

GUIDELINES FOR STANDARDISED



Joint ECTA-EPCA-CEPIC Working Group



DELIVERY PERFORMANCE MEASUREMENT



Responsible Care

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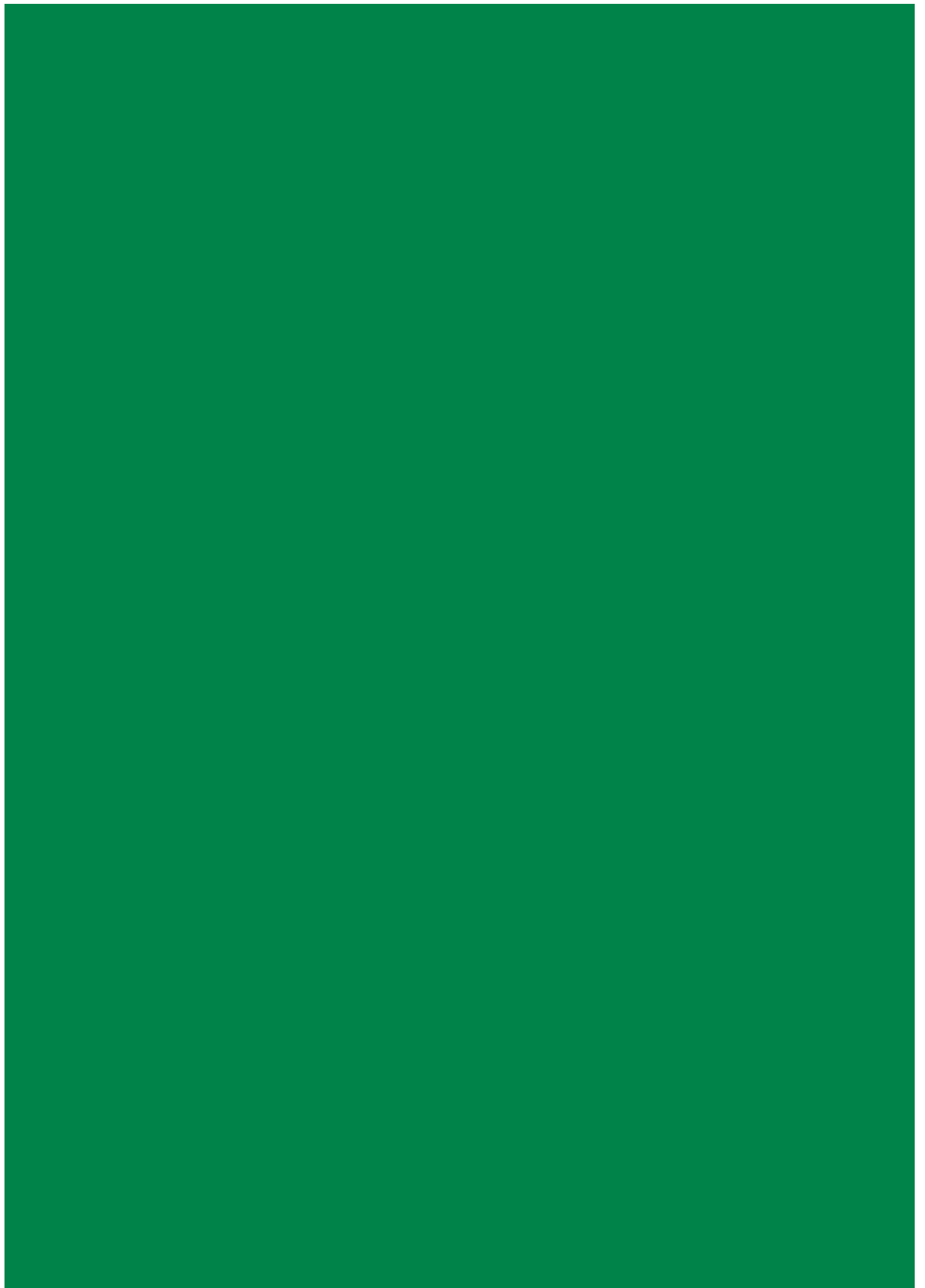


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INTRODUCTION

Many companies in the chemical industry and other sectors are trying to measure their delivery performance as a tool for continuous improvement.

For the greater part of the data collection they are dependent on hauliers that provide their transport.

At present this data collection is done on the basis of bilateral agreements and systems between industry and hauliers. As a consequence, hauliers serving several companies are facing different reporting systems, which complicates a structured processing of information.

