recovery/disposal or by the facility that performs the first interim recovery/disposal.

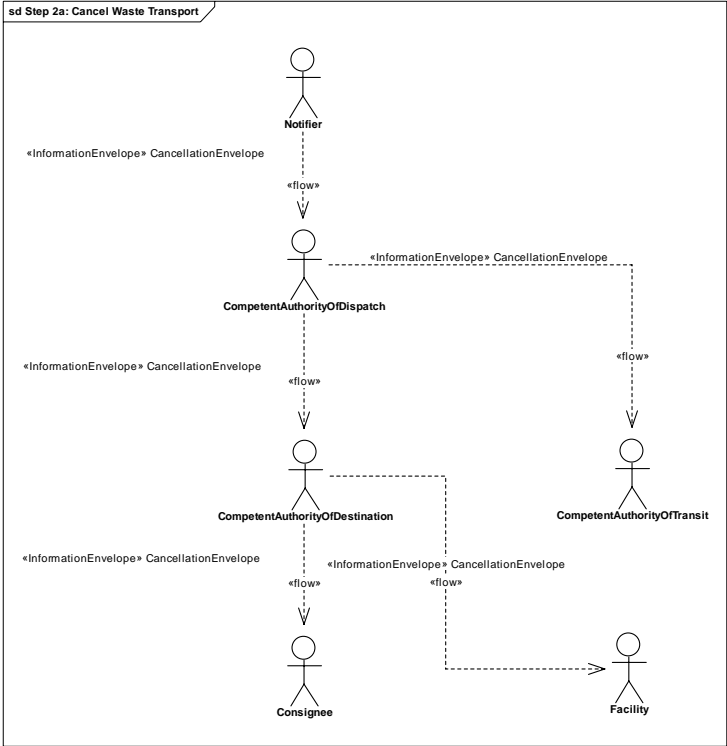


Certificate for non-interim recovery or disposal by the facility: as soon as possible, but no later than 30 days after completion of the non-interim recovery or disposal operation, and no later than one calendar year following receipt of the waste, the facility carrying out the operation shall, under its responsibility, certify that the non-interim recovery or disposal has been completed.

Interim recovery or disposal: As soon as possible, but no later than 30 days after completion of the interim recovery or disposal operation, and no later than one calendar year following the receipt of the waste, the facility carrying out this operation shall, under its responsibility, certify that the interim recovery or disposal has been completed. However, it should be noted that the facility that performed the first interim recovery/disposal is responsible for sending all the interim and the final recovery/disposal information to the competent authorities and to the notifier.



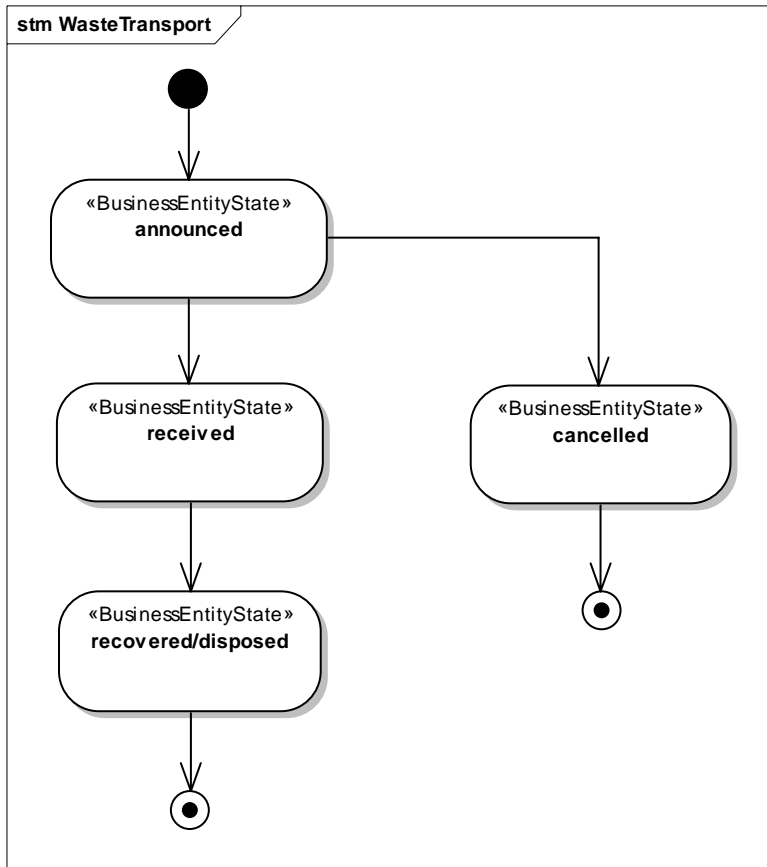
If a shipment will not take place or if any essential change is made to the details and/or conditions of the consented shipment, the notifier has to inform all the other involved parties. In either case the notifier has to inform the competent authorities and the consignee that the shipment will not be carried out as previously announced by a cancellation message. In case of an essential change, the correct information about a shipment is announced by a new waste movement message. This means an update is realized in two steps: First by canceling the old shipment announcement and secondly by issuing a new shipment announcement. Furthermore, one should note that we recommend again sending the cancellation information also to the facility in case that consignee and facility are not the same legal entity.



5.1.3 Business Entity Lifecycle

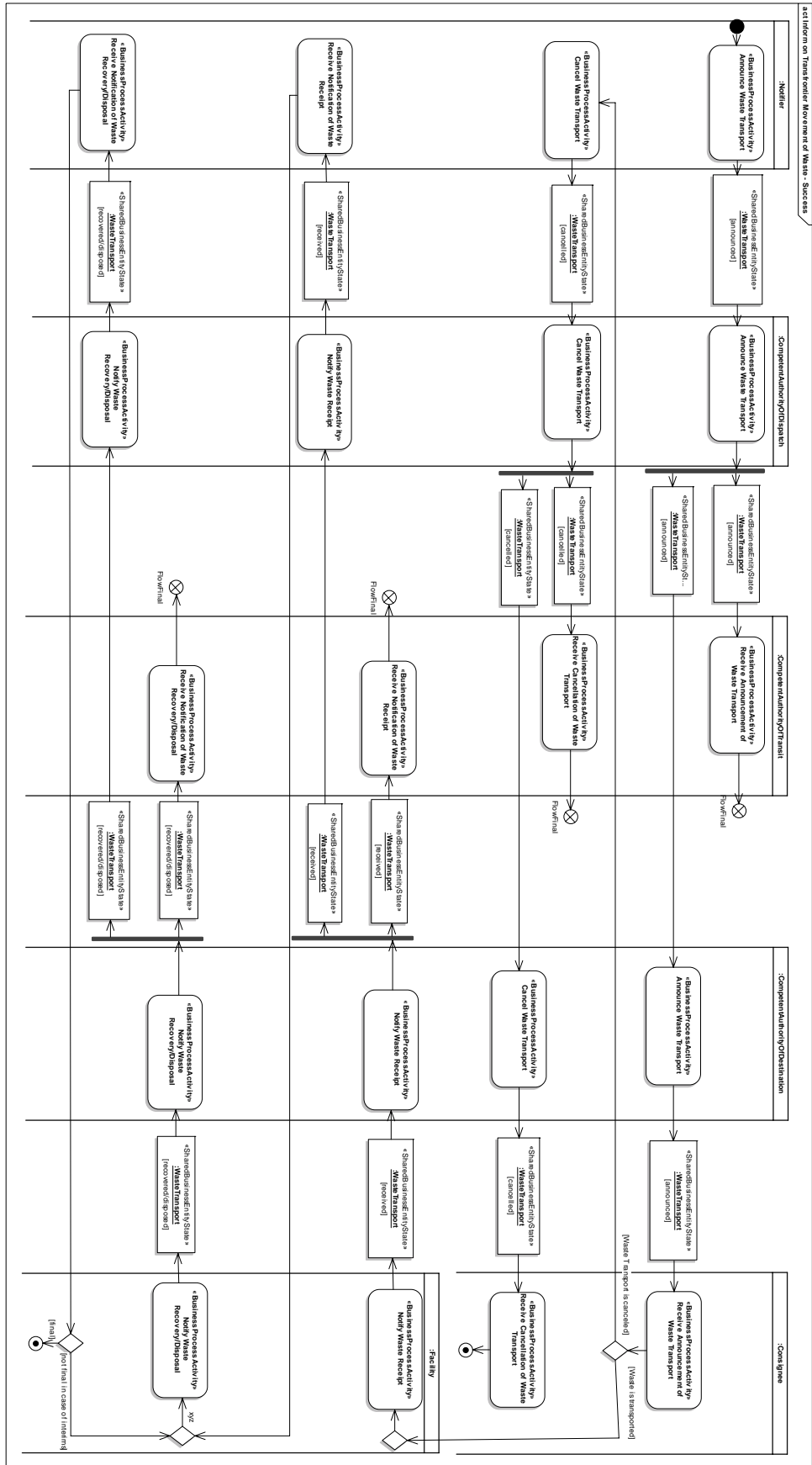
A Waste Transport usually has the following lifecycle: At the beginning the waste transport is announced. If the waste transport is not carried out as intended, the waste transport is cancelled and the lifecycle ends. If the waste transport is carried out as intended and arrives at the facility, the waste transport is received. After the final recovery or disposal operation, the waste transport is in state recovered/disposed, which completes the lifecycle.

It is important to note that this lifecycle considers only the regular case. Irregular cases where some stages are skipped due to missing information are not considered. Furthermore, this lifecycle does not reflect the fact that a state is reached due to an unintentional issue of a document that must be undone.



