

ECTA Best Practice Guideline: Truck & Driver data standards



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Table of Contents

1. Introduction.....	5
2. Who needs truck and driver data and for what purpose?	6
2.1 Definition & scope	6
2.2 Actors involved	6
2.3 What drives the purpose to share truck and driver data?	7
2.4 When are truck and driver data exchanged and how frequent?	7
3. Truck and driver data framework.....	8
3.1 Explaining the truck and driver master data template structure.....	8
3.2 The truck and driver master data template and file	9
4. Truck and driver data and GDPR compliance.....	9
4.1 What is defined as personal data in relation to truck drivers?	9
4.2 The nature and purpose of using/sharing/processing/analysing personal data	10
4.3 The partners who agree to share personal data	10
4.4 Transfer of Personal data	10
5. Truck and driver data implementation guideline.....	11
5.1 How to share truck and driver data across actors?.....	11
5.2 How to keep truck and driver data up to date?	12
5.3 What are challenges of sharing truck and driver data digitally?.....	12
6. Truck and driver data Use case example.....	13
7. Contact lists and WG participants	14

Disclaimer

This document is intended for information only and sets out a best practice guideline for companies who want to exchange truck and driver data in a digital way. The information provided in this guideline is provided in good faith and, while it is accurate as far as the authors are aware, no representations or warranties are made with regards to its completeness and extra guideline revisions might be made at any time. It is not intended to be a fully comprehensive guideline. Each company, based on their individual decision-making process, may apply this guideline, in full or partly and no responsibility will be assumed by ECTA to the information contained in this guideline.

Overview of Figures

Figure 1 Overview of an overall “end to end” chemicals logistics process..... 6
Figure 2 Overview of truck and driver data sharing options..... 11

Overview of Tables

Table 1 Lexicon table**Fehler! Textmarke nicht definiert.**
Table 2 Summary overview related to the usage and purpose of truck and driver data**Fehler! Textmarke nicht definiert.**
Table 3 The structure of the truck and driver master data template **Fehler! Textmarke nicht definiert.**

Abbreviation	Definition
API	Application Programming Interface – A software intermediary that allows two applications to talk to each other.
GDPR	General Data Protection Regulations – a regulation on data protection and privacy in the European Union
eCMR	Electronic Convention relative « au contrat de transport international de Marchandises par Route. » Convention on the contract for the international carriage of goods by road.
EDI	Electronic Data Interchange
eFTI EU regulations	eFTI stands for Electronic freight transport information and refers to the EU regulation (EU) 2020/1056. This regulation sets down the rules for authorities to accept goods related freight transport information as of August 2025. This means authorities are obliged to accept digital transport information which is linked to the goods transported.
Equipment Operator	This is the organization that is managing/maintaining the original truck and driver master data and operates/plans the truck and truck driver. Often this corresponds with the carrier or transport company.

Table 1: Lexicon table

1. Introduction

To meet the customer and future societal needs, current logistics supply chains are being transformed into hyper-connected logistics networks where digital collaboration amongst all stakeholders is becoming a necessity. However, due to the increasing number of different IT platforms, data interfaces and involved parties within the transport and logistics chain, there is more and more need for standardization of data. This is especially true when personal data, like truck and driver data is being shared. At this moment, different standards for truck and driver data are used within the transport sector. As a result, there are many different data definitions, rules and data requests from each platform provider or company. This lack of truck and driver data harmonization and standardization, results in a lot of manual work, data input mistakes, different IT interfaces and complexity and extra costs.

When there is a standard format and set of definitions for truck and driver data and this set is exchanged digitally between different parties, such common dataset will smoothen the digital collaboration and increase the data quality, allow automation, reduce errors and manual input work. Besides, it is for every party clear which data is required to digitally collaborate to reach a common purpose. As a result, the waiting time at the gate or at customers will be reduced and the process will be more efficient.

Besides that, when sharing truck and driver data it is also important to consider which data can or cannot be shared and how it can be shared, so that personal data is processed confidentially and complies with the General Data Protection Regulations (GDPR). Besides, commercial sensitive truck data should be handled with respect for data ownership.