A working party under the umbrella of ECTA*, EPCA* and CEFIC*, and consisting of representatives from chemical industry and hauliers, prepared this set of guidelines which enables parties concerned to collect the data needed for Delivery Performance Measurement in a standardised way.

Although this standardised system has been set up by a working party of EPCA and ECTA, it is not restricted to the chemical industry to make use of it.

The following chapters in this booklet describe the standardised system.

** see appendix 3 Definitions*

OBJECTIVES

The main objective of the following system is a broad application of Standardised Performance Measurement for both industry and haulier.

The harmonisation and transmission of performance data enable the users to achieve several advantages:

- Reduction of the number of different systems in place.
- Reduction in time and effort spent on collection, transmission and processing of data.
- Increase the possibilities for automatic collection and exchange of information.
- Increase the reliability and accuracy of information.
- Performance results are directly comparable between different hauliers and so creating possibilities for benchmarking exercises for the industry.
- Enable the immediate identification of weaknesses and provide a platform for continuous improvement.
- Provide a basis for a better understanding between parties involved.
- Create a Standardised System which can be used by a wide platform of companies (also small companies).

PRINCIPLES

The Standardised Delivery Performance Measurement is based on reporting by exception (although full reporting possibilities are not excluded). This means that the haulier is supposed to record and report each individual shipment that deviates from the industry's requirements as an incident.

An incident in this respect is any non conformance in the provision of a transport order/shipment.

With the Standardised Delivery Performance Measurement, it is intended that all data which a company requires for its internal performance rating are passed in full and standardised by the haulier. For this purpose, both the haulier and the industry are advised to use common codes (see chapter 4 "Clarification of Standardised Elements of Codification") which simplifies the process and increases the meaning of the information.

The basic principles for using different elements of codification are referring to the following questions:

- *Which part of the supply chain was involved?*
- *What happened?*
- *Who was accountable?*
- *Why did it occur?*

In order to answer these questions systematically, the elements have been classified into 4 groups, each consisting of a defined number of codes (see Appendix 1 "Matrix of Codes"):

a) Part of the Supply Chain for	"Which part?"
b) Incident Category for	"What?"
c) Accountability for	"Who?"
d) Cause Code for	"Why?"

a) Part of the Supply Chain (Which part?)

With this element it can be determined whether the non-conformity occurred during loading or delivery. With one single shipment an incident can occur which could have an effect on loading and/or on delivery.

If both parts of the supply chain are affected the incident must be reported twice (1 time for loading / 1 time for delivery). If a deviation at loading results in a deviation in delivery as well, the shipment must also be reported twice. (see Appendix 2 section C and F).

b) Incident Category (What?)

Seven different codes are available, each referring to a specific deviation.

A maximum of 7 incidents per loading and 7 incidents per delivery are possible. In the worst case a total of 14 incidents per shipment could be reported (see Appendix 2 section D/E/F).

c) Accountability (Who?)

Four different codes are specified to assign accountability to each incident.

Only one accountable party can be reported per single incident. Sharing of accountability is not allowed.

If, at the time that the report is being written, it is not clear where the accountability lies (e.g. product damaged), a bilateral agreement between the relevant company and haulier must be reached on who takes responsibility in the reporting.

The performance record can be changed afterwards, when the accountability was found clear.

Assignment of Accountability in relation to a cause can only be made in valid combination as mentioned in the "Matrix of Codes". Invalid combinations are prohibited (see Appendix 1 - Force majeure can only be combined with the causes 14, 15, 16 and 17 but not with 01-human error for instance).

d) Causes (Why?)

Seventeen different codes are available to specify the (root)cause of an incident. Only one single cause code should be reported per incident.

Clarification of Standardised Elements of Codification (See Appendix 1)

Part of the Supply Chain (Which part?)

Loading (= code L)

Use this code for ALL incidents that take place as from receipt of transport order until departure of vehicle after loading.

Delivery (= code D)

Use this code for ALL incidents that take place as from departure of vehicle after loading until discharge at the consignee has been completed and the vehicle has left consignee's premises.

Incident Category (What?)

The incident category is to be used to define the type of incident.

Date & Time (= code DA)

For all date and time related incidents such as late arrival of vehicle.

Equipment (= code EQ)

For all incidents for failures with equipment (vehicle, pump, computer etc.).

Product (= code PR)

For all incidents where the quality or condition of the product is affected.

Packaging (= code PA)

For all incidents where the quality or condition of the packaging is affected.

