

# **Logistic Service Providers Process and Scenario**

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## Acknowledgements

- AGROSTAR
- BONGRAIN SB ALLIANCE
- CRYOLOGISTIC
- GEFCO
- GEODIS
- NESTLE GRAND FROID
- PASTACORP LUSTUCRU
- PROCTER ET GAMBLE
- SAUPIQUET

....

## 1. INTRODUCTION

**Logistic Service Providers represent an essential link in the supplier – retailer relationship**

### 1.1 OBJECTIVES AND SCOPE OF THE GUIDE

The main objective of this guide is to give recommendations for information exchange scenarios that are connected to logistic services and based on the GS1 standards. This document has been developed to provide a reference for the requesting party (either supplier or retailer), while describing the flow of products and its appropriate information.

Thus, after having created a common knowledge of the different processes how to use the GS1 standards, the different actors will increase their collaboration in a reliable way.

In more details, this document has been created with the aim of:

- providing information about the GS1 standards in order to guarantee the same level of information among the actors of the supply chain, within the company (logistics, information technologies, quality, and sales) and with their external trade partners.
- providing substantial arguments in order to convince the trade partners of using the GS1 standards and their application rules.
- promoting the use of international standards that are applicable for everybody instead of specific or proprietary solutions.
- offering advices, recommendations and training in order to be sure that the companies follow the same rules while using the GS1 standards.
- showing the necessity of linking the physical and the electronic information flows in order to ensure the products' traceability (i.e. to manage the relation between the labelled information and the correspondent electronic messages)

This guide's recommendations have been elaborated as part of a working group called "Logistic

Service Providers” within GS1 France. Furthermore, the message implementation guidelines (MIGs), which have been elaborated and approved by experts, are a complement to ensure a common language between trade partners (see below).

This guide positions is an open environment between trade partners where the stock keeping/inventory management and logistics services exist.

It defines the actors, the locations and the functions of the logistic service providers as well as the interactions, existing between them all through the scenarios.

First it describes the general scenario of the logistic service providers in the supply chain and then in a more detailed way the scenarios per processes (supplying, stock keeping).

This guide defines the general conditions of the implementation of EDI messages and presents a description of their use among all the actors. It deals especially with the choice of the EDI messages and their scenarios.

The schemas specify the stages of the scenarios where the labelling and the scanning can be done, in addition to the information exchange (EDI documents or messages),

This guide does not refer to the case when the logistic service provider is the owner of the goods and carries out the sales and purchases functions.

The implementations of these scenarios are only possible when following the recommendations of the document and the general MIGs (Message Implementation Guidelines) here below :

- **Applications of the EAN standards in logistics –User’s guide – GS1 France ;**
- **Message Implementation Guideline – Inventory report (stock status) – INVRPT – June 2001 ;**

The message INVRPT has to be used concerning the stock status. It concerns an inventory report at a certain point of time t that has been updated by stock movements during a period starting at the moment t-1, which correspond to the following algorithm:

**Stock status (t) = goods in stock (t-1) + incoming quantities (t-1→ t) – outgoing quantities (t-1→ t)**

- **Message Implementation Guideline – Inventory Adjustment Status (Movements of goods) – INVRPT – October 2002 ;**

The message INVRPT / Inventory Adjustment Status has to be used. It allows the identification of all events that influence the quantity and the quality of the stock. The frequency is variable. If the message concerns regular movements, the messages DESADV and/or RECADV are recommended.

The message INVRPT / Inventory Adjustment Status is recommended in the following cases :

- Blocking
- Releasing
- Scrapping
- Changing place (transfer of goods)
- Clearing – Repackaging...

- Request for Info on traceability

The messages DESADV or RECADV might possibly be used additionally to show a receipt or an exit of stocks.

- **Message Implementation Guideline – Inventory Movement Advice – INVRPT – October 2002 ;**

The message INVRPT / Inventory movement advice is used as a summary of movements. It is a listing of all movements that have been done over a certain period of time. It's not an accumulation. This message has no influence on the stock. It's a balance tool that allows retransmitting the incoming goods, the outgoing goods and other movements.

- **Message Implementation Guideline – Cargo/goods Handling and Movement – HANMOV – June 2004**

In the case of a preparation and delivery order the message HANMOV has to be used. However, it is also recommended for other kinds of logistics services orders (blocking and releasing order, picking order, repackaging order, transfer of goods order).

- **Message Implementation Guideline – Instruction to Despatch – INSDDES – June 2004.**

In the case of a simple delivery order, the message INSDDES has to be used. As soon as it turns to a delivery and preparation order it is more appropriate to use the HANMOV message because it is more suitable between the requesting party and his provider. However, if the logistic service provider asks to his supplier for supplying him, the INSDDES message is recommended.

- **Message Implementation Guideline – Despatch Advice – DESADV - June 2004.**

DESADV is the message used to inform the trade partner (logistic service provider, warehouse of the retailer,..) that he will soon receive goods and to give details about traceability (SSCC, GTIN, batch number,...). In the case of a despatch of the goods, this message has to be used between the logistic service provider and the retailer. It has to be used as a supply note in the case of a supply of the logistic service provider from the requesting party (e.g. supplier). In both cases the use of this message is connected to the flow of the despatched goods.

- **Message Implementation Guideline – Receiving Advice – RECADV - June 2004.**

RECADV is the message that has to be used in reference to acknowledge receipt of the goods. It offers:

- Acknowledgement receipt of goods.
- Information about discrepancies between received and accepted quantities and despatched quantities (data found in the DESADV message).
- Information or instruction concerning the acceptance of goods or other measures that have to be taken because of identified discrepancies.
- Instruction establishing the credit note. The point of delivery may also correct internal invoices of goods that have been resold or despatched to another client.

It also allows:

- to keep the buyer, the seller and the supplier informed about the arrival of the goods.
- to know the customer's stock movements.
- to follow the logistics services and/or the transport to ensure a better service quality.
- to be able to assure the traceability of logistic units.
- to validate the quantities for a better integration of the invoice.
- to fasten the process of payment
- to limit the time of inquiry
- to reduce the time of treatment and disputes.

▪ **Message Implementation Guideline – Order Status Report – OSTRPT – June 2005.**

OSTRPT is the message that has to be used to transmit status information in order to inform the requesting party about the progress of an order.

This message can be used after receipt of the HANMOV message – preparation and delivery order– or after the INSDDES message - simple delivery order. It informs the requesting party about the progress of the preparation for the delivery order and specifies one or several status of this preparation for line items.

The logistic service provider can also use this message to give information about follow-up of transportation.

This message will not be used in response of the following service orders:

- Blocking
- Releasing
- Scrapping
- Picking
- Repackaging
- Transfer of goods

It will not be used instead of the despatch advice – DESADV.

The rules of adequate practice and the minimal data to allow the communication between the trade partners are indicated in each of these profiles or implementation guides.

These documents are available to our members on our home page: [www.gs1fr.org](http://www.gs1fr.org)

## 1.2 THE PROFITS DUE TO THE USE OF THE STANDARDS AND THE SCENARIOS

In the trade and logistics framework, the new technologies for bar codes as much as for E-business (EDI or WEB/EDI) have been established between the trade partners.

However, before benefiting from these technologies, each company has to use a common language and the same application rules.

The use of the GS1 standards and the defined scenarios in this guide meet the companies' needs and offer the following advantages :

### ✓ PRODUCTIVITY

- Rapidity of implementation of a new project
- Reduction of errors and disputes
- Better service
- Reduction of inventory shortage
- Elimination of multiple inputs
- Increased rapidity in the implementation of the processes
- Elimination of re-labelling by the carriers
- Acceleration in staff training

### ✓ EFFICIENCY

- Stability and portability of the implemented solution
- Data reliability (data base, stock, traceability,...)
- Conformity between the physical flow and the flow of information
- Assured traceability and transparency between the supplier, the carrier and the consignee
- Reliability of goods receipt
- Automatic tracking of real time inventory report
- Improvement of loading and control operations
- Application of value increasing tools for the operators

The use of GS1 standards is most relevant in the scenario of goods receipt as it offers an automatic, reliable and rapid receipt. It abolishes the whole administrative work and reduces the risk of disputes.

The profits listed above can be obtained due to the use of the following :

- GS1 logistics labels
- Scenarios of this guide
- EANCOM MIGs which integrate the logistics service providers needs

### 1.3 DATA ALIGNMENT : A PREREQUISITE

The sharing of the data base (articles and trade partners) between the trade partners ( requesting party and logistic service providers) is an unavoidable prerequisite for the control of the operations in this complex environment of modern distribution and logistics (preparation; constitution of the pallets, of the boxes).

The processes as a whole, which provides «right» and updated data, is conventionally called “**data base synchronization**”. It results in an ideal state of information diffusion called “data adjustment”.

In order to adjust the same product identification and description in the card index of the requesting party and the logistic service provider and to make accessible the data at the moment the user needs it; it is necessary that:

- the database is collected and published in a common language known by all the actors.
- the publication tools, which are conform to this language are extensively accessible.
- the access to the data via publication tools is easy.
- the publication and access conditions offer sufficient security and data privacy.

If the data base management is an intern necessity for the requesting party and the logistic service provider, the synchronization in real time needs collaboration between them both. The synchronization has to treat the standards of exchange and of content as well as the means allowing supporting this exchange.

Concerning the standards, GS1 has been chosen as common language as a logical consequence of the existing applications (codification, automatic identification and EDI).

#### **EDI with EANCOM<sup>®</sup> messages**

GS1 has published EDI standards notably to ensure the data adjustment. It concerns the transactions while using the EANCOM<sup>®</sup> language.

During the adjustment of the data in partnership, the PARTIN (party information) message is recommended. However, some ordering parties use the HANMOV/INSDDES message to inform their logistic service providers about the GLN (Global Location Number).

- «**PARTIN**» - information about the trade partners ( requesting party, consignee, service providers,...) – this message allows the transmission of information about the companies. It is used to indicate location numbers and operational, administrative, commercial and financial information like names, addresses, contact persons, account number, etc.  
The message will be sent again in case of modifications or updates of these data during the business connection, with the aim of maintaining the trading partner's master data files.  
PARTIN can also be used in order to provide addresses to the database, which guarantees the availability of as much information as possible.

Concerning the product data adjustment, the PRODAT (product data) message is recommended.

- « **PRODAT** » - product information – this message is used to exchange product information

between the trade partners.

It provides technical product data, as well as all information concerning logistics. It may for example indicate technical specifications of electric equipment, the ingredients of a cake, the height of the pallet, ... This message does not include commercial conditions.

The exchanged information in a product data message changes infrequently.

### **Electronic Catalogues**

Electronic catalogues are privileged tools for the database management and maintenance. The term electronic catalogue indicates the information technology tools providing electronic data storage as well as interfaces offering data consulting, creation, modification or elimination.

In most European countries, including the eastern countries, the GS1 organisations have been starting the creation of electronic catalogues. As far as GS1 France is concerned it develops a network of electronic catalogues called **gds.fr** with its slogan **“Publishing once and broadcasting to everybody. Subscribing once and receiving from everybody.”**

This network connects virtual catalogues. The list of the catalogues is accessible on the homepage: [www.gs1fr.org](http://www.gs1fr.org)

### **Electronic data exchanges based on XML (XML-EDI)**

Among the recent evolutions in Internet technologies, the language XML is perceived as one of the most important ones for e-commerce.

Actually, XML is a new syntax whose potential to simplify electronic data exchange evokes much interest, particularly concerning the application in very small companies. One of the characteristics of XML is that it offers messages, which can be processed by the computer and read by a person through a browser. XML offers especially the opportunity of interrogating the database and of receiving answers in real time in an *“approach pull”*, e.g. where the information can be “pulled” by the user.

So XML represents the advantage being particularly good adapted to the applications of collaborative exchanges (electronic catalogues, batch files), which become more and more important for the companies.

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## 2. GENERAL REMARKS

The scenarios have been defined on the bases of the practical guide called “Logistical implementation of the GS1 standards - practical manual”.