5.1.4 Business Process Activity Model

The multi-party business process activity model for inform on transfrontier waste movement reflecting the business entity lifecycle of waste transport introduced before is described as follows:



5.2 Business Collaborations

5.2.1 Inform on Transfrontier Waste Movement

5.2.1.1 Business Collaboration Use Case: Inform on Transfrontier Waste Movement

Diagram without Role Mapping:

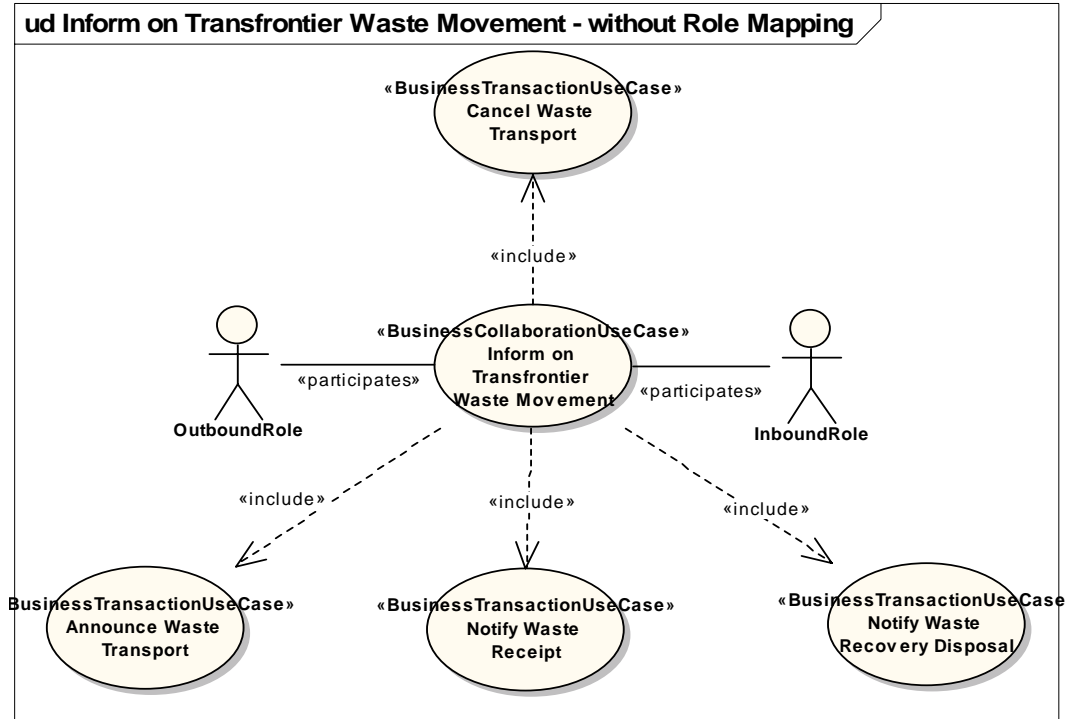
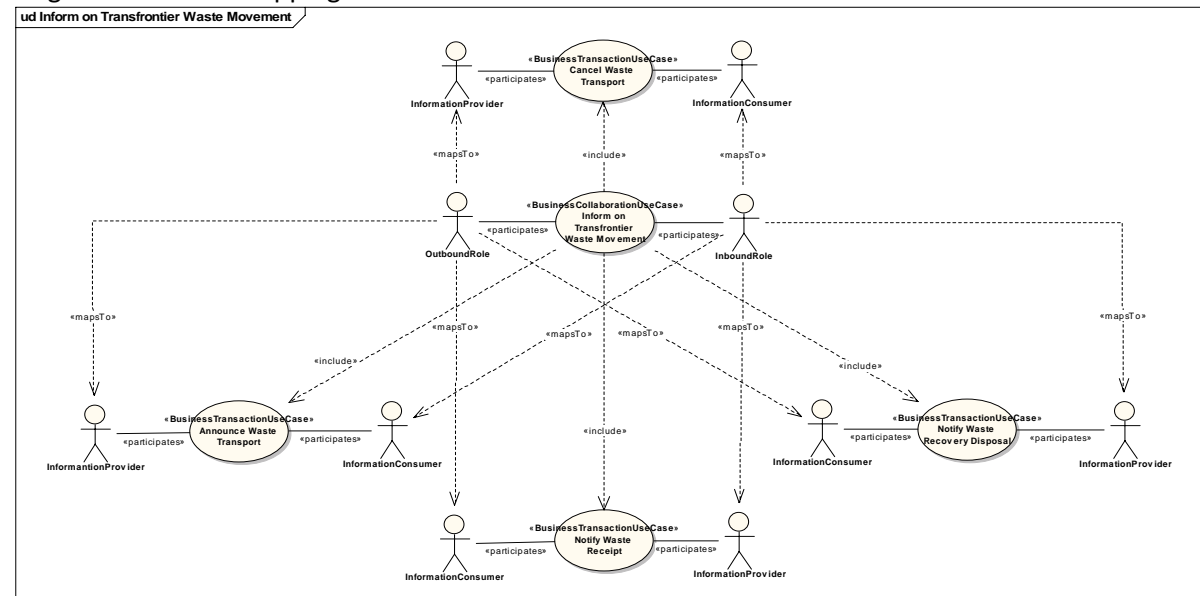


Diagram with Role Mapping:



5.2.1.2 Business Collaboration Use Case Worksheet: Inform on Transfrontier Waste Movement

General

Business Collaboration Name Inform on Transfrontier Waste Movement

Definition The subject of the collaboration is the distribution of information concerning a cross-border waste transport which usually includes announcing the waste transport, notifying the waste receipt and notifying the waste recovery/disposal.

Description In this model it is envisioned that a notifier as well as a consignee have access to information systems each provided by the competent authority in their country, which are connected to a messaging system guaranteeing the delivery to the other relevant parties involved. This means that the notifier as well as the consignee will only communicate with the information system provided by the competent authority in their country, a messaging system is used to realize the information exchange between the competent authorities.

It follows that the same business collaboration is executed between different sets of business partners, one of which always plays the outbound role (OR) and the other one the inbound role (IR):

[a] between notifier (OR) and competent authority of dispatch (IR)

[b] between competent authority of dispatch (OR) and competent authority of destination (IR)

[c] between competent authority of destination (OR) and consignee/facility (IR)

The information flow to and from competent authorities of transit are defined in another business collaboration.

This business collaboration use case focuses on a bi-lateral collaboration between a single <outbound role> and a single <inbound role>, but not all the collaborations along the chain.

The business collaboration is started when the <outbound role> announces a waste transport by a movement announcement. If the waste transport does not take place as announced, it is necessary that the <outbound role> cancels the waste transport by a movement announcement cancellation. If the transport takes place, the waste will be shipped to the consignee. The <inbound role> notifies the receipt of the waste by a certificate of waste receipt. Once the waste is recovered/disposed, the <inbound role> notifies this fact by a certificate of waste recovery disposal. It should be noted that in case of interim recovery and disposal operations (which may involve multiple facilities) multiple certificates of waste recovery/disposal – one for each interim recovery/disposal and one for the final recovery/disposal - are sent.

The above mentioned flow of information will be kept in the usual case. However, the sequence specified in this flow is not mandatory. This means that a document must be accepted even if a previously required document was not issued. In other words, a certificate of waste receipt or a movement announcement cancellation must be accepted even if the corresponding movement announcement is missing. A certificate of waste recovery disposal must be accepted even if the corresponding movement announcement and/or certificate of waste receipt is missing. The consequences must be handled on a business level which is not subject to this model.

Start/End Characteristics	
Affected Business Entities	General Notification Waste Movement
Pre-condition	The Consigner is allowed to export the waste according to a previous general notification.
Post-condition	The exported waste was recovered or disposed and both competent authorities are aware of the quantities shipped, received and recovered/disposed.
Begins When	The <outbound role> announces a waste transport.
Ends When	The <outbound role> cancels the waste transport or the <inbound role> notifies the recovery/disposal of the waste.
Exceptions	<p>The information about the transport must be changed. This requires the cancellation of the transport. A new business collaboration is started by issuing a new movement announcement.</p> <p>The information about the receipt of waste must be changed.</p> <p>Information of waste receipt was issued unintentionally, since the waste has not been received in reality.</p> <p>The information about the recovery/disposal must be changed.</p> <p>Information about the recovery/disposal was issued unintentionally, since the waste has not yet been recovered/disposed in reality.</p> <p>The <inbound role> is aware that a waste was received without having been informed about its transport.</p> <p>The <inbound role> is aware that a waste was received, but the transport was canceled before.</p> <p>The <inbound role> is aware that a waste was recovered/disposed without having been informed about its transport / receipt.</p> <p>The <inbound role> is aware that a waste was recovered/disposed, but the corresponding transport was</p>

cancelled.

The <inbound role> is not informed about the general notification on which the transport is based.

Actions

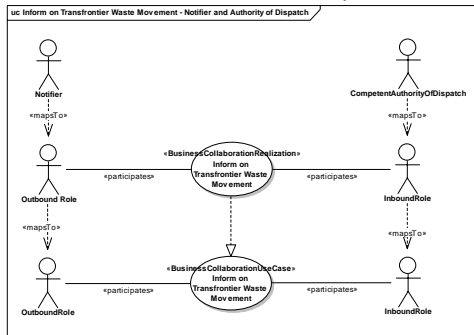
Description

Announce Waste Transport
 Notify Waste Receipt
 Notify Waste Recovery Disposal
 Cancel Waste Transport

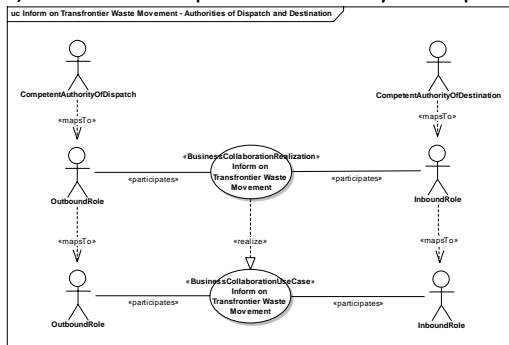
5.2.1.3 Business Collaboration Realizations of Inform on Transfrontier Waste Movement

The business collaboration Inform on Transfrontier Waste Movement is carried out exactly the same way between three different sets of business partners. Accordingly, there exist three realizations of the same business collaboration.