Documentation (= code DO)

For all incidents where a failure with documents occurred.

Safety (SHE = Safety Health Environmental = Code SA)

For all incidents where the safety, health and environment during loading, transport or delivery are affected.

Behaviour (= code BE)

For all incidents where the behaviour of personnel (e.g. driver, loading or discharge staff etc.) is the reason for the incident.

Accountabilities (Who?)

This code is used to specify who is responsible for the cause of the incident.

- *(Final) Customer (= code C)*

The company who receives the product.

- *Shipper (= code S)*

The company who gives the transport order.

- *Haulier (= code H)*

- *Force Majeure (Act of God) (= code X)*

Cause Codes (Why?)

- *01 - Human error*

ONLY use this code as last option if none of the other cause codes is applicable.

- *02 - Communication/Information/Instructions Failure*

Something with communication, information or instruction wherever in the supply chain went wrong (eg. order booking, loading instruction, misunderstandings etc.).

- *03 - Documents failure*

The incident was caused by wrong or missing documents.

- *04 - Breakdown of equipment*

All "equipment" used or involved in the supply chain is included (eg. truck, facilities at loading/unloading, IT-machinery etc.).

- *05 - Product or packaging damage*

- *06 - Wrong equipment*

All "equipment" in the supply chain which is not meeting the requirements of the shipper or the customer.

- *07 - Non-availability*

The lack of anything in the supply chain causing the incident (no loading windows available, no truck/driver/ferry booking, no loading equipment/personnel, no material, not enough storage space etc.).

- *08 - Rush order*

The shortening of the transit time has direct impact on the incident (eg. late delivery due to too late booking or too short lead-time etc.)

- *09 - Accident*

An accident at any point in the supply chain has caused the incident (eg. at dispatch, during transport etc.).

- *10 - Theft and vandalism*

- *11 - Unsafe conditions*

Not meeting safety, health or environmental requirements or instructions (no safety gear, missing safety instructions etc.).

- *12 - Upon request*

Only referable if direct and active request or demand of the shipper or final customer is given.

- *13 - Third party*

All incidents in the supply chain caused by any other party involved (eg. ferry/rail delay, breakdown railterminal equipment etc.). See definition in Appendix 3.

- *14 - Excessive customs clearance*

- *15 - Traffic*

- *16 - Strike*

- *17 - Weather*

14 – 17 are so-called "Acts of God" or "Forces Majeures" thus meaning that incidents caused by them could not have been directly and/or actively influenced or avoided by haulier, shipper or final customer.

To facilitate the selection of the proper coding a few examples with the applicable coding are given in Appendix 2, and a more complete list is available upon request from the ECTA office.

Clarification of the Data Set

(See Appendix 4)

The data to be communicated between the shipper and the haulier consist of 19 different elements.

Below the elements with a short explanation:

Data-Set Elements

1. *Reporting period from - to*

2. *Haulier Name*

The elements 1 and 2 are fixed elements which must always be mentioned on the report. It remains a subject of discussion as to whether in the future a standard-identification-code (ECTA-Code) will be used instead of the haulier name.

3. *Reference 1*

4. *Reference 2*

5. *Reference 3*

The elements 3-5 build the unique shipper's reference under which the shipment (or order) is known at both parties. Parties should be encouraged to use one unique reference number only. One reference number must be used on every report.

6. *Requested loading date from - to*

7. *Requested loading time from - to*

8. *Requested delivery date from - to*

9. *Requested delivery time from - to*

The elements 6-9 identify the scheduled loading and delivery date and time. Time-frames (from – to) for both date and time are being used.

10. *Actual loading date*

11. *Actual loading time*

12. *Actual delivery date*

13. *Actual delivery time*

The elements 10-13 give the information about the actual delivery date and time.

14. *Part of supply chain*

15. *Incident category*

16. *Accountability*

17. *Cause code*

18. *Charter/spot used: Yes or No*

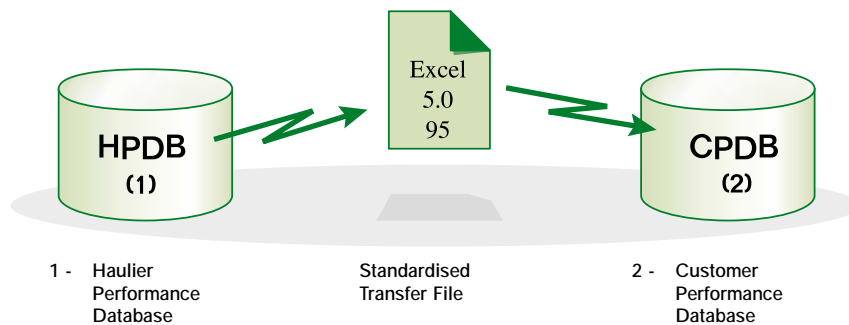
19. *Cause description/Remarks*

Field available for further short explanation. Please note that it is not a coded field. Analysis on these remarks/texts is very difficult.