The Message Implementation Guidelines EANCOM<sup>®</sup> 97 have been elaborated within the “Logistic Service providers” working group of GS1 France. They are applicable in different scenarios of the present document and they integrate notions of barcode marking.

These guidelines represent an overview of the messages of the international EANCOM<sup>®</sup> manual. They refer to the version of 1997 of this manual, which includes 44 EDIFACT messages that are based on the dictionary D.96A.

There exist two reasons, which justify the choice of EANCOM<sup>®</sup>:

- On the one hand this language is the language used by companies for the EDI communication with their trade partners,
- on the other hand, it is the most commonly used language nationally and internationally in the elaboration of EDI MIG and those of other sectors that may be concerned.

The first step of the MIG creation was the data modeling. This procedure allows to develop about messages in the EANCOM<sup>®</sup> 97 and XML language.

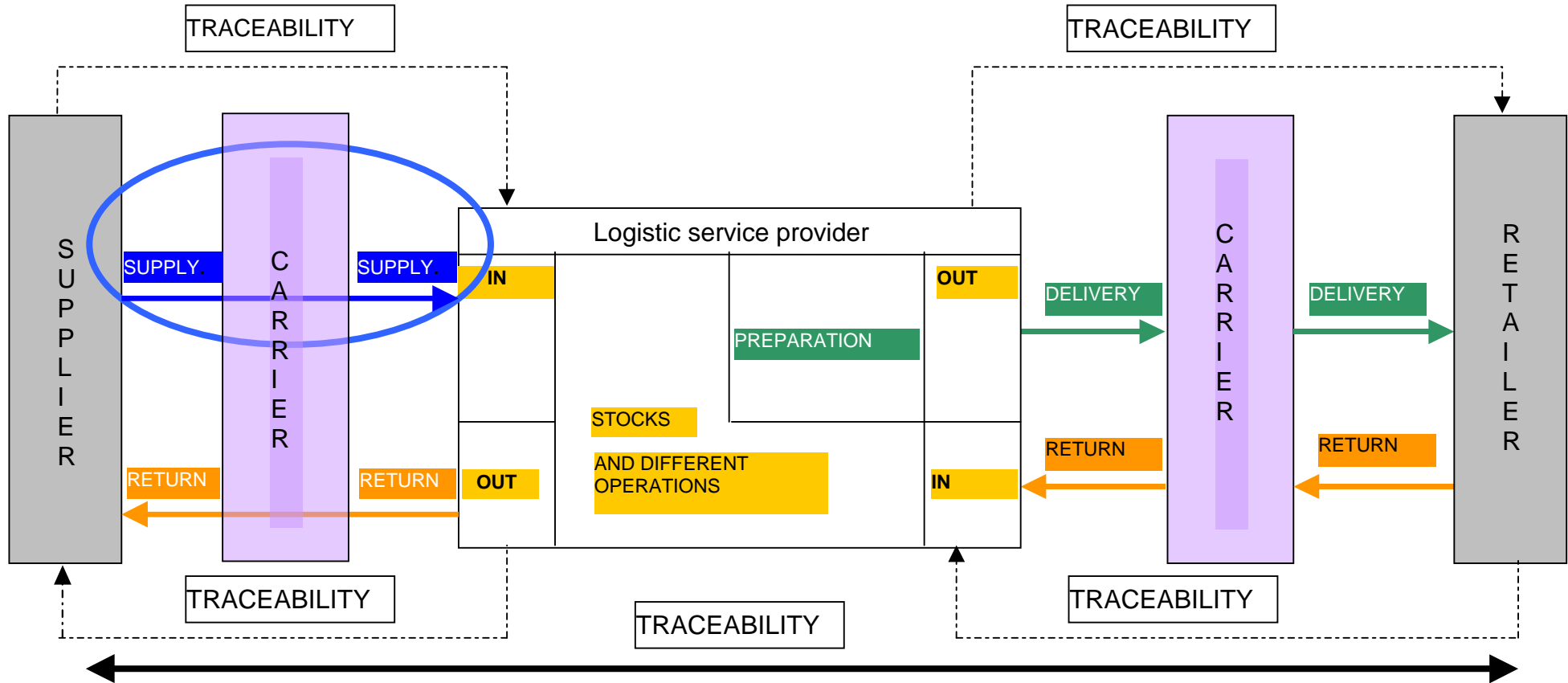
The EANCOM<sup>®</sup> MIGs for logistic service providers are available for members of GS1 France on the web site : [www.gs1fr.org](http://www.gs1fr.org)

The scenario below describes globally the logistic service provider via the supply chain.

It describes the process of inventory management, preparation for delivery and for order and different other service operations.

## 2.1 GENERAL FUNCTIONAL SCENARIO

BETWEEN THE REQUESTING PARTY- LOGISTIC SERVICE PROVIDERS AND DELIVERED CUSTOMER



- = Supply process
- = Inventory process
- = Delivery process
- = Process of return of goods
- = Transport process
- = Traceability process is not treated in this guideline

The more detailed scenarios have released themselves from the existing practices between the requesting party and their logistic service providers – particularly :

- Supply scenarios (three scenarios)
- Receipt scenario (included in the supply scenario)
- Inventory management and stock keeping scenario
- Goods delivery service scenario
- Transport scenario
- Scenario of return of goods (4 scenarios).
- Logistic service provider scenario

## 2.2 FUNCTIONS OR PROCESSES<sup>1</sup>

The logistics service often corresponds to a combination of several functions or processes.

The know-how of logistic service providers is not limited to the inventory of complete pallets. Additionally they can offer highly technical services referring to the warehousing – particularly :

- Quality Management;
- Traceability of the intern and extern product flow;
- Logistics of the after sales service;
- Management of the returns flow;
- Services (marking, packaging, labelling);
- Packaging (development, production and personalisation of the packing) ;
- Cross docking;
- Inbound logistics;
- Outbound logistics;
- Sectoral processing (for example Frozen Goods and Ice Cream,..);
- Invoicing on the requesting party's account.

However, whatever these functions are and whoever the operating actors of these functions are, they have to be able to respond to more and more specialised objectives:

- Security (traceability, haccp<sup>2</sup> ... ) ;
- Respect for the reglementation;
- Rapidity ;
- Efficacy.

In order to reach these objectives, GS1 France recommends global standard solutions, which make the different functions of capture and automatic information processing operations easier. Within this process the automation of these tasks needs more severity between the actors.

One of the most important efficacy measures in the trade and logistics relations, is the possession of a common language between the different actors of the supply chain.

In this spirit of efficacy and severity, precise definitions have been elaborated as well as the description of different processes where you can find several scenarios of physical and related information flow.

## 2.3 ACTORS AND LOCATIONS

Logistics or logistics service consists in grouping of actors, of more or less complex functions and of information flow. The terminology used in this context becomes essential in order to avoid all possible confusion or even discrepancy between the trade partners.

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<sup>1</sup> The definitions have been established by experts of the working group GS1 France.

<sup>2</sup> HACCP : Hazard Analysis Critical Control Point

This chapter defines the actors and locations in relation with the logistic service providers. Furthermore a glossary has been drawn up at the end of this document in order to offer the same semantic base as a reference for every reader.

### **The actors**

- **Supplier**

Actor or company that supplies the goods.

- **Retailer**

Actor or company that ensures the distribution and the sale to the final (ultimate) consumer.

- **Requesting party**

Actor or company that sends an “Cargo/goods Handling and Movement” and/or an “instruction to despatch” to a logistic service provider. It can concern a supplier or a retailer or another logistic service provider (the requesting party can be called “shipper” in relation with the carrier).

- **Logistic service provider**

Actor or company that ensures the realization of logistic activities on behalf of a supplier or a retailer.

- **Carrier**

Actor or company that takes responsibility for shipment from one place to another (forwarding agent).

### **The locations**

- **Warehouse**

The warehouse usually indicates the location where stored goods are located with the precise aims of:

- ❖ Time staggered use (of raw material, of finished products...)
- ❖ packaging grouping or segmentation of the product before re-shipment;
- ❖ deconditioning or repackaging

- **Platform**

The platform, is the location where the cross-docking is executed, and indicates the location where the goods will be received for reshipment within a very short time.

Cross docking:

Cross-Docking is a distribution system in which merchandise received at a warehouse or distribution center is not stocked but immediately prepared for onward shipment. In other words, Cross Docking is the transfer of inward deliveries from the point of reception directly to the point of delivery with limited or no interim storage. Cross Docking is characterised by very short lead times. Close synchronization of all inbound and outbound shipments is crucial.

There are two cases of cross-docking : Prepacked cross-docking and Intermediate handling cross-docking :

Pre-packed cross docking : Packages (e.g., pallets, cases, etc), pre-packed by the supplier according to store orders, are received and moved to the outbound docks for consolidation with similar packages from other suppliers on store delivery vehicles without further handling.

In this precise case, it is the supplier who places the logistic labels (including among others the final consignee's location information) on the logistic unit.

- Intermediate handling cross docking : Packages (e.g., pallets, cases, etc) are received, broken down and re-labelled by the distribution center into new packages for delivery to the stores, e.g., roll cages. These new packages are then moved to the outbound dock for consolidation with similar packages from other suppliers on store delivery vehicles.

In this case it is the platform or distribution center which places the logistic labels on the newly regrouped logistic units.

## 2.4 DIFFERENT SERVICES ORDER

There are a lot of information exchange between requesting party and logistic service providers. Some recommendations are given :

- In the case of a preparation and delivery order, a single message has to be used : HANMOV.
- In the case of a simple delivery order, the message INSDES has to be used. As soon as it turns to a delivery and preparation order it is more appropriate to use the HANMOV message because it is more suitable between the requesting party and his provider.

The use of the HANMOV and INSDES messages :

INSTRUCTIONS TYPE	HANMOV	INSDES
Intruccion to prepare	X	
Intruccion to deliver	X	X
Instruction to prepare and deliver	X	
Instruction to de block and unblock	X	
Intruccion to destroy	X	
Instruction to pick	X	
Instruction to unpack and pack	X	
Instruction to move goods	X	

The functions or processes as well as certain conditions, which are employed within these functions or processes, are described here below:

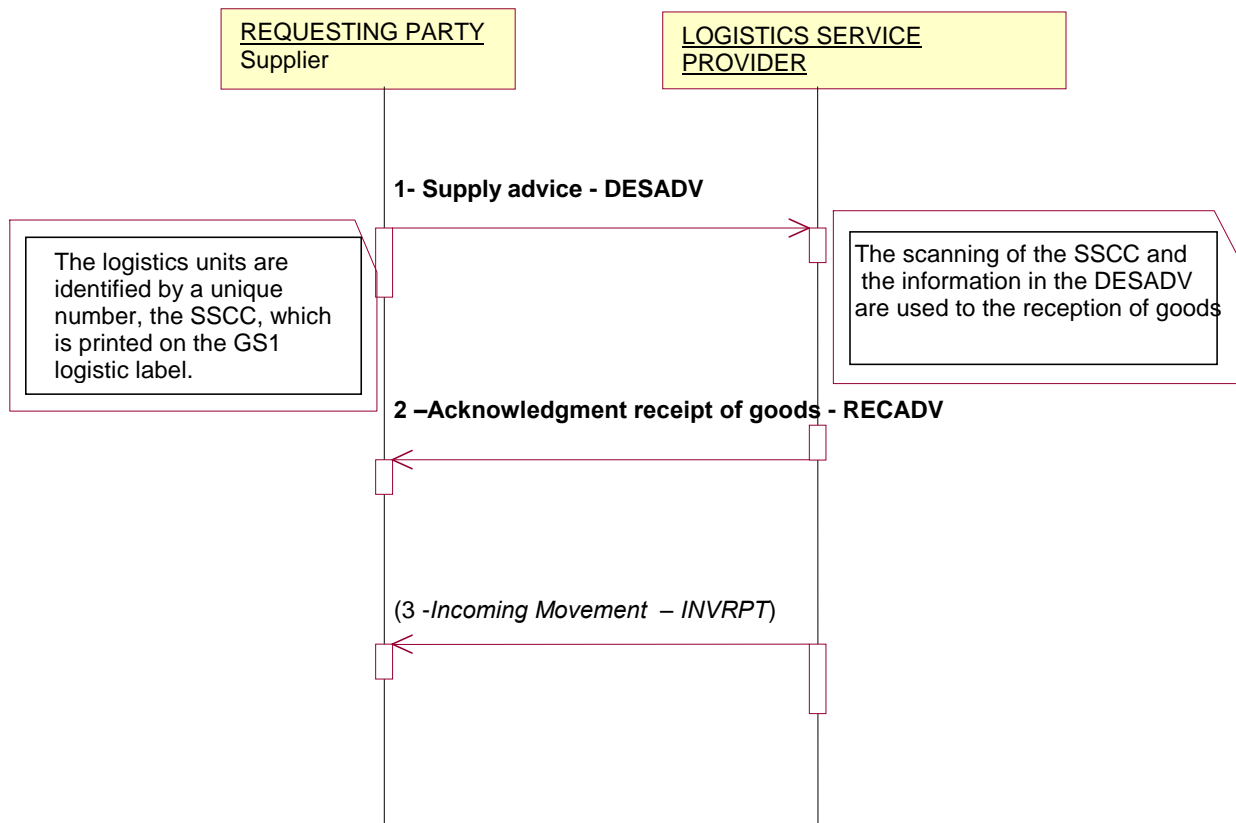
**Clauses used in the scenarios**

→	Direction of the information flow
<b>LOGISTICS SERVICE PROVIDER</b>	Actor
<i>(Incoming movement - INVRPT)</i>	Optional flow
<b>DESPATCH ADVICE– DESADV</b>	Mandatory flow

### 3. SUPPLY PROCESS

**Supply or stock replenishment** is the step of inventory supply to the logistic service provider by the requesting party.

#### 3.1 First Scenario – supplier is requesting party

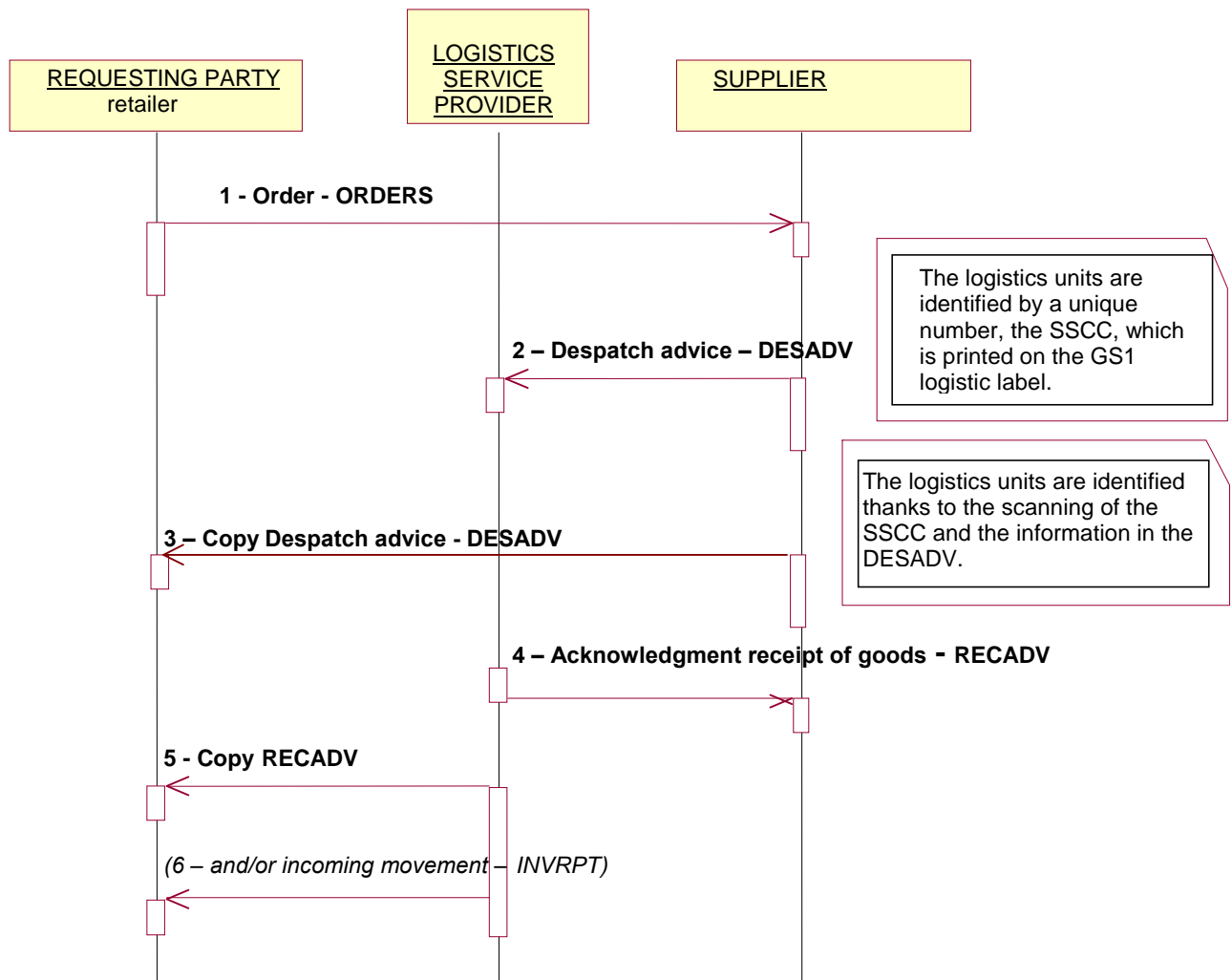


This scenario represents the case of pushed flow where the logistic service provider is the supplier’s logistic service provider.

**Scenario step by step:**

- 1 — The requesting party sends a despatch advice (DESADV) integrating the logistical structure with the SSCC and the traceability information.
- 2 — The logistic service provider answers through an acknowledgement receipt of delivery (RECADV- Receiving advice) that mirrors the DESADV integrating the logistical structure with the SSCC.
- 3 — The logistic service provider may send the Inventory adjustment status message - INVRPT in order to provide the requesting party with incoming inventory after receipt of the supply advice.

### 3.2 Second Scenario - the retailer is the requesting party and manages the supply from the logistic service provider



The logistics service provider is the retailer’s provider.  
The requesting party/retailer is the owner of the stored goods at the provider’s.

#### Scenario step by step:

1 – The retailer (the requesting party) sends an order (ORDERS) to the supplier.  
A copy of this order can be sent to the logistic service provider.

2 – The supplier sends a despatch advice (DESADV) to the logistic service provider (or the requesting party to his logistic service provider) integrating the logistical structure with the SSCC and the traceability information.

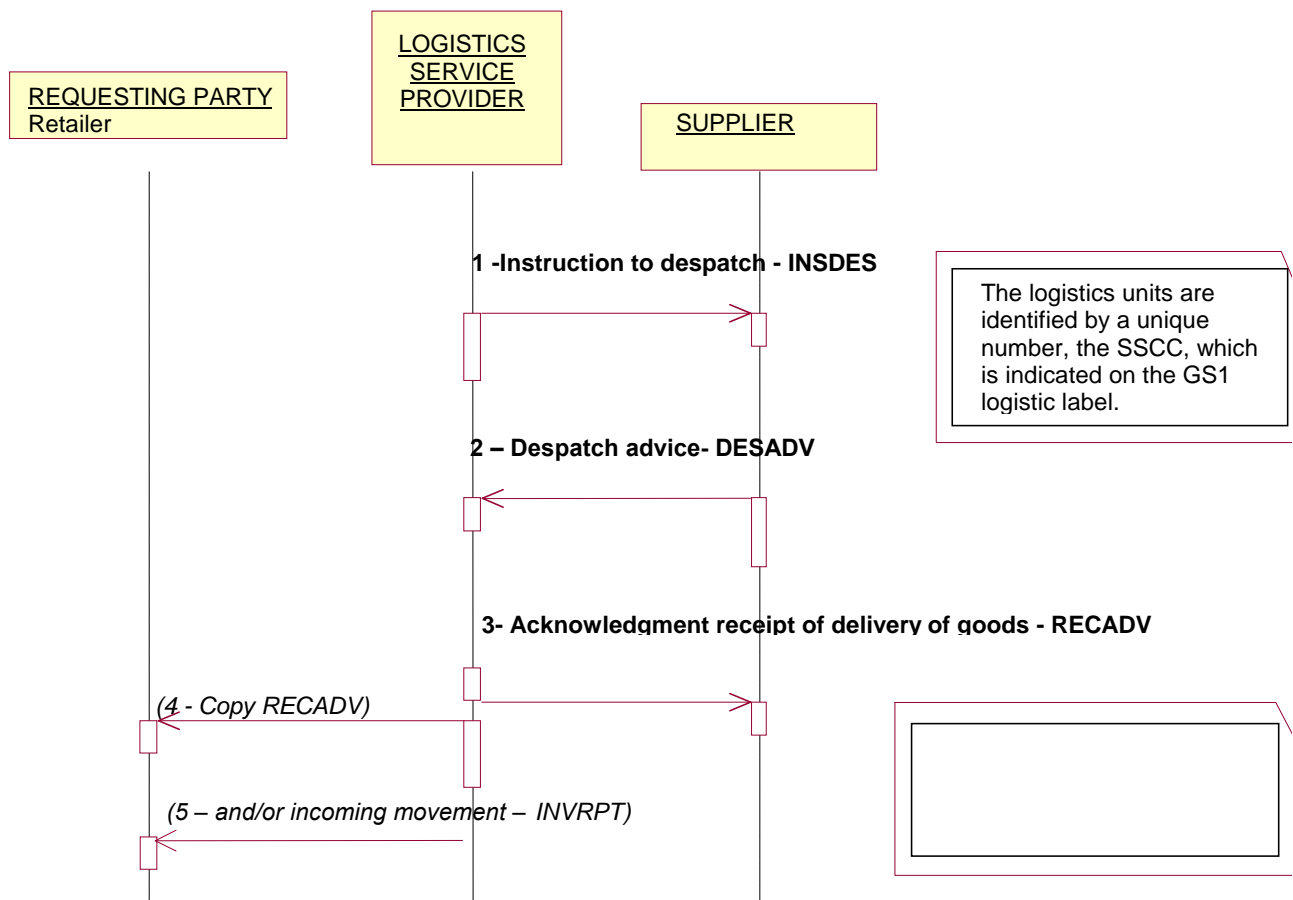
3 – The supplier sends a copy of the despatch advice to the retailer.

4 – The logistics service provider sends an acknowledgement receipt of delivery (RECADV) to the supplier.

5 – The logistic service provider sends a copy of the acknowledgement receipt of delivery to the requesting party.

6 – The logistic service provider may send the Inventory adjustment status message - INVRPT for incoming stocks.

### 3.3 Third Scenario – the retailer is the requesting party and the provider manages his supply



The logistic service provider is the retailer’s provider. The supplier is the owner of the goods.

#### Scenario step by step:

- 1 – The logistic service provider sends an instruction to despatch (INSDDES) to the supplier. He asks to the supplier to supply him.
- 2 – The supplier sends a despatch advice (DESADV) to the provider.
- 3 – The logistic service provider sends an acknowledgement receipt of delivery (RECADV) to the supplier.
- 4 – The logistic service provider can send a copy acknowledgement receipt of delivery to the requesting party.
- 5 – The logistic service provider may send the Inventory adjustment status message - INVRPT for incoming stocks.

### 3.4 Process of goods receipt

The receipt process starts at the arrival of the goods' lorry and finishes at the goods' storage.