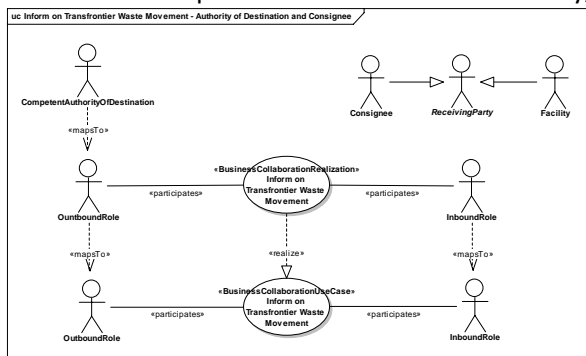
1) Between notifier and competent authority of dispatch:



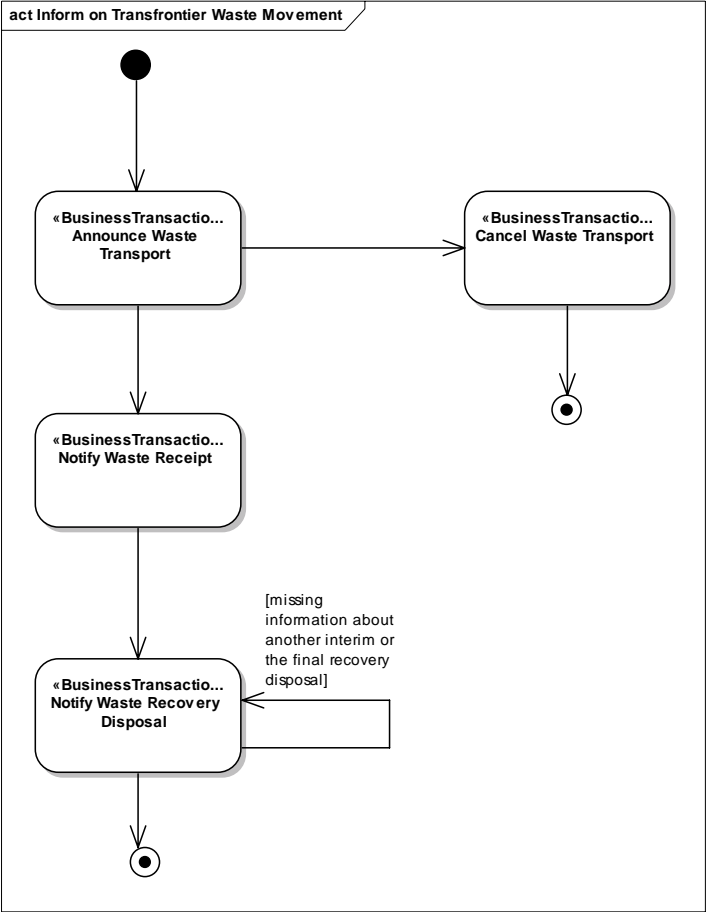
2) between competent authority of dispatch and competent authority of destination:



3) Between competent authority of destination and an abstract role receiving party, which is the consignee in case of the movement announcement and the cancellation and which is the facility in case of the receipt of the waste and the recovery/disposal of the waste:

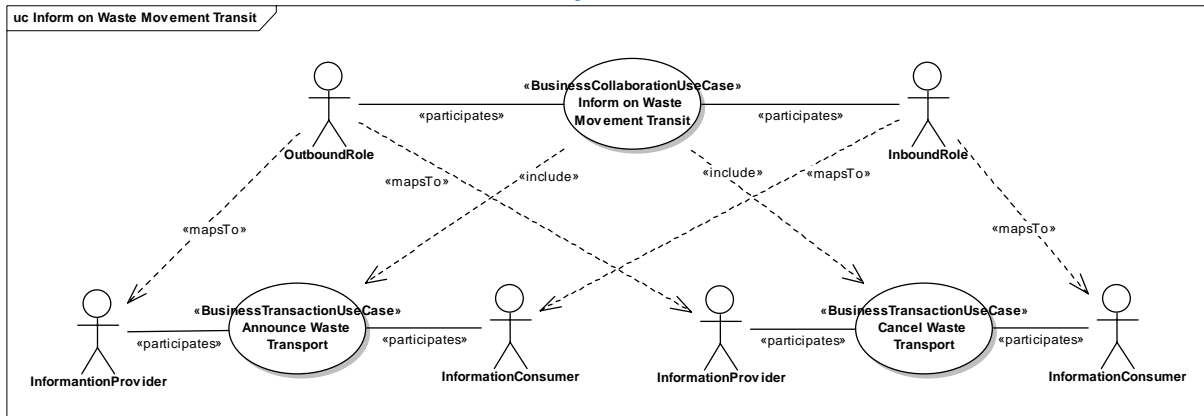


5.2.1.4 Business Collaboration Protocol (Activity Diagram): Inform on Transfrontier Waste Movement



5.2.2 Inform on Waste Movement Transit

5.2.2.1 Business Collaboration Use Case: Inform on Waste Movement Transit



5.2.2.2 Business Collaboration Use Case Worksheet: Inform on Waste Movement Transit

General

Business Collaboration Name	Inform on Waste Movement Transit
Definition	The subject of the collaboration is the announcement of a cross-border waste to a competent authority of transit. In most cases it only includes this announcement, but it must also be prepared for cancelations of the waste transport.
Description	<p>In this model it is envisioned that a notifier as well as a consignee have access to information systems each provided by the competent authority in their country, which are connected to a messaging system guaranteeing the delivery to the other relevant parties involved. Accordingly, a messaging system is used to realize the information exchange between a competent authority of dispatch and a competent authority of transit.</p> <p>In this business collaboration the competent authority of dispatch plays the outbound role (OR) and the competent authority of transit plays the inbound role (IR).</p> <p>The business collaboration is started when the <outbound role> announces a waste transport by a movement announcement. If the waste transport does not take place, it is necessary that the <outbound role> cancels the waste transport by a movement announcement cancellation.</p>

Start/End Characteristics

Affected Business Entities	General Notification Waste Movement
Pre-condition	The Consigner is allowed to export the waste according to a previous general notification.
Post-condition	The waste movement is announced – if the transport takes place as announced – and cancelled otherwise.
Begins When	The <outbound role> announces a waste transport.
Ends When	The <outbound role> cancels the waste transport or a

notification of waste receipt is received by both parties as a result from other business collaborations (see 5.2.1.2 inform on transfrontier waste movement and 5.2.3.2 inform transit on waste movement results).

Exceptions

The information about the transport must be changed. This requires the cancellation of the transport. A new business collaboration is started by issuing a new movement announcement.

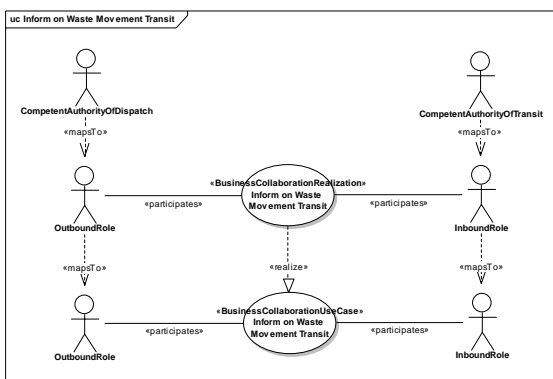
The <inbound role> is not informed about the general notification on which the transport is based.

Actions

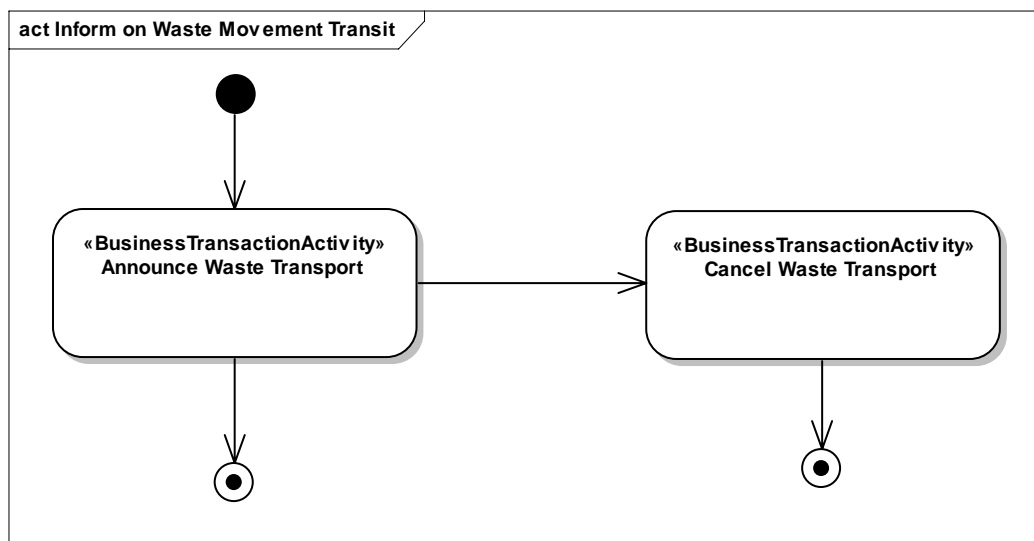
Description	Announce Waste Transport Cancel Waste Transport
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5.2.2.3 Business Collaboration Realizations of Inform on Waste Movement Transit

The business collaboration Inform on Waste Movement Transit is carried out only between the competent authority of dispatch and a competent authority of transit. Accordingly, there is only one business collaboration realization in which the competent authority of dispatch performs the Outbound Role and the competent authority of transit performs the Inbound Role.