General Remarks

- The format of the data-fields in the standardised Excel-File must be "text" (not date etc...)
- To avoid incomplete performance reporting and useless information it is essential that the (exception) report is completely filled without blank elements on the data set.
The length fields have to be filled completely.
- Some fields are obliged to be used:
 - Reporting period
 - Haulier name
 - Ref. Nr. (at least 1 identification)
 - All other fields are optional and subject to mutual agreements between haulier and shipper
- Bilaterally it can be agreed between haulier and shipper not to use some non relevant elements on the data set. Or, alternatively, haulier is sending the complete data set to the shipper. The shipper then can filter the information, which is relevant for its system.

Standardized Transfer-File



Standard = Microsoft Excel 5.0/95

Advantages (compared to EDI/XML ...):

- 1 standard for everybody (industry/hauliers)
 - simple and cheap to implement
 - feasible for smaller companies
- (See Appendix 4 a)

Mode of Communication

In general, the mode of communication should be bilaterally agreed between the respective partners.

In order of preference and dependent on available facilities at haulier's and shipper's end, it is advised to use the following modes of communication:

- *Via EDI (Electronic Data Interchange)*
- *Via standardized Web-Site (Internet)*
- *Via electronic transfer of XLS-file (E-mail)*
- *Via direct input into shipper's system*
- *Via mailing of file on disk by haulier to be loaded into shipper's system*
- *Via mailing of printed report*

!!! But always using the Standardised Transfer File!!!



Appendix 1 Matrix of Codes

Part of Supply Chain		Incident Categories							Accountability				Cause Codes	
Loading	Delivery	Date & Time	Equipment	Product	Packaging	Documentation	Safety (SHE)	Behaviour	Haulier	(Final) Customer	Supplier	Force Majeure	Code	Description
L	D	DA	EQ	PR	PA	DO	SA	BE	H	C	S	X		
L	D								H	C	S		01	Human error
L	D								H	C	S		02	Communication/Information/Instructions/Instructions/Failure
L	D								H		S		03	Documents Failure
L	D								H	C	S		04	Breakdown of equipment
L	D								H	C	S		05	Product or packaging damage
L	D								H	C	S		06	Wrong equipment
L	D								H	C	S		07	Non-availability
L	D									C	S		08	Rush order
L	D								H	C	S		09	Accident
L	D								H	C	S		10	Theft and Vandalism
L	D								H	C	S		11	Unsafe conditions
L	D									C	S		12	Upon request
L	D								H				13	Third party
L	D											X	14	Excessive customs clearance
L	D											X	15	Traffic
L	D											X	16	Strike
L	D											X	17	Weather

= valid combination with cause code
 = non valid combination with cause code

Appendix 2 Examples

SECTION A ONE INCIDENT - LOADING ONLY

Truck refusal at loading point because of a tank not properly cleaned. No affect on unloading.

DESCRIPTION OF INCIDENT

L EQ H 06

SECTION B ONE INCIDENT - DELIVERY ONLY

Because of computer problems at shipper's site the delivery was too late.

DESCRIPTION OF INCIDENT

D DA S 04

SECTION C ONE INCIDENT - BOTH LOADING & DELIVERY

Driver overslept and did not arrive in time for loading resulting in a late delivery.

DESCRIPTION OF INCIDENT

L DA H 01
D DA H 01

Appendix 2

Examples

SECTION D SEVERAL INCIDENTS - LOADING ONLY

DESCRIPTION OF INCIDENT				
Truck was not allowed to load because of gas alarm at site.	L	SA	S	11
After alarm situation had been cleared, it turned out that the truck was not suitable to load the ordered quantity.	L	EQ	H	06

SECTION E SEVERAL INCIDENTS - UNLOADING ONLY

DESCRIPTION OF INCIDENT				
Due to bad weather truck arrived too late at unloading.	D	DA	X	17
Staff had to hurry up with unloading, as there was stop of production, thus damaging some bags.	D	PA	C	01

SECTION F SEVERAL INCIDENTS - BOTH LOADING & UNLOADING

DESCRIPTION OF INCIDENT				
At the loading place the truck had to wait until the loading equipment was repaired (3 hrs). Moreover no paperwork was issued and documents were missing. Delivery was delayed	L	EQ	S	04
due to a railway delay. Customer discharge pipes were damaged and needed to be repaired, causing delay in unloading.	L	DO	S	03
	D	DA	H	13
	D	DA	C	04

If you are interested in receiving the full "Set of Examples" please contact the ECTA Secretariat.