The receipt of the goods is done the following way:

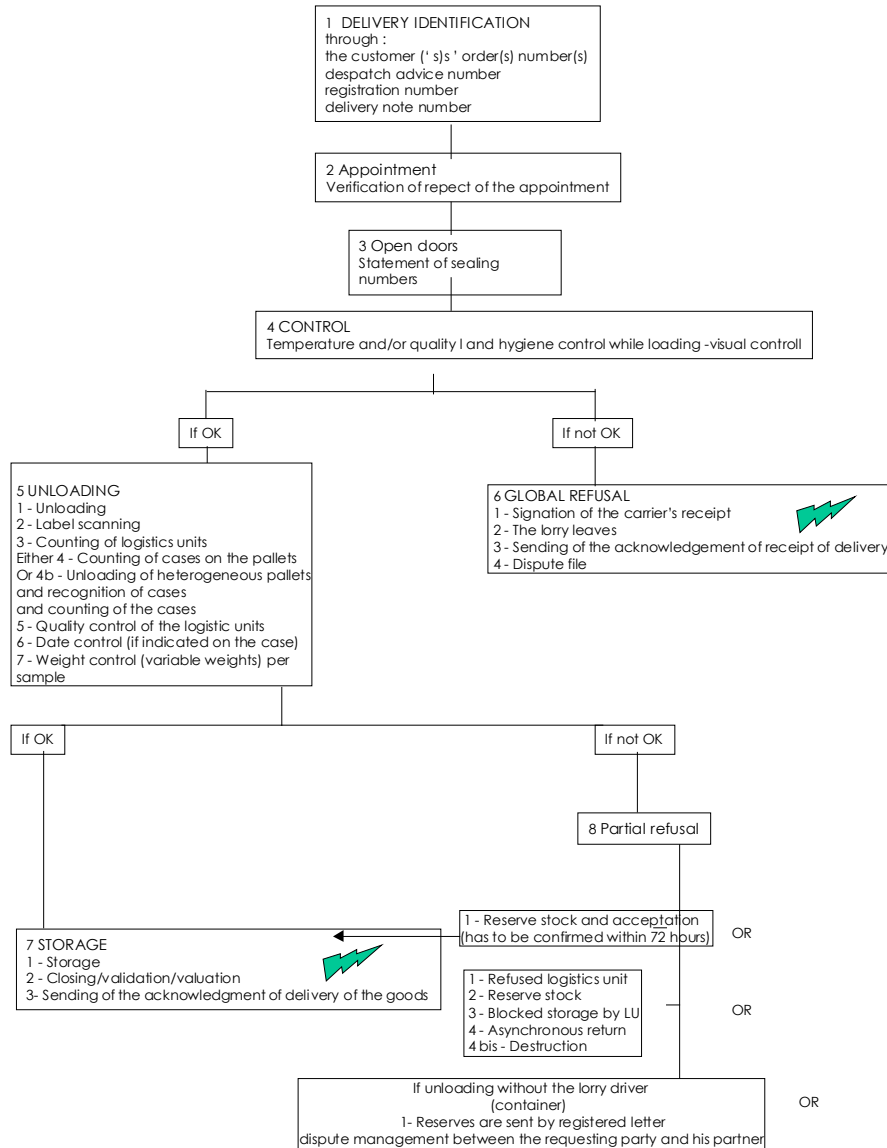
- Quantitative and qualitative controls of the goods and verification of the conformity compared to the despatch advice and the delivery conditions.
- Acceptation of the goods that induces the transfer of responsibility from the carrier to the consignee.

You encounter this process in all three scenarios of the supply process, in the delivery scenario as well as in the scenario of return of goods.

## SCHEMA OF THE PHYSICAL FLOW AND OF THE STEPS OF THE RECEIPT

The receiving advice is sent once.

It is produced after receipt and passed on according to a bilateral agreement (permanently, at the end of the day, ...)



←	Direction of the information
⚡	Despatch of the acknowledgement receipt of delivery of the goods (RECADV- Receiving advice)

## 4. PROCESS OF STOCK KEEPING AND INVENTORY MANAGEMENT

### Some definitions:

#### ▪ **Stock keeping**

This function consists of counting, physical inventory and report by the logistic service provider. Some logistic service providers are able to manage the date (Best before date, Expiry date) - others are not. They may also count the pallets only.

Stock keeping is mandatory for all logistics schemas concerning storage.

The “Stock keeping” function contains theoretical stocks, physical stocks and status or stock level.

#### ▪ **Inventory management**

You call it inventory management when the requesting party gives the logistic provider responsibility for the supply process on the stock.

The inventory manager determines the supply date, the quantity regardless the type of delivery.

When talking about inventory management, there is a warehousing of goods.

#### ▪ **Warehouse operations**

The three basic warehouse operations are movement, storage and information transfer to the trade partners:

1. Movement is subdivided in four activities: receipt, stock keeping, preparation of delivery and shipment.
2. Storage is the product storage and the management of the internal movements. These internal movements (slot management) do not concern the information exchange with the trade partners.
3. The information transfer is created through the “movement” function and through the transmission of the stock level which is issued by the “stock keeping” function. These information regroup the stock levels, the flow levels of different products which pass through the warehouse, the shipments and the receipts.

- **Inventory**

The inventory is the result of a physical counting which allows to eliminate possible discrepancies in reference to the theoretical stock level (before inventory) and to readjust the stock level to the physical stock.

On-going Inventory: this inventory refers to a part of the stocks. This part may be geographically (e.g. an aisle) and/or the stock of one product. The frequency of this inventory is variable. It is different from the inventory at the end of the period, as it is exhaustive.

- **Stock level**

The stock level are goods in stock at a certain point of time t, which have been updated by movements over a period, starting at the moment t-1, which refers to the following algorithm:

$$\begin{aligned}
 & \text{Stock level (t-1)} \\
 + & \text{ incoming quantities (between the moment t-1 and the moment t)} \\
 - & \text{ outgoing quantities (between the moment t-1 and the moment t)} \\
 = & \text{ Stock level (at the moment t)}
 \end{aligned}$$

Incoming quantities refer to everything that raise the stocks' level and outgoing quantities refer to everything that lower the stocks' level with or without physical movement.

Example:

	<b>Stock level</b>	<b>Incoming</b>	<b>Outgoing</b>	<b>Balance</b>
<b>January</b>	0	150	50	100
<b>February</b>	100	150	25	225
...				

The stock situation is transmitted via the message Inventory report-INVRPT/stock level.

The use of the standards offers the opportunity of automatic registration of article codes, as well as the electronical updating of the stock. The time saving that result from it is significant, considering the work of doubled manual data input *after a cost valuation of the stock items*.

- **Movement**

Movement refers to all events that modify quantitatively and/or qualitatively the stocks : receipts, despatches and miscellaneous movements (change in state, discrepancy of

inventory,...).

The despatch and receipt movements are respectively transmitted via the messages DESADV and RECADV.

Concerning the logistic service provider's supply, the message Inventory adjustment status -INVRPT may include incoming stocks when required from the requesting party. In the framework of shipment by the logistic service provider, the message INVRPT/Movements may include outgoing stocks if the requesting party asks to do it.

The message INVRPT / Movements offers the opportunity to transmit miscellaneous movements.

INVRPT does not represent a commercial action, it is used to establish a stock level or to inform about movements, whereas the messages DESADV / RECADV are commercial actions.

The recording of the movements and their transmission towards the requesting party offers him a faster and more reliable visibility of the available stocks. They also afford to enhance the reactivity when a problem arises thanks to a better quantitative and qualitative tracing of the products and thus a more efficient traceability of the products.

- **Inventory movement advice**

It corresponds to a summary of movements; a report. It lists all the movements made in a given period but it is not an accumulation.

The movement report has no influence on the stock, it is only a tool of conciliation.

It facilitates to register the incomings, outgoings and miscellaneous movements.

The message used for transmission is INVRPT/Inventory movement advice.

This stock movement report is an inventory management decision between trade partners within the framework of inventory management. It may be used periodically, i.e. the report is sent regularly in agreement with the partners, but it may also be used at a certain point due to events as discrepancy in stocks or concerning traceability.

- **Physical stock**

It represents a snapshot of the goods' quantity for one product at a certain point of time, further to a counting (inventory).

- **Theoretical stock**

It is the electronical stock at a certain point of time.

- **Stock status**

The rules of specific management are attached to a stock's level, which is called the stock status. The status is an element of differentiation of stock.

The defined stock statuses are:

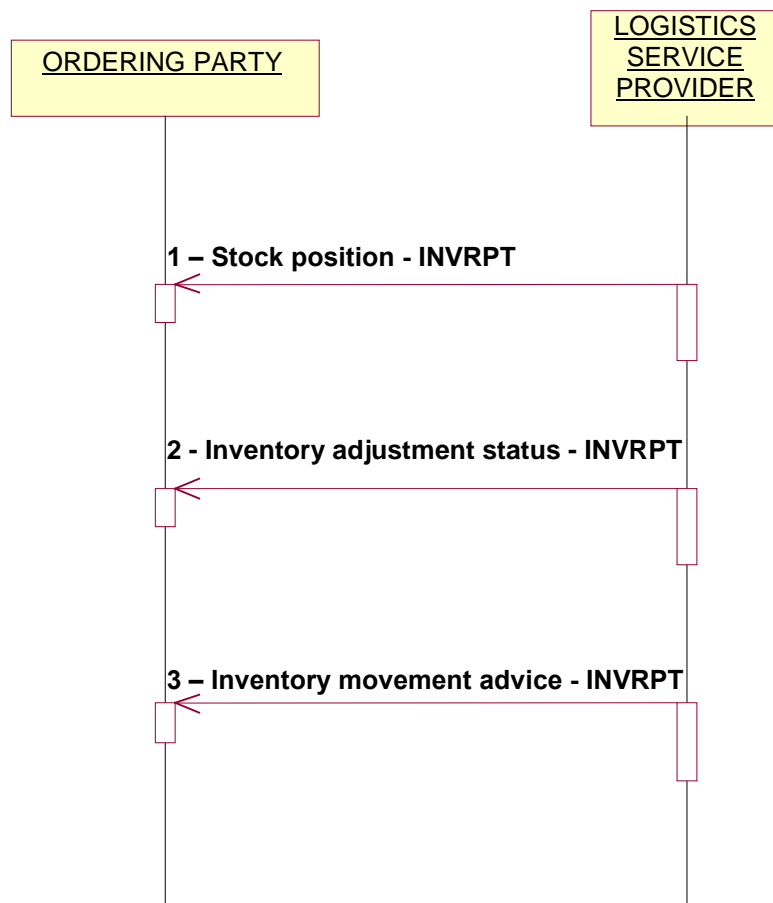
- available;

- booked;
- en route (in transit);
- damaged;
- under customs;
- blocked.

For the “blocked” status the following reasons may be specified:

- exceeded date of commercialisation (blocked article but may be commercialised through parallel channels);
- exceeded expiration date;
- quality control;
- waiting for liberation.

### Stock keeping and inventory management



#### Scenario step by step:

- 1 – The logistic service provider sends the stock level (INVRPT) to the requesting party.
- 2 – The logistic service provider sends one or several stock movements (Inventory adjustment status - INVRPT).
- 3 – The logistic service provider sends an inventory movement advice (INVRPT).

## 5. PROCESS OF DELIVERY SERVICE

According to the tools and companies the updating of the stocks is made during the preparation and despatch process.

### 5.1 Process of delivery preparation

It consists in :

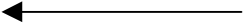

- Processing and verifying the delivery service orders (HANMOV).
- Removing the necessary goods to the zones of stocking reserved to that effect respecting the supplied prescription of the requesting party.
- Preparing the logistics units.
- Making the logistics units available for despatch or pick up/collection.

### 5.2 Shipment process

This process starts with the arrival of the lorry that conducts the delivery and ends at the lorry's departure from the platform or from the warehouse of the logistic service provider.