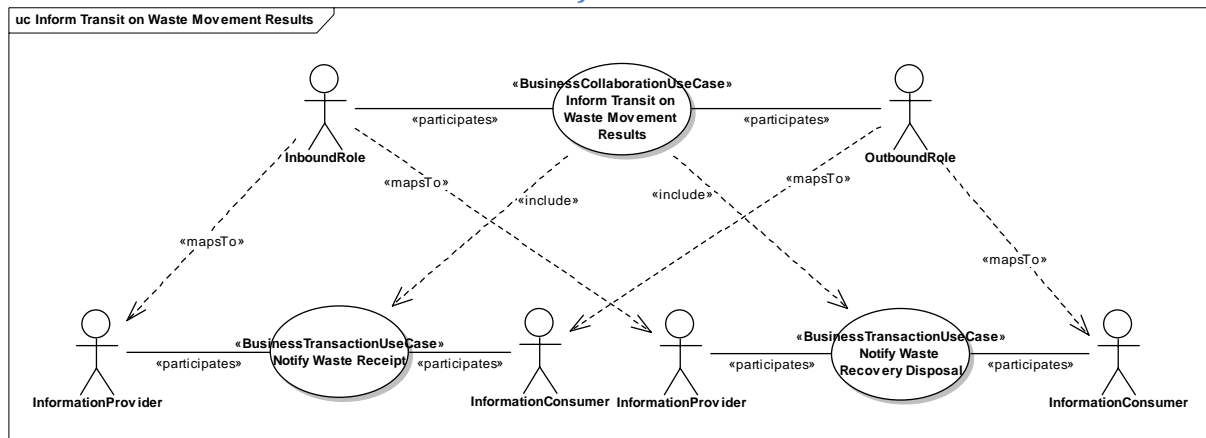


5.2.2.4 Business Collaboration Protocol (Activity Diagram): Inform on Waste Movement Transit



5.2.3 Inform Transit on Waste Movement Results

5.2.3.1 Business Collaboration Use Case: Inform Transit on Waste Movement Results



5.2.3.2 Business Collaboration Use Case Worksheet: Inform Transit on Waste Movement Results

General

Business Collaboration Name	Inform Transit on Waste Movement Results
Definition	The subject of the collaboration is to inform a competent authority of transit on the results of a waste movement – i.e. that the waste was received and that the waste was recovered or disposed.
Description	<p>In this model it is envisioned that a notifier as well as a consignee have access to information systems each provided by the competent authority in their country, which are connected to a messaging system guaranteeing the delivery to the other relevant parties involved. Accordingly, a messaging system is used to realize the information exchange between a competent authority of destination and a competent authority of transit.</p> <p>In this business collaboration the competent authority of destination plays the inbound role (IR) and the competent authority of transit plays the outbound role (OR).</p> <p>The business collaboration starts when the <inbound role> notifies the receipt of the waste by a certificate of waste receipt. Once the waste is recovered/disposed the <inbound role> notifies this fact by a certificate of waste recovery disposal. It should be noted that in case of interim recovery and disposal operations (which may involve multiple facilities) multiple certificates of waste recovery/disposal – one for each interim recovery/disposal and one for the final recovery/disposal - are sent.</p> <p>The above mentioned flow of information will be kept in the usual case. However, the sequence specified in this flow is not mandatory. This means that a document must be accepted even if a previously required document was not issued. In other words, a certificate of waste receipt must be accepted even if the</p>

corresponding movement announcement is missing. A certificate of waste recovery disposal must be accepted even if the corresponding movement announcement and/or certificate of waste receipt is missing. The consequences must be handled on a business level which is not subject to this model.

Start/End Characteristics

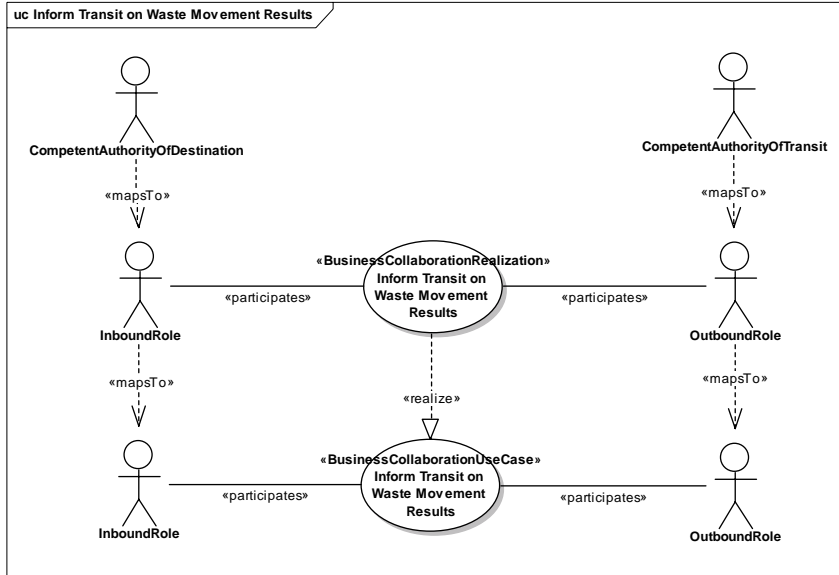
Affected Business Entities	General Notification Waste Movement
Pre-condition	The corresponding waste transport was announced.
Post-condition	The exported waste was recovered or disposed and both competent authorities are aware of the quantities shipped, received and recovered/disposed.
Begins When	The <inbound role> notifies the receipt of a waste.
Ends When	The <inbound role> notifies the final recovery/disposal of the waste.
Exceptions	<p>The information about the receipt of waste must be changed.</p> <p>Information of waste receipt was issued unintentionally, since the waste has not been received in reality.</p> <p>The information about the recovery/disposal must be changed.</p> <p>Information about the recovery/disposal was issued unintentionally, since the waste has not yet been recovered/disposed in reality.</p> <p>The <inbound role> is aware that a waste was received without having been informed about its transport.</p> <p>The <inbound role> is aware that a waste was received, but the transport was canceled before.</p> <p>The <inbound role> is aware that a waste was recovered/disposed without having been informed about its transport / receipt.</p> <p>The <inbound role> is aware that a waste was recovered/disposed, but the corresponding transport was cancelled.</p> <p>The <inbound role> is not informed about the general notification on which the transport is based.</p> <p>The <outbound role> is not informed about the general notification on which the transport is based.</p>

Actions

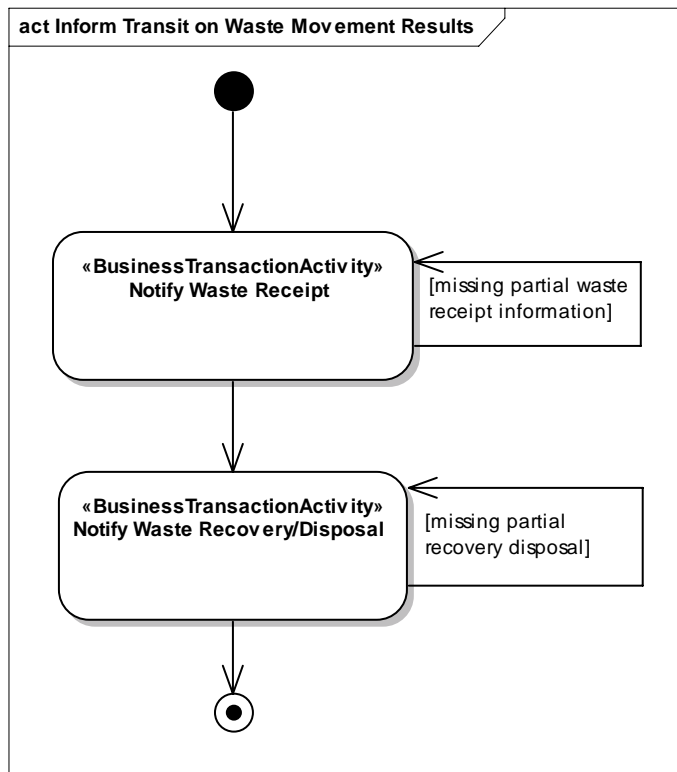
Description	Notify Waste Receipt Notify Waste Recovery Disposal
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5.2.3.3 Business Collaboration Realizations of Inform Transit on Waste Movement Results

The business collaboration Inform Transit on Waste Movement Results is carried out only between the competent authority of destination and a competent authority of transit. Accordingly, there is only one business collaboration realization in which the competent authority of destination performs the Outbound Role and the competent authority of transit performs the Inbound Role.



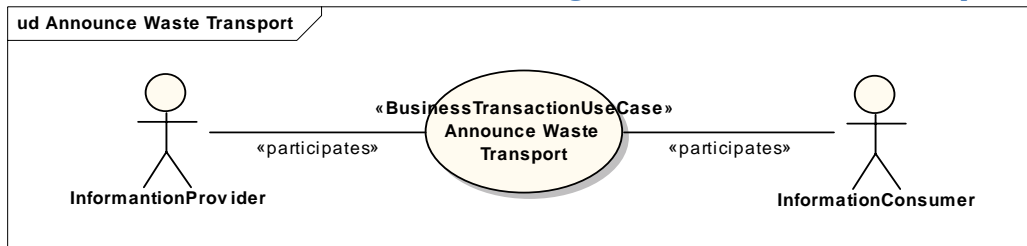
5.2.3.4 Business Collaboration Protocol (Activity Diagram): Inform Transit on Waste Movement Results



5.3 Business Transactions

5.3.1 Announce Waste Transport

5.3.1.1 Business Transaction Use Case Diagram: Announce Waste Transport



5.3.1.2 Business Transaction Use Case Worksheet: Announce Waste Transport

General

Business Transaction Name	Announce Waste Transport
Definition	"Announce Waste Transport" is used to provide the details of an intended waste transport.
Description	"Announce Waste Transport" deals with prior information regarding the actual start of a waste shipment. The notifier shall send signed copies of the completed movement document to the competent authorities concerned and to the consignee at least three working days before the shipment starts.

The movement document is not only used to capture the information known prior to the transport, but later information of the waste receipt as well as of the waste recovery/disposal are added. In this model it is envisioned that a movement document is an electronic document. Since keeping track of changes in electronic documents edited by multiple parties is hard and costly, clearly want split the movement document into three different documents depending on the state in the process. Thus, we use the term movement announcement to refer to a document which only captures the information known prior to the waste transport.

In this model it is envisioned that the notifier has access to an information system provided by its competent authority of dispatch which is connected to a messaging system guaranteeing the delivery to the other relevant parties involved. This means the notifier delivers the movement announcement to the information system of the competent authority of dispatch. From the information system of the competent authority of dispatch the movement announcement is forwarded to the competent authority of destination and to the competent authorities of transit, if any. The consignee has access to the information system of the competent authority of destination in order to get the movement announcement.