Appendix 3

Definitions

- *Delivery Performance*
The measurement of the actual performance of the entire supply chain in comparison to the required performance.
- *Haulier*
The (main) carrier or transport company (includes controlled sub-contractors).
- *Charter/Spot*
Transport company which is not controlled or operated by main haulier.
- *Shipper*
The shipper. Most of the time the producer of the product who ordered the transport.
- *Consignee = Final Customer*
The company to whom the material is or should be delivered to by the haulier.

- *Customer*
See Consignee.
- *CEFIC*
European Chemical Industry Council.
- *ECTA*
The European Chemical Transport Association.
- *EPCA*
The European Petrochemical Association.
- *Non-Conformity*
The deviation from the transport agreement between shipper and haulier, also referred to as incident.
- *Incident*
See non-conformity.
- *Exception Reporting*
In this type of reporting only the deviations to the agreement are reported. Details about shipments without deviations are not reported.
- *Shipment*
Movement of material (product) for which the haulier received a transport order from the shipper.
- *(Root) Cause*
The ultimate cause of an incident. In the context of this standardised system only one (main) cause should be assigned to an incident.
- *Third Party (not sub-contractor)*
A party which is not under direct control of main haulier (ferry, rail etc.).

Appendix 4b

Suggested Specifications for Data Set

Suggested Specifications to Recording Actual Delivery Data		
Description	Codification	Length/Specification
Reporting Period from	RPF	1 - 8 CCYYMMDD
Reporting Period to	RPT	1 - 8 CCYYMMDD
Haulier Name	HAULN	1 - 17AN (alphanumeric)
Reference Nr. 1	REF1	1 - 14AN (alphanumeric)
Reference Nr. 2	REF2	1 - 14AN (alphanumeric)
Reference Nr. 3	REF3	1 - 14AN (alphanumeric)
Requested Loading Date from	RLDF	1 - 8 CCYYMMDD
Requested Loading Date to	RLDL	1 - 8 CCYYMMDD
Requested Loading Time from	RLTF	1 - 4HHMM
Requested Loading Time to	RLTT	1 - 4HHMM
Requested Delivery Date from	RDDF	1 - 8 CCYYMMDD
Requested Delivery Date to	RDDL	1 - 8 CCYYMMDD
Requested Delivery Time from	RDTF	1 - 4HHMM
Requested Delivery Time to	RDTT	1 - 4HHMM
Actual Loading Date	ALD	1 - 8 CCYYMMDD
Actual Loading Time	ALT	1 - 4HHMM
Actual Delivery Date	ADD	1 - 8 CCYYMMDD
Actual Delivery Time	ADT	1 - 4HHMM
Part of Supply Chain	POSC	1 A (alpha) L or D
Incident Category	INCAT	2 A (alpha) DA, EQ, PR..
Accountability	ACC	1 A (alpha) H, C, S, X
Cause Code	CAUSE	2 N (numeric) 01 - 17
Charter/Spot used	SUBC	1 Y or N
Remarks	REM	1 - 70 AN(alphanumeric)

Appendix 4

Example of the Data Set

Recording Actual Delivery Data	
Reporting period from:	19990101 to: 19990131
Hauler Name:	LKW Walter
Ref.Nr. 1	14525094
Ref.Nr. 2	30666326
Ref.Nr. 3	B0747644
Requested loading date from:	19990125 to: 19990125
Requested loading time from:	0915 to: 1015
Actual loading date:	19990125
Actual loading time:	1000
Requested delivery date from:	19990127 to: 19990127
Requested delivery time from:	0000 to: 0000
Actual delivery date:	19990129
Actual delivery time:	0000
Part of the Supply Chain:	D
Incident Category:	DA
Accountability:	C
Cause Code:	13
Charter/Spot used Yes/No:	N
Cause description/remarks:	Mechanical failure of vehicle