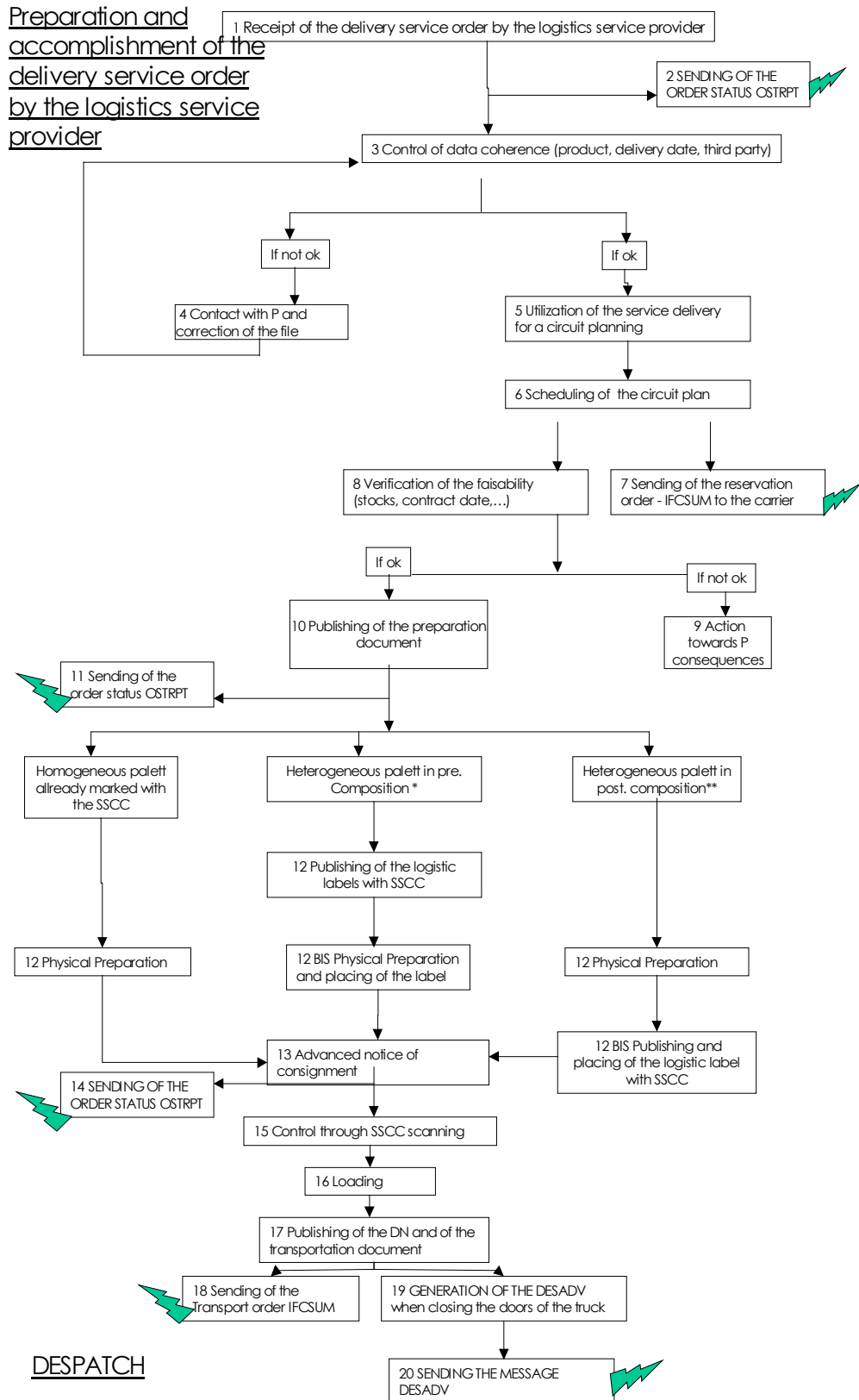
## SCHEMA OF THE PHYSICAL FLOW - STEPS OF THE GOODS' PREPARATION AND DELIVERY

Certain steps will or will not exist according to the operations that are determined by the profession or activity sector.

	Direction of information
	Sending of the messages: <ul style="list-style-type: none"> <li>• Despatch advice (DESADV)</li> <li>• Order status report (OSTRPT)<sup>3</sup></li> <li>• Forwarding and consolidation summary message (IFCSUM)</li> </ul>
<b>P</b>	Requesting party
<b>DN</b>	Delivery note

<sup>3</sup> The message order status (OSTRPT) is adequate to be sent to the indicated steps of the following schema. However it may also be sent to other steps as a consequence of a bilateral agreement between trade partners.

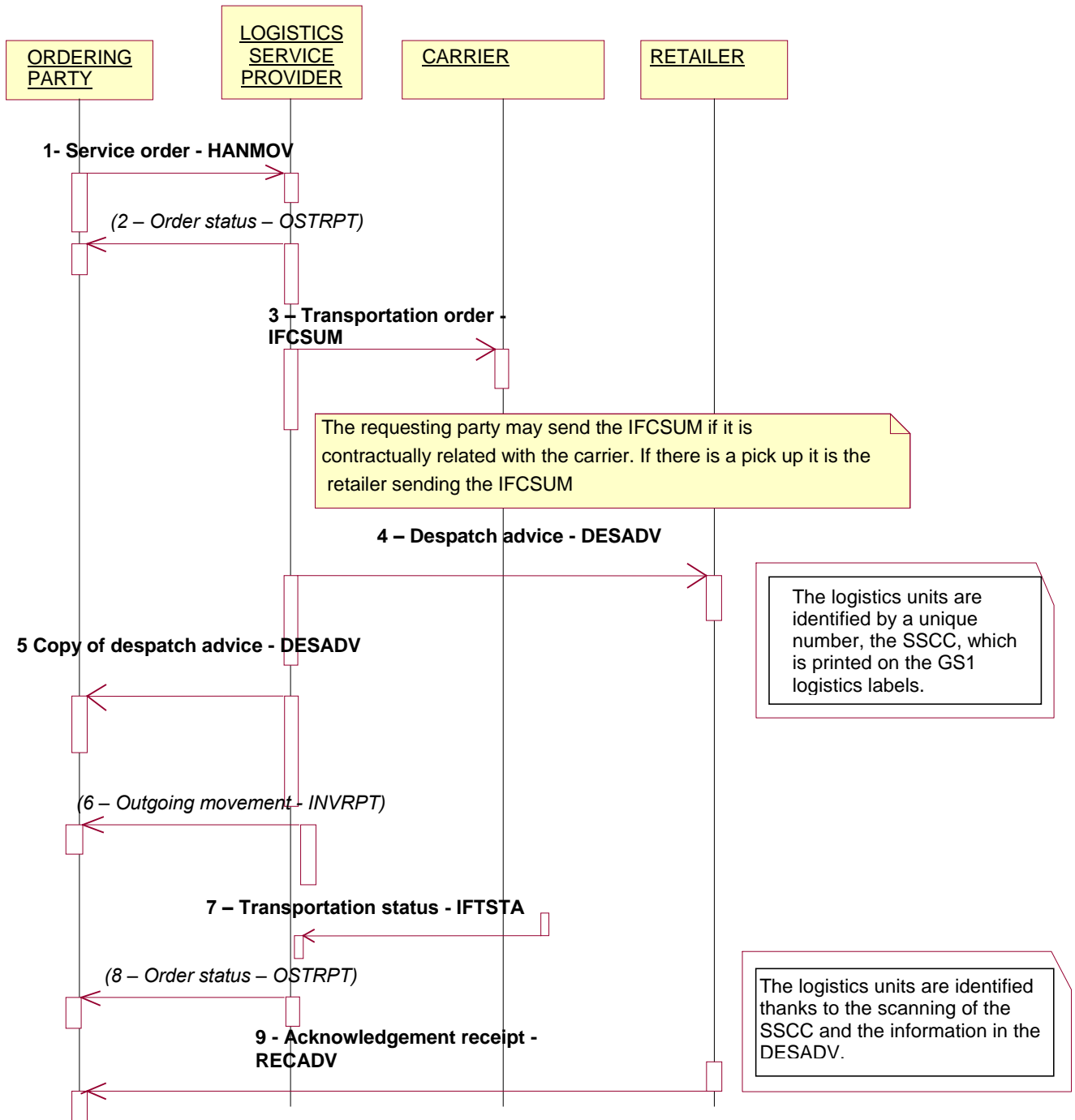
## Logistic Service Provider – Process and Scenario



\* Heterogeneous pallets in pre. Composition : detailed and ordered preparation before the beginning of the physical preparation

\*\* Heterogeneous pallets in post composition : the assistant defines the pallet's constitution during the physical preparation

**Scenario of delivery of goods**



The logistic service provider is the supplier's service provider.

The process of goods transfer between two warehouses follows the same logic as the process of delivery above.

In case of a preparation and delivery order the use of the message HANMOV is recommended. In case of a simple delivery order the message INSDDES can be used, however, since there is an order of preparation and delivery, HANMOV is more adapted between the requesting party and his service provider.

**Scenario step by step:**

The retailer sends an order to the supplier (requesting party). The order flow is now without CRP (Continuous Replenishment Program).

**1** – The requesting party sends the service order (preparation and delivery – HANMOV) to the logistic service provider. This message may contain information, which should be integrated into the transport order (IFCSUM) by the logistic service provider.

**2** – The logistic service provider can send an order status (OSTRPT) to inform the requesting party about the progression of the preparation of the delivery. This message may be sent once or several times and in several steps since the receipt of the preparation and delivery service order and before the sending of the despatch advice.

**3** – The logistic service provider sends a transport order (IFCSUM) to the carrier so that he delivers the goods to the retailer. If the carrier is contractually related with the requesting party, it is the latter who sends the IFCSUM. If there is a pick up, it is the retailer who sends it.

**4** – The logistic service provider sends a despatch advice (DESADV) to the retailer so that he can prepare the receipt of the goods.

**5** – The logistic service provider sends a copy of the despatch advice (DESADV) to the requesting party in order to inform him that the goods have been despatched to the retailer.

**6** – The logistic service provider may send an Inventory adjustment status message (INVRPT) to the requesting party in order for an outgoing of stocks.

**7** – The carrier sends a transport status message (IFTSTA) to the logistic service provider in order to inform him about the delivery of the goods.

**8** – The logistic service provider can send an order status (OSTRPT) to inform the requesting party about the progression of the transport.

**9** – The retailer sends an acknowledgement receipt of delivery of the goods (RECADV) to the requesting party (supplier), responsible for the delivery.