It follows that the movement announcement is transmitted from an information provider (IP) to an information consumer (IC):
[a] from the notifier (IP) to the competent authority of dispatch

- (IC)
- [b] from the competent authority of dispatch (IP) to the competent authority of destination (IC)
- [c] from the competent authority of dispatch (IP) to the competent authority of transit (IC)
- [d] from the competent authority of destination (IP) to the consignee (IC)

This business transaction use case focuses on an interchange between a single information provider to a single information consumer, but not all of the exchanges along the chain.

It must be noted that the movement announcement shall be sent at least 3 working days prior to the transport. However, the transmission of a movement announcement closer to the transport is possible – the consequences must be handled on a business level which is not subject to this model.

Requesting Role	Information Provider
Responding Role	Information Consumer
Requesting Activity	Submit Movement Announcement
Responding Activity	Check Movement Announcement

Start/End Characteristics

Affected Business Entities	General Notification Waste Transport
Pre-condition	A general notification of the intended waste transport already exists.
Post-condition	Both the <Information Provider> and the <Information Consumer> are aware of the intended waste transport.
Begins When	The <InformationProvider> submits a movement announcement to the <InformationConsumer>.
Actions	Submit Movement Announcement; Check Movement Announcement
Ends When	The <InformationProvider> receives an acknowledgement from the <InformationConsumer> that it will process the movement announcement
Exceptions	The <InformationConsumer> is not aware of the general notification on which the waste movement is based

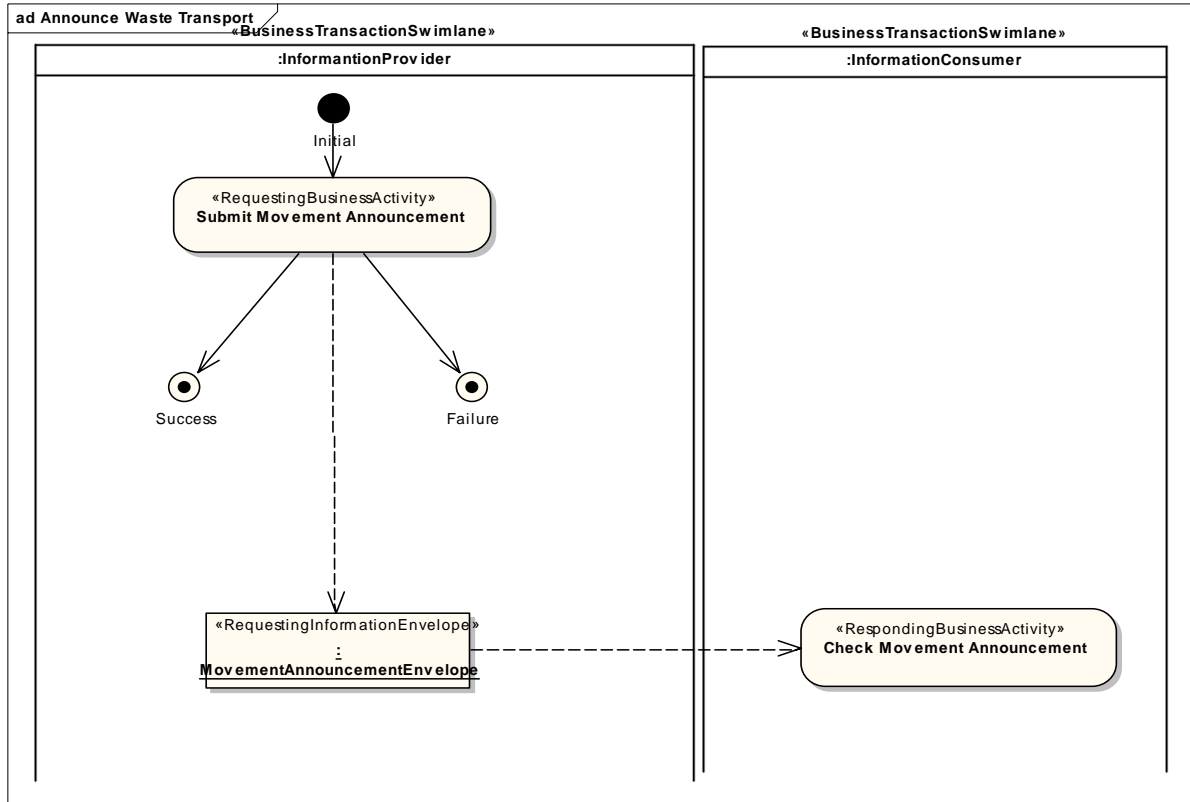
The quantity that will be shipped exceeds the open quantity of the general notification

The time frame of the general notification is already exceeded

The <InformationConsumer> does not receive/acknowledge the information about the waste movement

The information in the movement announcement is not correct or it was issued unintentionally. Both cases require a cancellation which is subject to another business transaction.

5.3.1.3 Business Transaction (Activity Diagram): Announce Waste Transport



5.3.1.4 Business Transaction Worksheet: Announce Waste Transport

General

Select Business Transaction Pattern Notification
 Secure Transport true

Requestor's Side

Requesting Role InformationProvider
 Requesting Business Activity Name Submit Movement Announcement
 Time to Respond null
 Time to Acknowledge Receipt 5 min
 Time to Acknowledge Processing 24 hrs
 Authorization Required true
 Non Repudiation Required false
 Non Repudiation of Receipt Required false
 Intelligible Check Required True (syntax and grammar validation, no sequence validation)
 Number of Retries 3

Responder's Side

Responding Role InformationConsumer
 Responding Business Activity Name Check Movement Announcement

Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	True (syntax and grammar validation, no sequence validation)

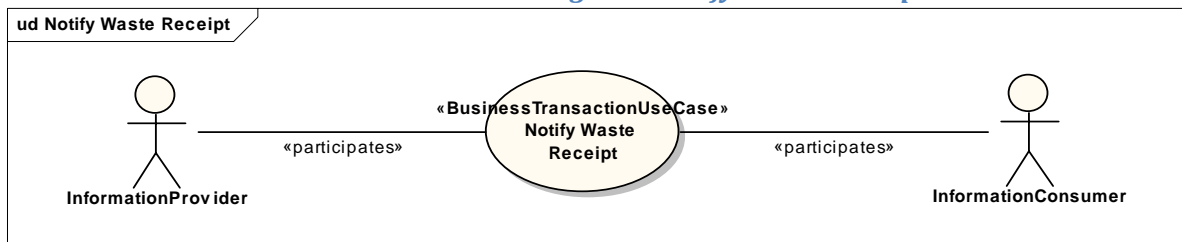
Business Information Envelopes

Information Envelope from Requesting Business Activity

Information Name	MovementAnnouncementEnvelope
Information State	
Are Contents Confidential?	True
Is the Envelope Tamperproof?	False
Authentication Required?	False (may be reconsidered in the future)

5.3.2 Notify Waste Receipt

5.3.2.1 Business Transaction Use Case Diagram: Notify Waste Receipt



5.3.2.2 Business Transaction Use Case Worksheet: Notify Waste Receipt

General

Business Transaction Name	Notify Waste Receipt
Definition	"Notify Waste Receipt" is used to signal the receipt of a waste movement.
Description	"Notify Waste Receipt" deals with the written confirmation of receipt of waste by the facility. Within three days of receipt of the waste, the facility shall provide confirmation in writing that the waste has been received. This confirmation is traditionally contained in, or annexed to the corresponding movement document. The facility shall send signed copies of the movement document containing this confirmation to the notifier and to the competent authorities concerned. In case of interim recovery, the facility which carries out this interim recovery or disposal operation shall provide confirmation in writing that the waste has been received within three days of the receipt of the waste. Note, there is only one confirmation of the receipt of the waste sent in total, either by the facility that performs the recovery/disposal or by the facility that performs the first interim recovery/disposal.

In this model it is envisioned that a movement document is an electronic document. Since keeping track of changes in electronic documents edited by multiple parties is hard and costly, the written confirmation of receipt of waste is a separate document: the certificate of waste receipt. The certificate of waste receipt has to clearly reference the corresponding movement announcement. Further it includes information about the date of the receipt, the quantity, and the type of waste received. However, it is desired that the overall information includes a copy of the data of the corresponding movement announcement. The copied information must be semantically identical to the movement announcement. Thus, the <InformationConsumer> may ignore the copied data.

Furthermore, it is envisioned that the consignee has access to an information system provided by its competent authority of destination which is connected to a messaging system guaranteeing the delivery to the other relevant parties involved. This means the consignee delivers the certificate of waste receipt to the information system of the competent authority of destination. From the information system of the competent authority of destination the certificate of waste receipt is forwarded to the competent authority of dispatch and to the competent authorities of transit, if any. The notifier has access to the information system of the competent authority of destination in order to get the certificate of waste receipt.

It follows that the certificate of waste receipt is transmitted from an information provider (IP) to an information consumer (IC):

- [a] from the consignee (IP) to the competent authority of destination (IC)
- [b] from the competent authority of destination (IP) to the competent authority of dispatch (IC)
- [c] from the competent authority of destination (IP) to the competent authority of transit (IC)
- [d] from the competent authority of dispatch (IP) to the consignee (IC)

This business transaction use case focuses on an interchange between a single information provider to a single information consumer, but not all of the exchanges along the chain.

It must be noted that the certificate of waste receipt shall be confirmed within 3 days of receipt of the waste. However, the transmission of a certificate of waste receipt after more than 3 days is possible – the consequences must be handled on a business level which is not subject to this model

Requesting Role

Information Provider

Responding Role

Information Consumer

Requesting Activity

Confirm Waste Receipt

Responding Activity

Act on Waste Receipt Confirmation

Start/End Characteristics

Affected Business Entities

General Notification

Pre-condition

Waste Transport

A movement document for the received waste exists. This is what is assumed in a regular case. However, in an exceptional case (see Exceptions below) it should be possible to notify the receipt of a waste even if a movement announcement does not exist.

Post-condition

The transport of the waste was not cancelled before. Although it is rather unlikely to receive a waste of which the transport was canceled, it should be possible to confirm the waste receipt. Both the <InformationProvider> and the <InformationConsumer> are aware of the receipt of waste.

Begins When

The <InformationProvider> provides the relevant information in a certificate of waste receipt to the <InformationConsumer>.