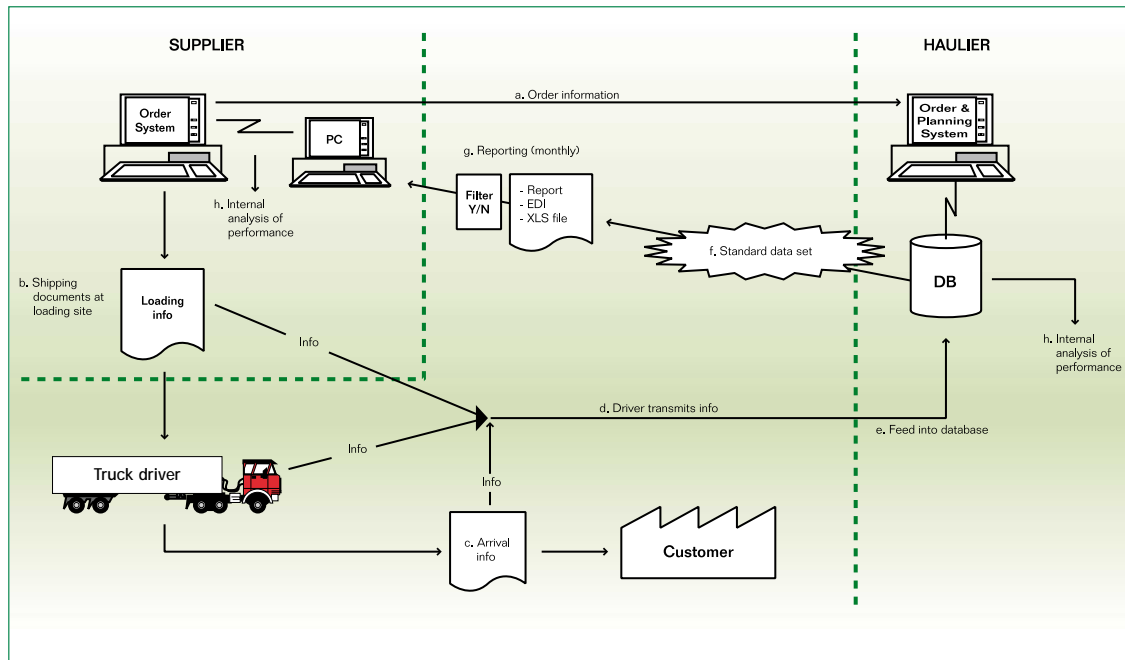
Appendix 4a

Print out of the Standardised Transfert-File

RPF	RPT	HAULN	REF1	REF2	REF3	RLDF	RLDT	RLTF	RLTT	RDDF	RDDT	RDTF	RDTT	ALD	ALT	ADD	ADT	POSC	INCAT	ACC	CAUSE	SUBC	REM
01092000	30092000	LKW WALTER INT	123456789			20000908	20000908	1500	1530	20000911	20000911	830	900	20000908	1515	20000911	0845	L	EQ	H	06	Y	Truck refusal at loading point because a tank not properly cleaned. Unloading ok
01092000	30092000	LKW WALTER INT	123456790			20000908	20000908	0800	0830	20000911	20000911	700	730	20000908	0800	20000911	1430	D	DA	S	04	Y	Truck arrived on time & was loaded too late due to computer problems at shipper
01092000	30092000	LKW WALTER INT	123456891			20000918	20000918	1030	1130	20000920	20000920	800	900	20000918	1630	20000920	1530	L	DA	H	01	N	Driver overslept & did not arrive in time for loading resulting in a late delivery
01092000	30092000	LKW WALTER INT	123456891			20000918	20000918	1030	1130	20000920	20000920	800	900	20000918	1630	20000920	1530	D	DA	H	01	N	Driver overslept & did not arrive in time for loading resulting in a late delivery

Appendix 5

Data Collection & Flow for Standardised Reporting



- a) The shipper sends the order information to the haulier inclusive order references, requested delivery dates, etc.
- b) At the moment of loading, the truck driver receives shipping documents that he will sign for receipt.
- c) The truck driver delivers to the customer and assures signature upon delivery to the customer.
- d) The truck driver feeds the loading and delivery information back to the haulier co-ordinator.
- e) The relevant data are input into the centralised database of the haulier.
- f) The haulier's system is creating the "data set".
- g) The "data set" is transmitted to the shipper on a regular (daily, weekly, monthly, yearly) basis.
- h) Shipper and haulier can make performance analysis based on identical data.

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Contact List



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