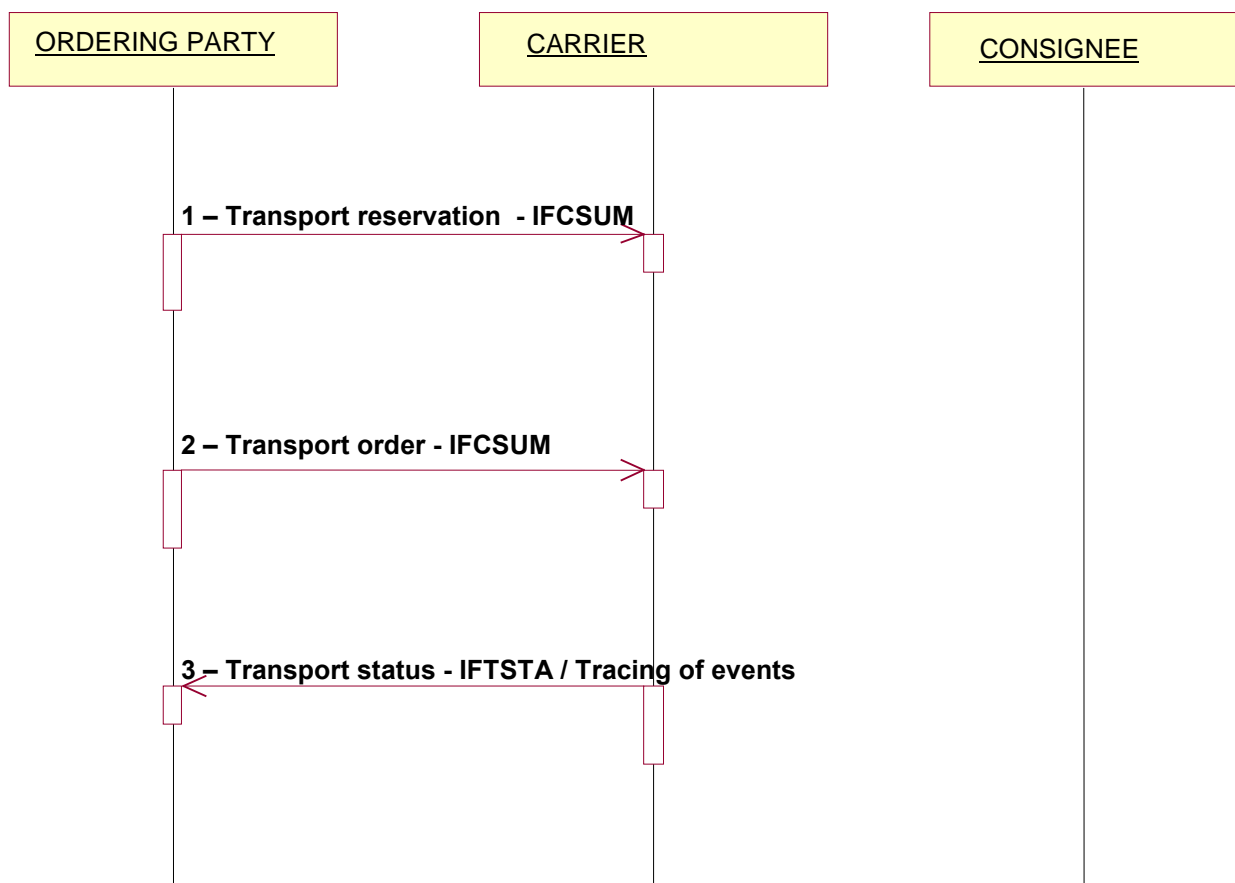
## 6. TRANSPORT PROCESS

Transport is the process of physical transfer of goods from one place to another respecting the contract that has been signed by both partners, the particularities of the transport order and the applicable regulations.

The following operations correspond to this process:

- Transport booking – IFCSUM;
- Availability of the means – IFTSTA;
- Loading of the lorry;
- Firm order of transport – IFCSUM;
- Transport;
- Information on delivery – IFTSTA.

### Transport scenario



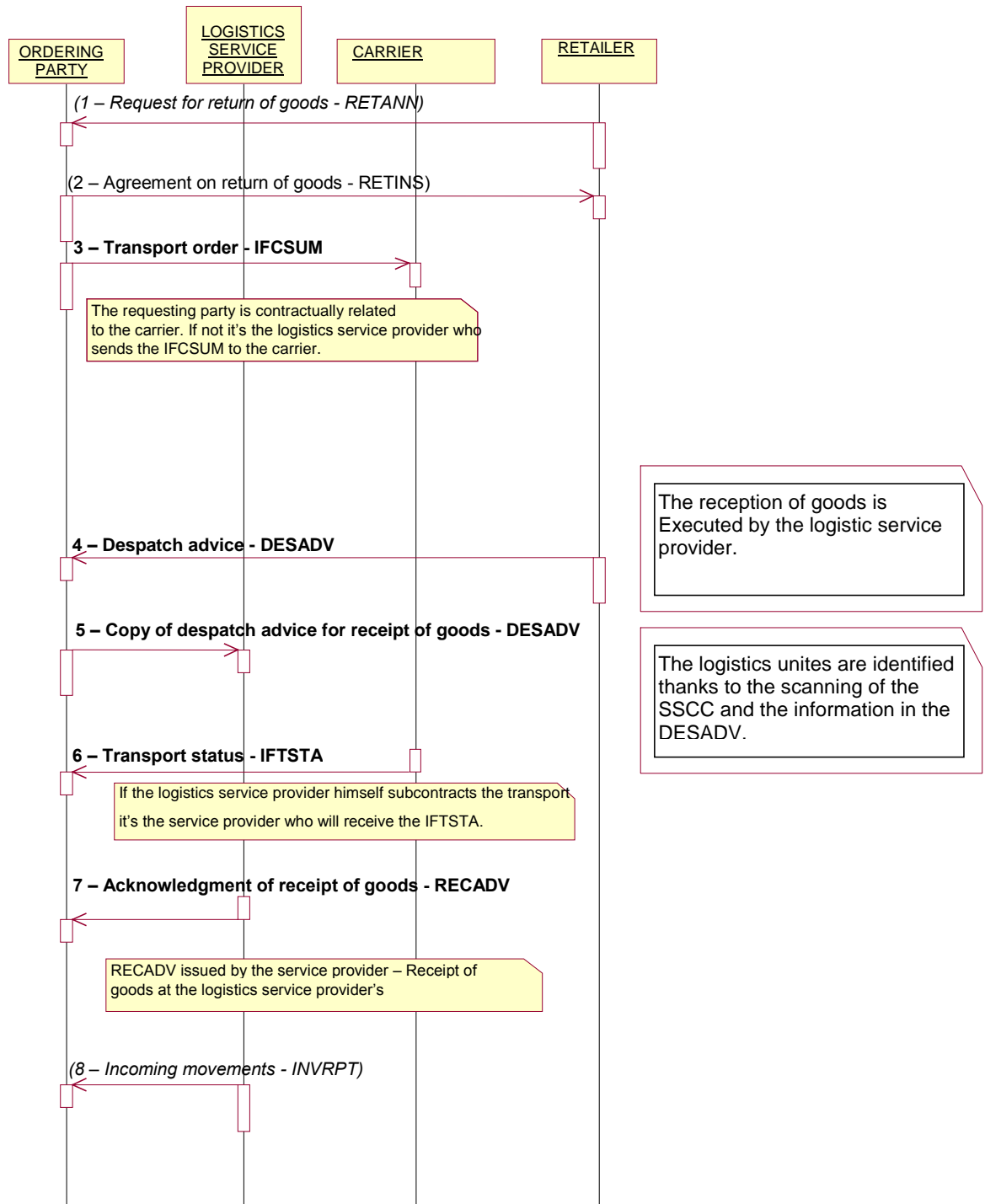
#### Scenario step by step:

- 1 – The requesting party books the transport. (IFCSUM).
- 2 – The requesting party sends the transport order (IFCSUM).
- 3 – The carrier sends the transport status (IFTSTA).

## 7. PROCESS OF RETURN OF GOODS

The process of return of goods starts consequently to a refusal of goods or of an order of return of goods. This process may also be a return by force.

### 7.1 Scenario of return of goods to the logistic service provider (recovered from the retailer) consequently to an agreement between the requesting party and the retailer



**In the different processes of return of goods, the stage receipt is the same as within the framework of the supply process.**

The logistic service provider is the supplier's service provider.

The described flows are aligned with the flows between the requesting party and his service provider. This is the reason why the return of the goods to the requesting party is not shown here (see following case).

**Scenario step by step:**

**1** – The retailer requests for a return of goods from the supplier. The RETANN message (request for return of goods) is adapted to this need.

The goods are returned consequently to an agreement between the trade partners - requesting party and retailer.

**2** – The supplier issues a response to the request for return of goods. The message RETINS (agreement or not, or return of goods) is adapted to this need.

The requesting party decides to return the goods.

*Concerning the request and the agreement of return, it is possible to not use the EDI messages RETANN and RETINS.*

**3** – If the carrier is contractually related to the requesting party, the requesting party sends a transport order to the carrier (IFCSUM) so that the latter picks up the goods at the retailer's. If not, the logistic service provider may send the IFCSUM directly to the carrier.

**4** – The retailer sends a despatch advice to the supplier (requesting party).

**If the retailer sends a despatch advice to the logistic service provider, the requesting party has to receive the copy of this advice.**

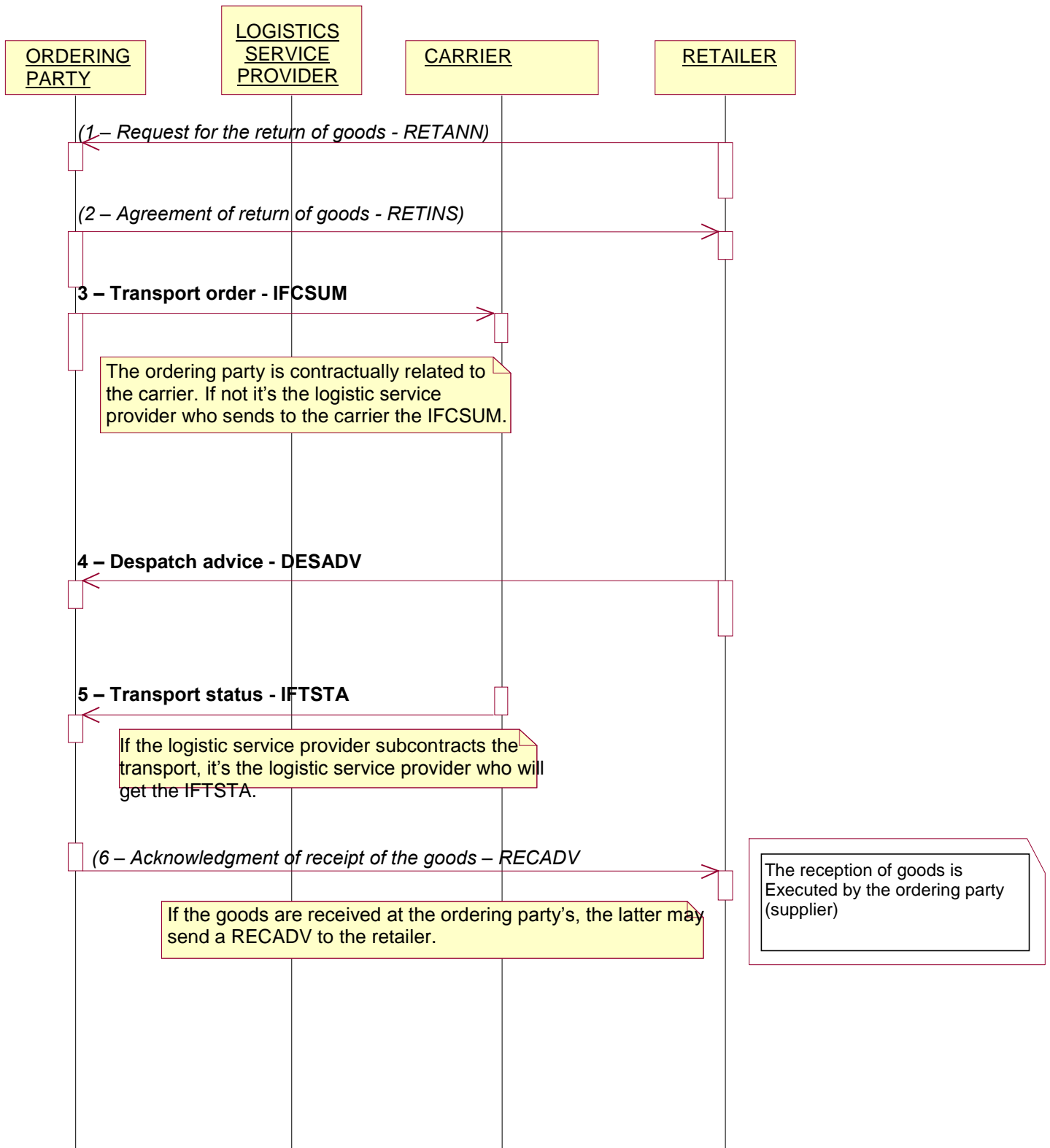
**5** – The requesting party sends a copy of the despatch advice (DESADV) to the logistic service provider in order to take the delivery of the goods. The requesting party has to inform his service provider about an expected return of goods, which has been agreed before (RETINS).

**6** – The carrier sends a transport status (IFTSTA) to the requesting party in order to inform about the delivery of the goods.