Actions

Confirm Waste Receipt; Act on Waste Receipt Confirmation

Ends When

The <InformationProvider> receives a confirmation from the <InformationConsumer> that it will process the certificate of waste receipt.

Exceptions

The waste export was not announced. This means, a corresponding movement announcement does not exist.

If the first exception holds, it might be even the case that the referenced General Notification is not known.

The data of the movement form is not correct and must be changed

The quantity received differs from the quantity shipped as announced in the movement announcement. Although this is the usual case, it is required to agree on the consequences.

The facility does not accept the shipped waste. This refusal might apply only to portions of the shipped waste.

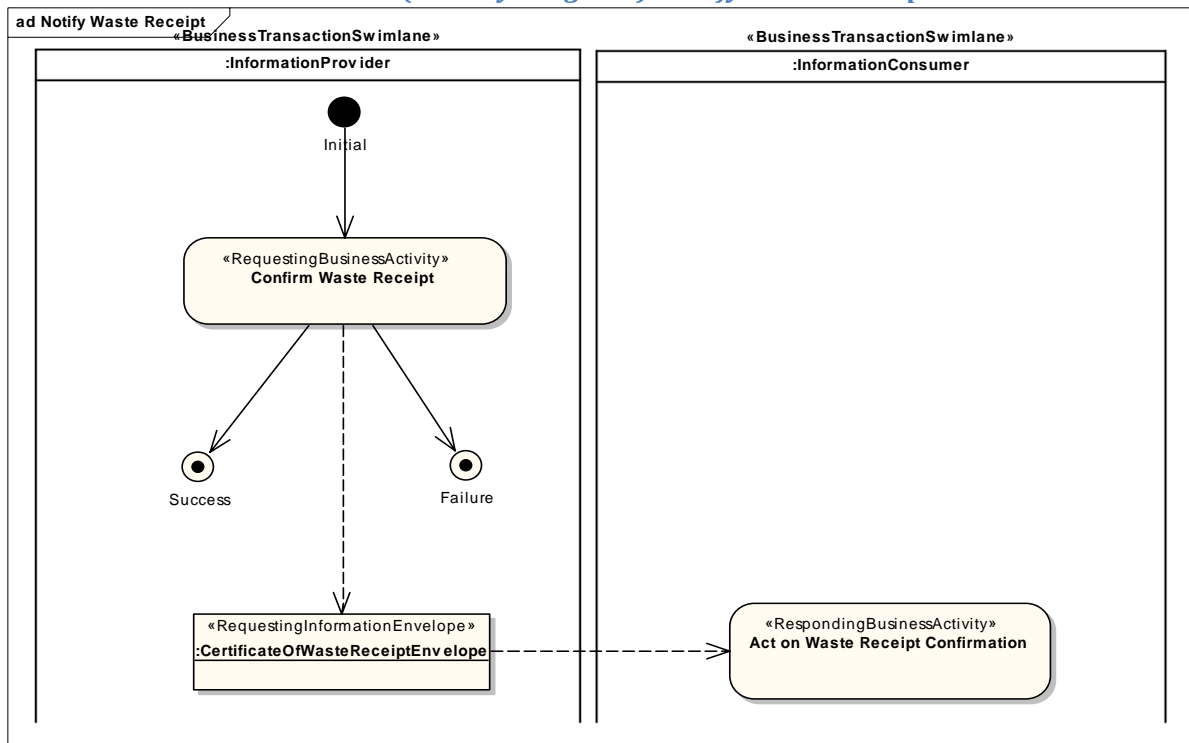
A confirmation of waste receipt was issued unintentionally, because the waste was not received in reality. In this case it is necessary to withdraw this certificate of waste receipt. This model does not include a transaction for this kind of withdrawal. Nevertheless, the cancelation message of this model should be used for this purpose.

A confirmation of waste receipt was issued with incorrect data. In this case the confirmation of waste receipt has to be issued again. The latest version of a confirmation of waste receipt must be considered as the accurate one.

The <InformationConsumer> does not receive/acknowledge the information about the waste receipt.

The Competent Authority of Destination may be required to notify the Competent Authority of Dispatch, as well as any Competent Authorities of Transit, with the details of the waste received by the facility, even when the waste is not regulated in the Country of Destination

5.3.2.3 Business Transaction (Activity Diagram): Notify Waste Receipt



5.3.2.4 Business Transaction Worksheet: Notify Waste Receipt

General

Select Business Transaction Pattern Notification

Secure Transport true

Requestor's Side

Requesting Role InformationProvider

Requesting Business Activity Name Confirm Waste Receipt

Time to Respond null

Time to Acknowledge Receipt 5 min

Time to Acknowledge Processing 24 hrs

Authorization Required true

Non Repudiation Required false

Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)
Number of Retries	3

Responder's Side

Responding Role	InformationConsumer
Responding Business Activity Name	Act on Waste Receipt Confirmation
Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)

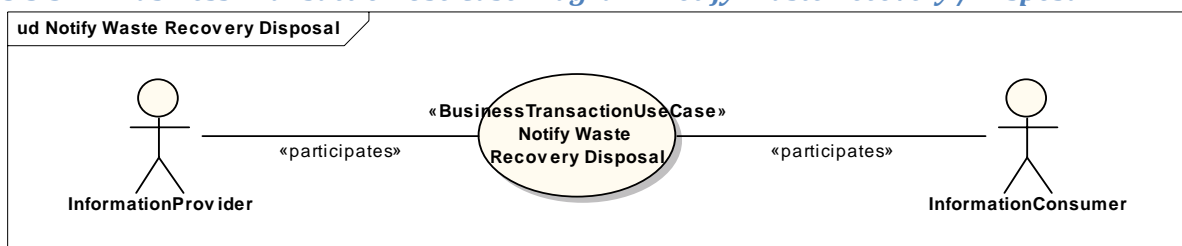
Business Information Envelopes

Information Envelope from Requesting Business Activity

Information Name	CertificateOfWasteReceiptEnvelope
Information State	
Are Contents Confidential?	True
Is the Envelope Tamperproof?	False
Authentication Required?	False (may be reconsidered in the future)

5.3.3 Notify Waste Recovery / Disposal

5.3.3.1 Business Transaction Use Case Diagram: Notify Waste Recovery / Disposal



5.3.3.2 Business Transaction Use Case Worksheet: Notify Waste Recovery / Disposal

General

Business Transaction Name	Notify Waste Recovery Disposal
Definition	"Notify Waste Recovery Disposal" is used to distribute the information about the final recovery or disposal of a waste.
Description	"Notify Waste Recovery Disposal" deals with the certificate for non-interim recovery or disposal by the facility: as soon as possible, but no later than 30 days after completion of the non-interim recovery or disposal operation, and no later than one calendar year, or a shorter period in accordance with Article 9(7),

following receipt of the waste, the facility carrying out the operation shall, under its responsibility, certify that the non-interim recovery or disposal has been completed. Traditionally, the certificate is contained or annexed to the movement document. The facility shall send signed copies of the movement document containing this certificate to the notifier and to the competent authorities concerned.

In this model it is envisioned that a movement document is an electronic document. Since keeping track of changes in electronic documents edited by multiple parties is hard and costly, the confirmation of the recovery or disposal is a separate document: the certificate of waste recovery/disposal. It has to clearly reference the corresponding movement announcement. Further it includes information about the date of recovery or disposal and the quantity recovered or disposed. However, it is desired that the overall information of the certificate of waste recovery/disposal includes a copy of the data of the corresponding movement announcement and of the data of the corresponding certificate of waste receipt. The copied information must be semantically identical to the movement announcement and the certificate of waste receipt. Thus, the <InformationConsumer> may ignore the copied data.

Furthermore, it is envisioned that the consignee has access to an information system provided by its competent authority of destination which is connected to a messaging system guaranteeing the delivery to the other relevant parties involved. This means the consignee delivers the certificate of waste recovery/disposal to the information system of the competent authority of destination. From the information system of the competent authority of destination the certificate of waste recovery/disposal is forwarded to the competent authority of dispatch and to the competent authorities of transit, if any. The notifier has access to the information system of the competent authority of destination in order to get the certificate of waste recovery/disposal.

It follows that the certificate of waste recovery/disposal is transmitted from an information provider (IP) to an information consumer (IC):

[a] from the consignee (IP) to the competent authority of destination (IC)

[b] from the competent authority of destination (IP) to the competent authority of dispatch (IC)

[c] from the competent authority of destination (IP) to the competent authority of transit (IC)

[d] from the competent authority of dispatch (IP) to the consignee (IC)

This business transaction use case focuses on an interchange between a single information provider to a single information

consumer, but not on all of the exchanges along the chain.

It must be noted that the certificate of waste receipt shall be confirmed within 30 days after completion of recovery or disposal and no later than one calendar year following the receipt of waste. However, the transmission of a certificate of waste recovery/disposal is possible after both mentioned deadlines – the consequences must be handled on a business level which is not subject to this model

Requesting Role	Information Provider
Responding Role	Information Consumer
Requesting Activity	Certify Waste Recovery Disposal
Responding Activity	Act on Waste Recovery Disposal Certification

Start/End Characteristics

Affected Business Entities	General Notification Waste Transport
Pre-condition	The <InformationConsumer> is aware of the receipt of waste. This is what is assumed in a regular case. However, in an exceptional case (see Exceptions below) it should be possible to notify the recovery/disposal of a waste even if a corresponding certificate of waste receipt and/or corresponding movement document does not exist.
Post-condition	The exported waste was recovered or disposed and the <InformationProvider> as well as the <InformationConsumer> are aware of the quantities shipped, received and recovered/disposed.
Begins When	The <InformationProvider> provides the relevant information in a certificate of waste recovery/disposal to the <InformationConsumer>.
Actions	Certify Waste Recovery Disposal; Act on Waste Recovery Disposal Certification
Ends When	The <InformationProvider> receives a confirmation from the <InformationConsumer> that it will process the certificate of waste recovery/disposal.
Exceptions	The certificate of waste recovery/disposal does refer to an unknown movement announcement or even to an unknown general notification, or a movement which was not notified as received.

Parts of the waste received are not recovered/disposed.

When recovering/disposing the waste, it is recognized that the type of waste is not the same as indicated in the certificate of waste receipt.