**7** – The logistic service provider sends an acknowledgement of delivery of the goods (RECADV) to the requesting party in order to inform about an incoming in stocks. In this particular case, the RECADV message is not used to inform the retailer that the returned goods have well been received but to inform the requesting party about the receipt of goods as incoming stocks.

**8** – The logistic service provider may send the Inventory adjustment status message (INVRPT) to confirm the incoming goods as stocks.

**7.2 Scenario of return of goods to the requesting party (recovered from the retailer) consequently to an agreement between the requesting party and the retailer**



The logistic service provider is the supplier's logistic service provider.

### **Scenario step by step:**

**1** – The retailer requests a return of goods to the supplier. The message RETANN (request for return of goods) is adapted to this need.

The goods are returned consequently to an agreement between the partners - the requesting party and the retailer.

**2** – The supplier sends a response to the request for return of goods. The message RETINS (agreement or not, of return of goods) is adapted to this need.

The requesting party decides here about the return of goods.

*Concerning the request and the agreement of return, it is possible to not use the EDI messages RETANN and RETINS.*

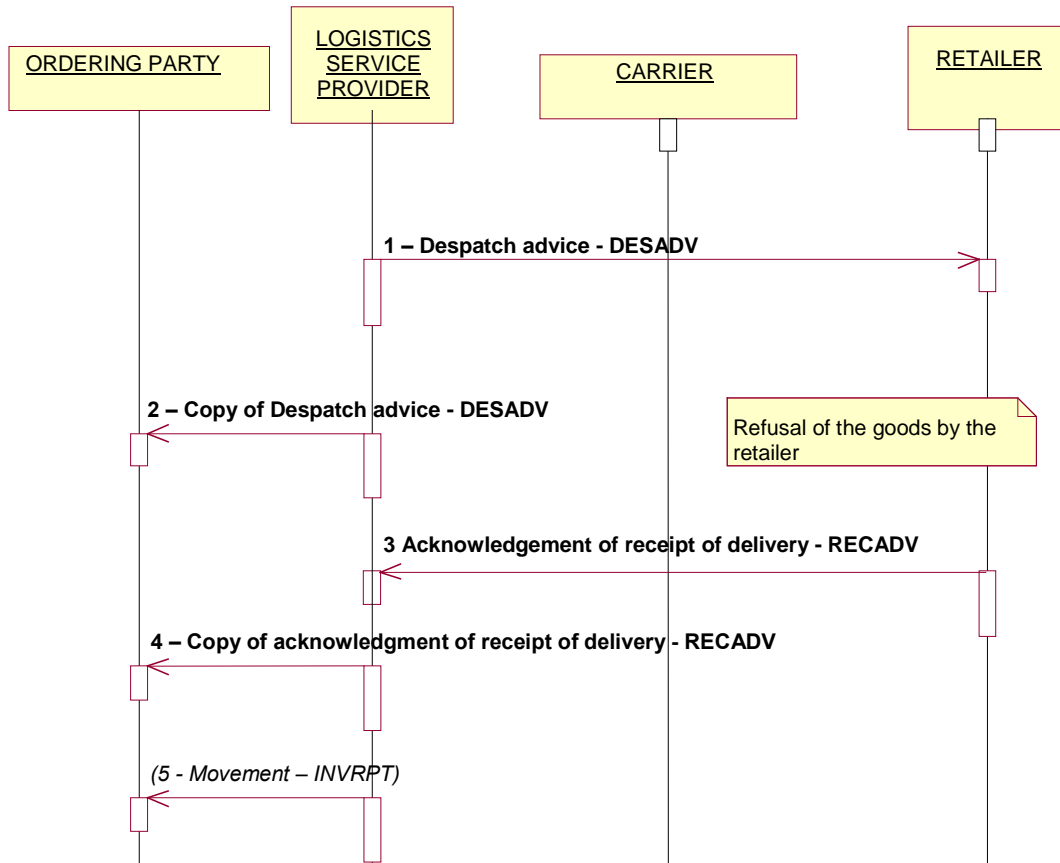
**3** – If the carrier is contractually related to the requesting party, the supplier – requesting party – sends a transport order (IFCSUM) to the carrier so that he picks up the goods at the retailer's. If the logistic service provider subcontracts the transport, he may send the IFCSUM directly to the carrier.

**4** – The retailer sends a despatch advice (DESADV) to the supplier (requesting party).

**5** – The carrier sends a transport status (IFTSTA) to the requesting party to inform him about the goods' delivery. If the logistic service provider subcontracts the transport, it's the service provider who will receive the IFTSTA.

**6** – The requesting party may send an acknowledgement of delivery of the goods (RECADV) to the retailer.

### 7.3 Scenario of return of goods by force



The logistic service provider is the supplier's logistic service provider.

The return of goods is done because of a refusal on the part of the retailer. The goods are returned by force without an agreement between the requesting party and the retailer.

The INVRPT corresponds here to miscellaneous movement.

#### Scenario step by step:

**1** – The logistic service provider sends a despatch advice (DESADV) to the retailer so that he can prepare the receipt of the delivered goods.

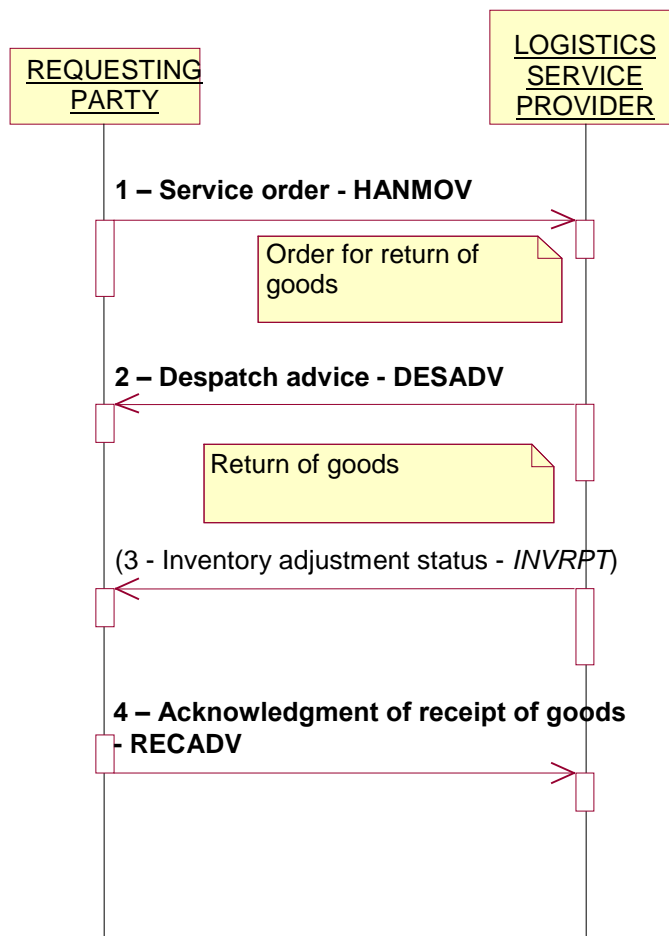
**2** – The logistic service provider sends a copy of the despatch advice (DESADV) to the requesting party in order to inform that the goods have been despatched by the retailer.

**3** – The retailer sends an acknowledgement receipt of delivery (RECADV) to the logistic service provider specifying the refusal of the goods and the reason.

**4** – The logistic service provider sends a copy of the acknowledgement receipt of delivery (RECADV) in order to inform the requesting party of a return by force consequently to a refusal of the retailer (which refers to DESADV)

**5** – The logistic service provider may send an inventory adjustment status message (INVRPT) to the requesting party for incoming in stock consequently to a refusal of the retailer (which refers to DESADV).

## 7.4 Scenario of return of goods from the logistic service provider to the requesting party



This schema is implemented in the scenario of supplying the logistic service provider. The logistic service provider is the one of the supplier. This schema will be the same for the logistic service provider of the retailer.

### Scenario step by step:

**1** – The logistic service provider’s retailer, consequently to the information received by his logistic service provider about a given goods, requests a return of the targeted goods from the latter via the HANMOV.

**2** – The logistic service provider returns the goods and sends the despatch advice (DESADV). The despatch advice is referred to the service order (HANMOV).

**3** – The logistic service provider may send an Inventory adjustment status message (INVRPT) for outgoing of stocks.

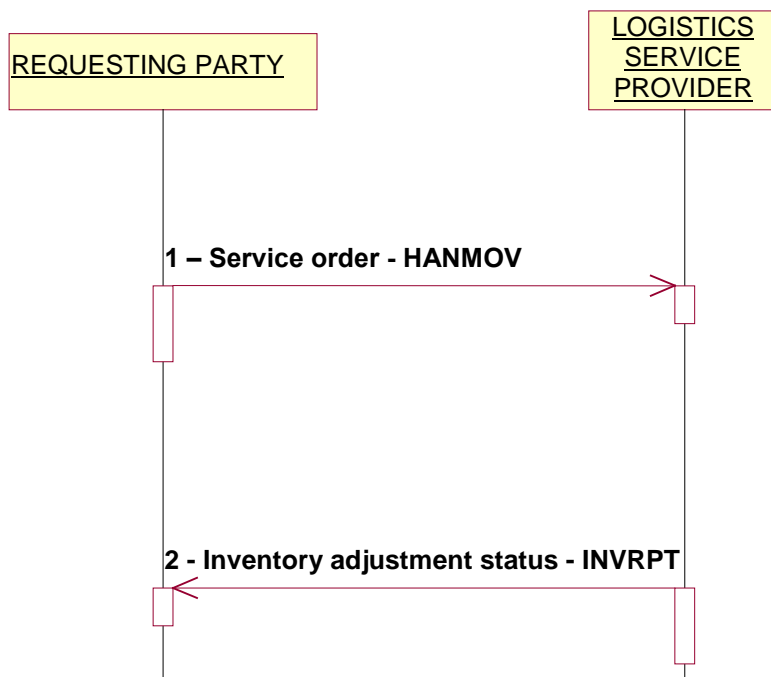
**4** – The requesting party sends an acknowledgement receipt of delivery of the goods. (RECADV)

## 8. OTHER LOGISTICS SERVICES

Following are logistics services:

- Order of block and release of goods ;
- Withdrawal of stocked products according to the instructions;
- Packing and unpacking of the goods (i.e.: co-packing, co-manufacturing, ...);
- Marking and labelling of the packaging.

### Scenario of logistics services



The logistic service provider is the one of the supplier or the retailer.

#### Scenario step by step:

1 – The requesting party sends an service order (HANMOV) to the logistic service provider.

2 –The logistic service provider sends the Inventory adjustment status message (INVRPT) to his requesting party.

## 9. GLOSSARY

### ▪ **Acknowledgement receipt of delivery of the goods**

The acknowledgement receipt of delivery (RECADV) is a message that indicates the details concerning the received goods according to the conditions agreed by the trade partners. The aim of this message is to inform the consignor/despatch party of the goods about the content (at time receipt) of the shipment.

The message concerns only one single receiving point and only one single shipping point and can cover different articles or boxes. The message allows to the despatch party of the goods to know if the goods have been received or not or if they have been accepted or not.

This information may facilitate the consignor/despatch party to prepare the invoice.

### ▪ **CMR**

The CMR (contract for the international carriage of goods by road) is the paper document of transport established within the framework of the International Convention of Geneva that regulates the international carriage by road.

### ▪ **Co-manufacturing**

Collaboration between several companies which aims to focus on specific competencies of each company in order to accomplish a common final product. The tasks, which are executed here, concern the whole product life, from its conception, through its development, production and packing. These value-added operations are sometimes assigned to the logistic service providers. However, within the framework of these operations it may be pre-manufacturing at the stage of its supply or post-manufacturing at the stage of its transport or of distribution.

### ▪ **Co-packing**

Packaging operation, often executed by the logistic service provider in a warehouse zone which consists of assembling either different products or the same products under the same packaging, (consumer batches, sample of a new product added to the normal one, ...).