A confirmation of waste recovery/disposal was issued unintentionally, because the waste was not recovered/disposed in reality. In this case it is necessary to withdraw this certificate

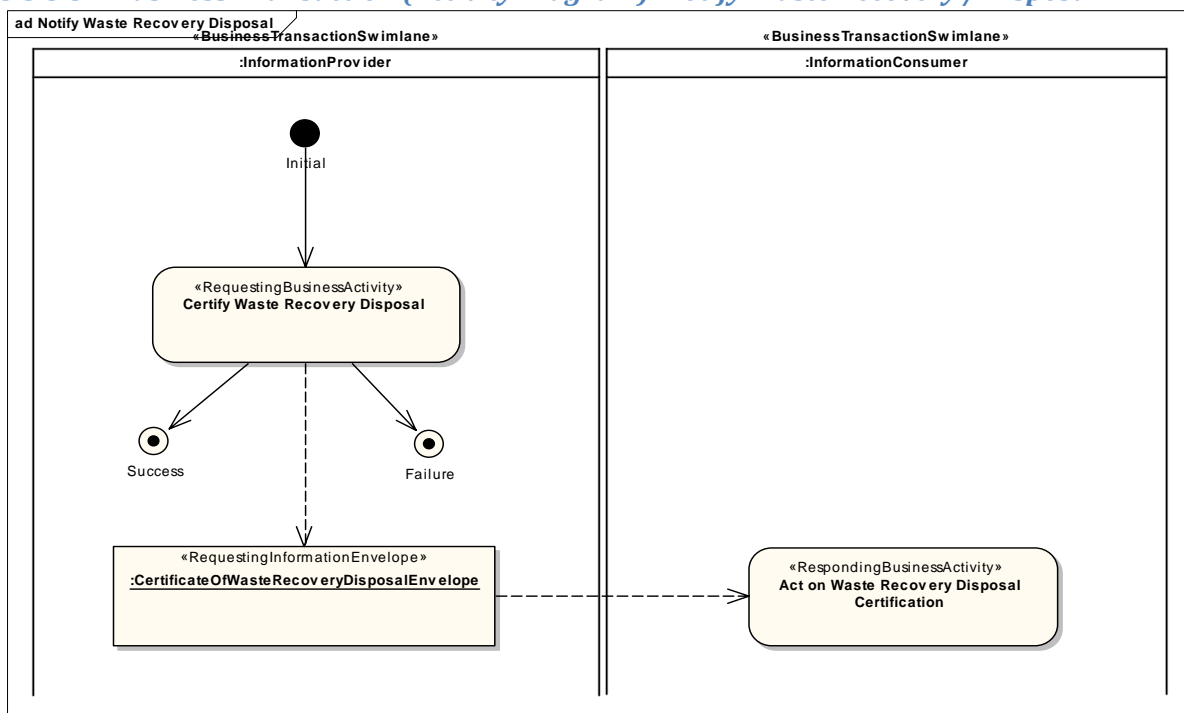
of waste recovery/disposal. This model does not include a transaction for this kind of withdrawal. Nevertheless, the cancelation message of this model should be used for this purpose.

A confirmation of waste recovery/disposal was issued with incorrect data. In this case the confirmation of waste recovery/disposal has to be issued again. The latest version of a confirmation of waste recovery/disposal must be considered as the accurate one.

The <InformationConsumer> does not receive/acknowledge the information about the recovery/disposal.

The Competent Authority of Destination may be required to notify the Competent Authority of Dispatch or a Competent Authorities of Transit, with the details of the completion of recovery/disposal of the waste, even when the waste is not regulated in the country of destination.

5.3.3.3 Business Transaction (Activity Diagram): Notify Waste Recovery / Disposal



5.3.3.4 Business Transaction Worksheet: Notify Waste Recovery / Disposal

General

Select Business Transaction Pattern Notification
 Secure Transport true

Requestor's Side

Requesting Role InformationProvider

Requesting Business Activity Name	Certify Waste Recovery Disposal
Time to Respond	null
Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)
Number of Retries	3

Responder's Side

Responding Role	InformationConsumer
Responding Business Activity Name	Act on Waste Recovery Disposal Certification
Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)

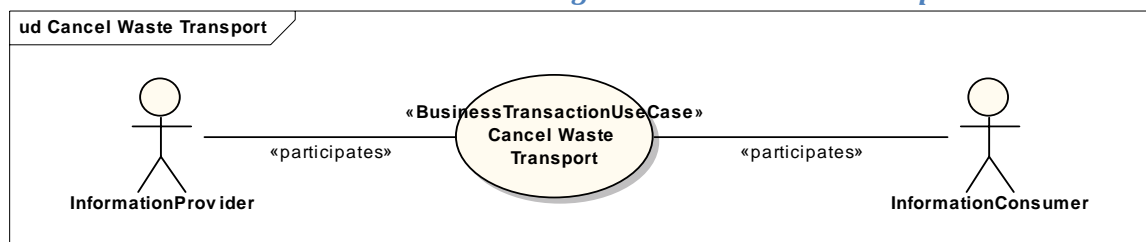
Business Information Envelopes

Information Envelope from Requesting Business Activity

Information Name	CertificateOfWasteRecoveryDisposalEnvelope
Information State	
Are Contents Confidential?	true
Is the Envelope Tamperproof?	false
Authentication Required?	false (may be reconsidered in the future)

5.3.4 Cancel Waste Transport

5.3.4.1 Business Transaction Use Case Diagram: Cancel Waste Transport



5.3.4.2 Business Transaction Use Case Worksheet: Cancel Waste Transport

General

Business Transaction Name	Cancel Waste Transport
Definition	"Cancel Waste Transport" is used to notify that a waste transport which was announced before will not take place as announced.
Description	"Cancel Waste Transport" deals with the waste movement announcement cancellation. If a waste movement notified by a previous movement announcement will not take place as announced, this announcement must be canceled. Usually, this is the case if the waste movement does not take place at all or if the information as indicated in the movement announcement is not correct. It is not possible to update a movement announcement. Instead the movement announcement must be canceled and a new movement announcement must be issued. If a waste movement was canceled, the waste must not be transported.

In this model it is envisioned that the notifier has access to an information system provided by its competent authority of dispatch which is connected to a messaging system guaranteeing the delivery to the other relevant parties involved. This means the notifier delivers the cancellation document to the information system of the competent authority of dispatch. From the information system of the competent authority of dispatch the cancellation document is forwarded to the competent authority of destination and to the competent authorities of transit, if any. The consignee has access to the information system of the competent authority of destination in order to get the cancellation document.

It follows that the cancellation document is transmitted from an information provider (IP) to an information consumer (IC):

- [a] from the notifier (IP) to the competent authority of dispatch (IC)
- [b] from the competent authority of dispatch (IP) to the competent authority of destination (IC)
- [c] from the competent authority of dispatch (IP) to the competent authority of transit (IC)
- [d] from the competent authority of destination (IP) to the consignee (IC)

This business transaction use case focuses on an interchange between a single information provider to a single information consumer, but not all of the exchanges along the chain.

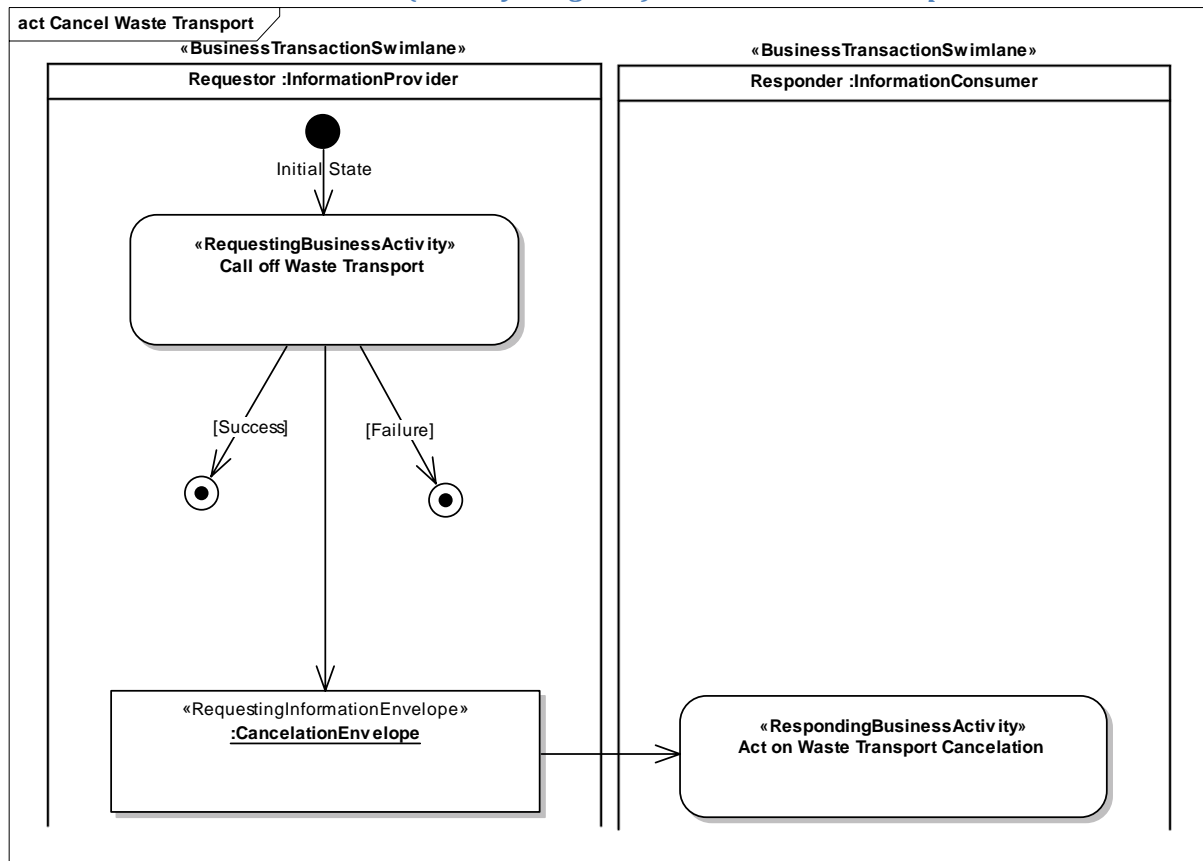
Usually, a waste movement should be canceled before the date which was indicated as start date in the corresponding movement announcement. However, the transmission of a cancellation document after this date is possible - the consequences must be handled on a business level which is not subject to this model.