### ▪ **Cross-Docking**

Cross docking (transshipment quay to quay or Flow Through Distribution) is a distribution system, which does not store but prepares the received goods in a distribution centre or in a hub for the immediate reshipment to shops. The preparations<sup>4</sup> per store are done by

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<sup>4</sup> The preparation indicates here every manipulation of an object with regard to the delivery towards the shops. It includes the labelling of the object and/or the allocation of the object.

the supplier and/or retailer.

Cross docking can be applied in several different ways:

- Pre-packed cross docking or allotment done by the manufacturer: the preparation of logistic units (cases, pallets,...) for shops is made by the supplier upfront. Afterwards, these logistic units are received and stored on the quay of the distribution centre or the hub. Then they are regrouped with other logistic units arriving from other manufacturer in order to be routed without any further manipulation towards the shops, their final shipment point.

In this precise case, it is the supplier who places the logistic labels (including among others the final consignee's location information) on the logistic unit

- Intermediate handling cross docking: the preparation for shops is done in the hub. The logistic units (cases, pallets,..) are received, split up and re-packed in another logistic unit, labelled by the hub and delivered to the shop. These new logistic units are regrouped by destination point with those of other manufacturers

In this case it is the hub that places the logistic labels on the newly regrouped logistic units.

- **Delivery note**

The delivery note is the commercial paper document, which integrates the information about the goods and which can be returned signed to the consignor.

- **Despatch advice**

The despatch advice (DESADV) is a message that indicates the details of the delivery of the despatched goods under certain conditions, which are accepted by the supplier and the customer. The message indicates the details about the content of the expedition to the consignee of the goods (for example the retailer).

- **HACCP**

Hazard Analysis Critical Control Point.

The HACCP is a method, which allows:

- To identify and to analyse the dangers related to the different stages of the process of production of foodstuffs;
- To define the necessary means to restraint the dangers;
- To be sure that these means have been applied in an effective and efficient way. This is an organised and systematical approach to build, to implement or to improve the security assurance of foodstuffs.

- **Instruction to despatch**

The order or instruction to despatch message (INDES) is issued by a supply chain actor (for example a buyer or a supplier) to the destination of another partner who holds the ordered goods (for example a logistic service provider). This message gives the instruction to ship or to collect a cargo according to the specified conditions in the message. It is possible to use the message to identify the location(s) of delivery, the delivery date (s), to indicate if the shipment is subordinated to refund,...

It is possible that the buyer or supplier uses the instruction to despatch message to inform the logistic service provider, about the order concerning the effective delivery of the goods (for example delivery conditions, necessary transportation equipment for the delivery). In this case the logistic service provider is not part of the normal buyer/seller order process. This information allows to the logistic service provider to produce a despatch advice on behalf of the buyer or supplier.

- **Inventory adjustment status (Movements) and Inventory movement advice**

Both flows use the message INVRPT.

The Movements or “Inventory adjustment status” message identifies all events that quantitatively and/or qualitatively influence the stock. The frequency is variable. If the movements are regular, the messages DESADV and/or RECADV can be used.

The message stock movement report or “Inventory movement advice” is a listing of all the movements over a certain period of time. It is not an accumulation but a summary.

- **Invoice**

The supplier sends the invoice (INVOIC) to the customer to ask for payment for the goods or for the services received according to mutually agreed conditions by the supplier and the buyer. If the master data is correct; this message covers also the functions of a Performa invoice, a credit memo and a debit note. The seller can bill one or several transactions concerning the products or services which are related to one or several orders, delivery instructions, demand of outstanding orders, etc.

- **Logistics labels**

Standardised format of the label, which has been defined by GS1. This label is appropriate for all logistics units and namely shows information that have been symbolised in the UCC/EAN –128 bar codes (in particular the SSCC).

- **Logistics service order**

A supply chain actor (for example a supplier) sends the logistics service order (HANMOV) to a logistic service provider. This message instructs to provide services on the products, which are in the logistic service provider’s possession but not his property. It allows to instruct services and/or possible movements of goods.

This message covers the logistics services of shipment preparation of the goods, picking of

the goods, packaging and unpacking of the goods, marking and labelling of the packaging and the transfer of goods between two warehouses.

#### ▪ **Logistic service provider**

According to the complexity and the type of operation (or function) which has been executed by the logistic service providers, several categories of actors have been created :

- ❖ The logistic service providers who ensure the performance of the physical logistics operations (transport and warehousing) and whose management system is restricted to the monitoring of the performance to the customer's account.
- ❖ The logistic service providers who integrate the operation above and moreover some services as complex handling operations (co-manufacturing, co-packing), management of administrative operations (invoice, orders) and IT (tracking - tracing,...).
- ❖ The integrators of logistics services who are characterised by the almost absence of absolute physical means and whose specificity is to integrate the services of different subcontracted company's (transport, warehouse, value added operations,...) and to ensure the coherence and the management through the information flows they report.

The first and the second group are often combined under the term Third Party Logistics (3PL), and the third one under the term of Fourth Party Logistics (4PL) (definition created by Accenture). Finally even if it is rarely used and it is close to 4PL, the term Fifth Party Logistics (5PL) is used for logistic service providers who develop, organise and realise logistics solutions on behalf of their requesting party (in particular for IT) by the means of adapted technologies.

#### ▪ **Multiple transport order**

It's the requesting party (supplier, retailer or logistic service provider) who sends the multiple transport order (IFCSUM) to a forwarding agent/commission agent or carrier in order to give a transport order or to reserve a transport for a group of shipments agreed conditions.

#### ▪ **Order (Purchase Order)**

The Purchase Order message is transmitted by the retailer to the supplier to order goods or services and to specify the relevant quantities, dates and locations of delivery.  
The scenarios are pulled by the purchase order.

#### ▪ **Order status**

The order status (OSTRPT) is sent by the logistic service provider to its requesting party to inform about the status of an order. This message can be used to give information about the status related to a logistics service order (HANMOV) or an instruction to despatch message (INDES) which has been previously sent.

- **Reply to an instruction for returns**

The response of an instruction for returns (RETINS) allows a supply chain actor to inform his partner about the means of how the goods should be returned. The issuer of this message has been informed in advance about his customer's intentions to return the goods by the message "Request for return of goods".

- **Request for return of goods**

The message request for return of goods (RETANN) is used by a supply chain actor (e.g. manufacturer, retailer, ...) to announce to another one the details of the returned goods and the reasons for this return (repair, damaged goods). The issuer can use this message to ask for a credit advice on the goods or for a refund of the goods to the consignee of the message because of several reasons: received goods were in bad conditions, were not ordered, with exceeded expiration date and still not sold,... These problems are revealed after the message of acknowledgement receipt of delivery of the goods has been sent.

- **SSCC**

Abbreviation for *Serial Shipping Container Code*. It's the international code consisting of 18 digits whose structure has been defined by GS1 and enabling to identify each logistic unit uniquely. When symbolised in UCC/EAN – 128 on the logistic unit and transmitted in the despatch advice, it allows ensuring the traceability of the products.

- **Stock level**

A flow, which uses the inventory report (INVRPT). It's a message that is exchanged between the supply chain actors in order to give information about the inventory. All goods, services and locations that are defined in the inventory report have to be defined.

- **Supply advice**

The supply advice (DESADV) is a message, which indicates the details of delivery of the despatched goods. The message indicates the details of the shipment's content to the consignee of the goods (logistic service provider).

- **Transport status**

The transport status (IFTSTA) offers the opportunity to exchange information about the status of physical movements of a shipment or of logistics units at any time and anywhere in the transport chain.

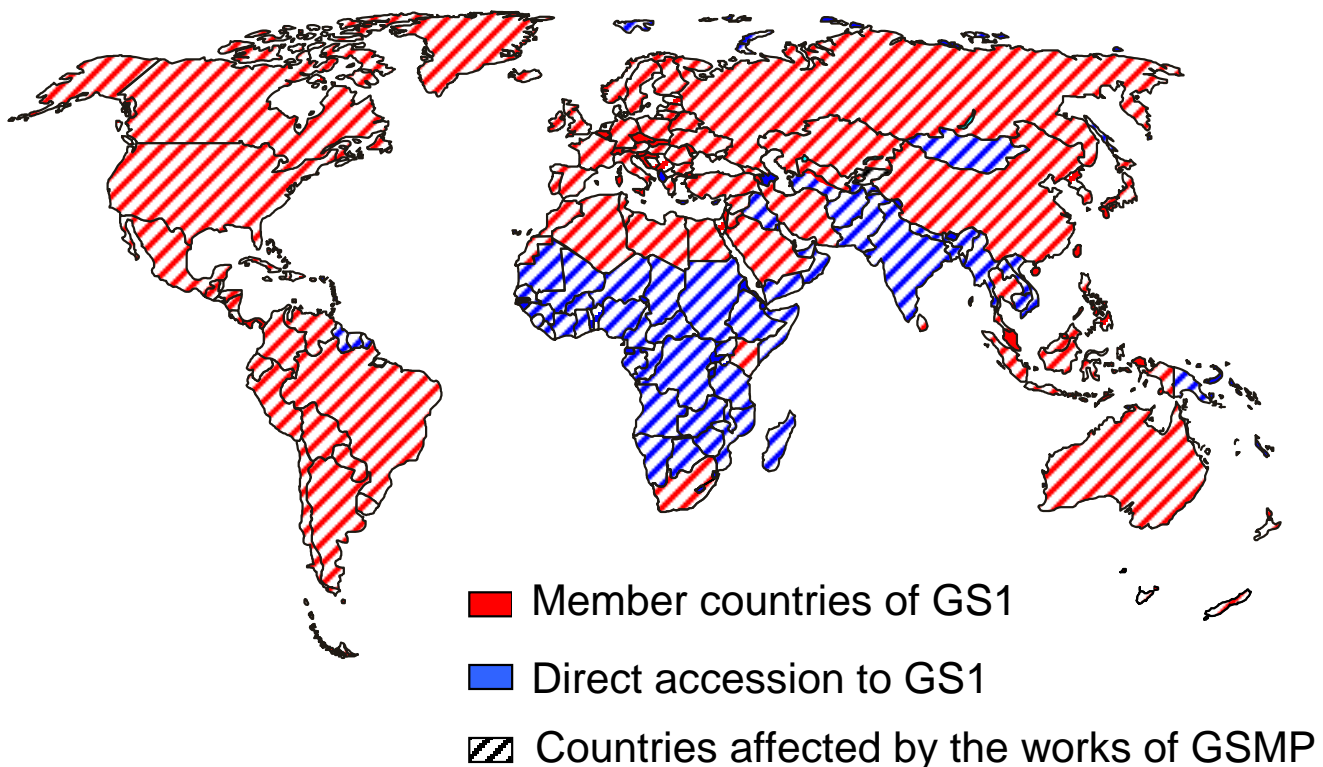
- **Waybill – Full or part transport load**

The waybill is the document of road transport (feuille de route) that is used when the despatch of goods is equal or heavier than three tons and when the distance is equal or more than 150 kilometres in France. The carrier's receipt is used when the despatch of goods is less than three tons and the distance is less than 150 kilometres in France.

**GS1 France****Structure of reconciliation****and of technological innovation**

Created in 1972, GS1 France is a founding member and French representative of GS1 (formally EAN International).

The activities executed at country level with participation of the companies have been assigned on the international level in one of the specific groups of EAN International. They may also be assigned within the framework of GSMP (Global Standard Management Process) regrouping all countries of the world.



The missions of GS1 France are:

- The study and the development of the standards, particularly within the framework of the working groups with subject related experts in order to elaborate common rules of use and documents helping to implement the GS1 standards.
- Assistance of the members with training, appointments in the company, hotline, technical control of the bar codes or the EANCOM/EDIFACT messages, relation with the service providers who offer tools which use the GS1 standards.
- Communication activities in order to ensure the promotion of the GS1 standards, in particular through a participation at the trade fairs, at the topical conferences updated regularly on the following homepage:

<http://www.gs1fr.org/>