Requesting Role	Information Provider
Responding Role	Information Consumer
Requesting Activity	Call off Waste Transport
Responding Activity	Act on Waste Transport Cancelation

Start/End Characteristics

Affected Business Entities	General Notification Waste Transport
Pre-condition	A corresponding waste movement was announced.
Post-condition	The waste movement is canceled.
Begins When	The <InformationProvider> calls off the waste transport in a waste transport announcement cancelation.
Actions	Call off Waste Transport; Act on Waste Transport Cancelation
Ends When	The <InformationProvider> receives a confirmation from the <InformationConsumer> that it will process the waste transport announcement cancelation.
Exceptions	<p>The waste movement announcement cancelation does refer to an unknown waste movement announcement.</p> <p>The cancelation was issued unintentionally. This cannot be undone. It is necessary to issue a new movement announcement.</p> <p>The <InformationConsumer> does not receive/acknowledge the information about the cancellation of a waste transport movement.</p>

5.3.4.3 Business Transaction (Activity Diagram): Cancel Waste Transport



5.3.4.4 Business Transaction Worksheet: Cancel Waste Transport

General

Select Business Transaction Pattern	Notification
Secure Transport	true

Requestor's Side

Requesting Role	InformationProvider
Requesting Business Activity Name	Call off Waste Transport
Time to Respond	null
Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)
Number of Retries	3

Responder's Side

Responding Role	InformationConsumer
-----------------	---------------------

Responding Business Activity Name	Act on Waste Transport Cancellation
Time to Acknowledge Receipt	5 min
Time to Acknowledge Processing	24 hrs
Authorization Required	true
Non Repudiation Required	false
Non Repudiation of Receipt Required	false
Intelligible Check Required	true (syntax and grammar validation, no sequence validation)

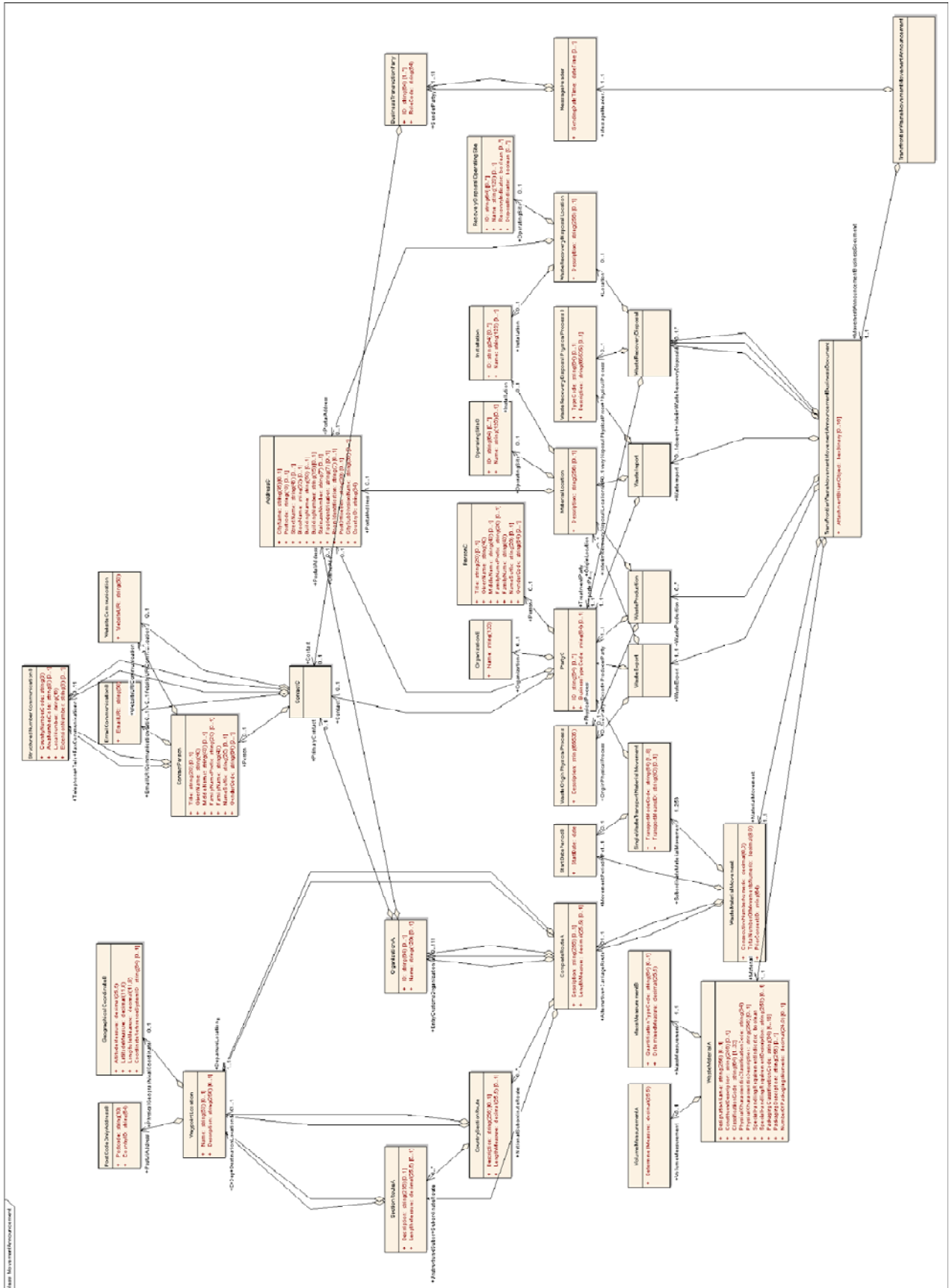
Business Information Envelopes

Information Envelope from Requesting Business Activity

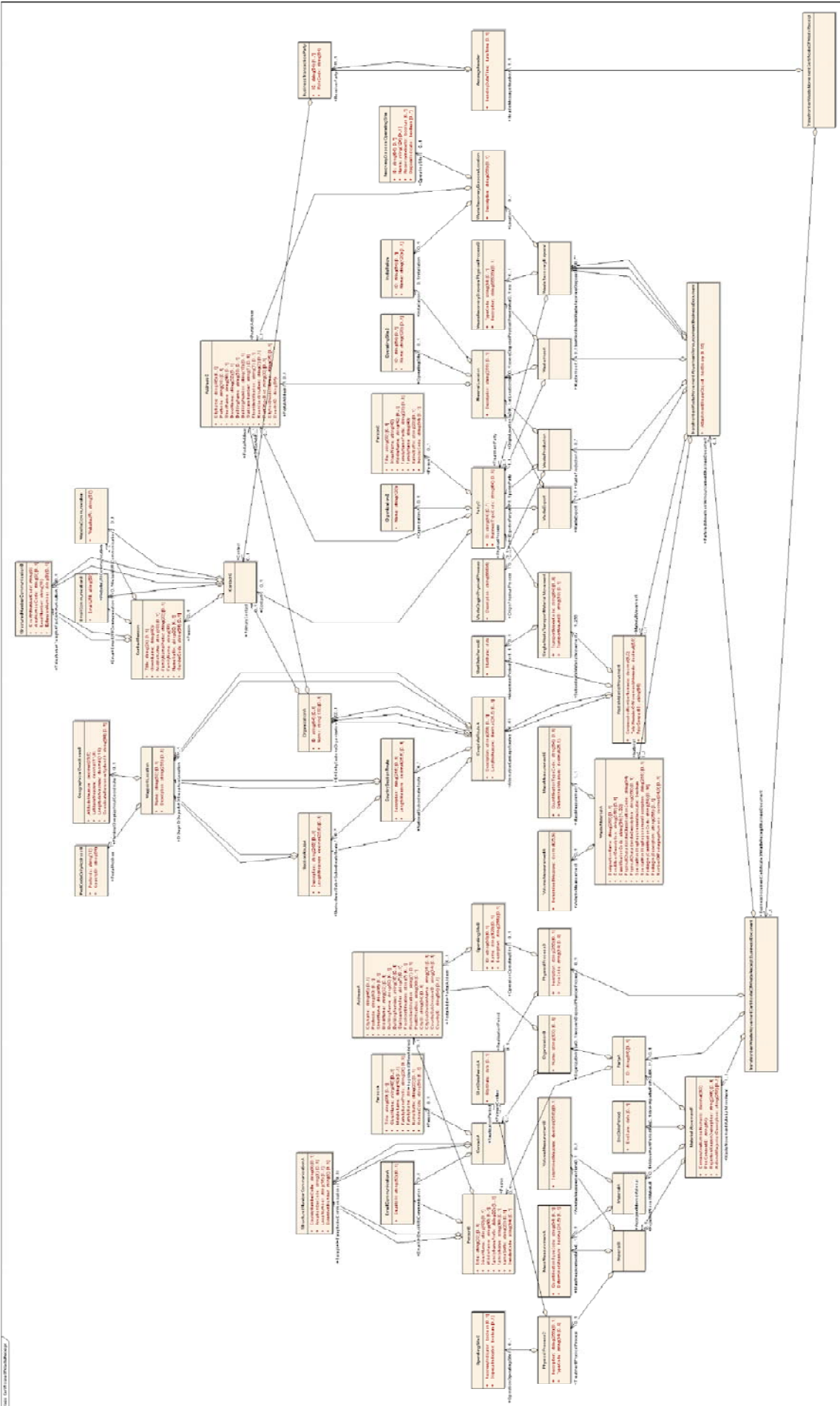
Information Name	CancelationEnvelope
Information State	
Are Contents Confidential?	true
Is the Envelope Tamperproof?	false
Authentication Required?	false (may be reconsidered in the future)

5.4 Information Model Definition

5.4.1 Movement Announcement



5.4.2 Certificate of Waste Receipt



5.4.3 Certificate of Waste Recovery /Disposal