The aim of this document is to provide an ECTA best practice guideline in which a standard set of truck and driver data is defined. Furthermore, the aim is to provide a recommendation for digitalizing truck and driver data, while complying with GDPR and with respect for truck data ownership and data sharing purpose. In terms of scope, this ECTA best practice guideline will cover road transport of bulk and packed goods in the chemical industry.

Chapter 2 of this guideline describes the actors who need truck and driver data, for what purpose and when they need it. In Chapter 3, the truck and driver data framework is given in which a standard set of truck and driver data is defined. This framework is maintained as a separate Excel template from this guideline. New revisions of this template will be updated on an “ad hoc” basis and will be shared on the ECTA website (www.ecta.com). In Chapter 4 the data that is processed and GDPR compliance is elaborated in more detail. In Chapter 5, a recommendation is given how truck and driver data can be shared and how it can be kept up to date. Furthermore, some challenges are explained when this standard dataset is implemented digitally. Finally, in Chapter 6, some use cases are presented.

2. Who needs truck and driver data and for what purpose?

2.1 Definition & scope

In this guideline, both truck and driver data are discussed. In this chapter the definitions and scope of each subject is given.

Truck data represents the tractor data and includes the extra auxiliary equipment required, like a chassis, to be able to move the goods from A to B physically. These truck reference data are typically exchanged when arriving at loading and unloading places and are being used as identification on logistics papers like transport bookings, eCMR, transport manifests etc.

Driver data consists of the driver identification information such as first and last name, nationality, ID, and information related to their driver license such as number and validity of the driver license.

Whenever truck or driver data can directly or indirectly identify the truck driver, such data are subjected to the GDPR.

For both truck and driver data, some fields can be considered as stable reference data which do not change over time (e.g. truck number plate). However, some data fields linked to these reference data are dynamic and might change over time (e.g. ADR chassis license) and as such will be updated in order to comply with the principle of the accuracy of the data under GDPR.

2.2 Actors involved

In this chapter, the different logistics actors are described who typically ask for truck and driver master data as part of the arrival and registration process. These actors are involved in the regular exchange of truck and driver master data by showing paper documents at arrival, via self-registration using a computer terminal or via digitally exchanging truck and driver data before arrival. All of these actors need up-to-date truck and driver information to be able to execute their activities within an overall “end to end” chemicals logistics process. Considering this “end to end” process, the following list of actors are identified.

- Loader of the goods - Loading places
- Receiver of the goods – End Customer Unloading places
- Depot – Terminals (sea, rail, inland water ways, hubs...)
- Intermodal Operators – Train/Ferry operator
- 4PL – freight forwarders

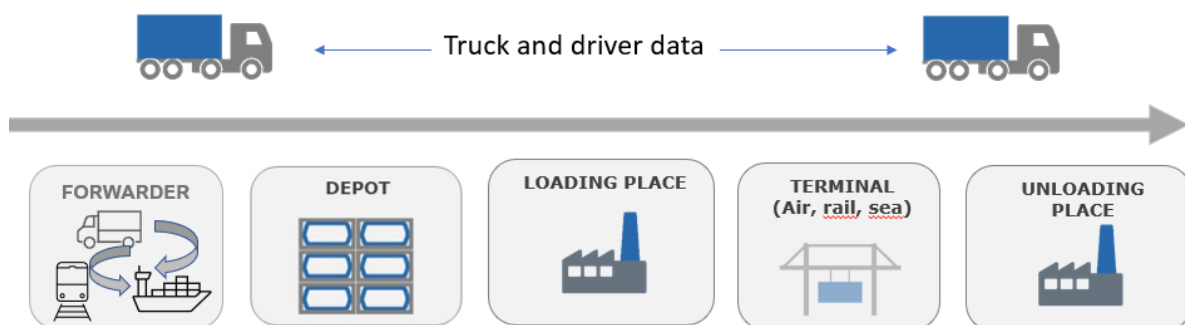


Figure 1 Overview of an overall “end to end” chemicals logistics process

This guideline does not include actors like maintenance shops, police and authorities, and insurance companies, because they request such information on an “ad hoc” basis. This might change in the future as part of the eFTI EU regulations.

In addition, cleaning stations are excluded as they require the typical equipment recipient master data information which has been covered under the ECTA equipment master data guideline and is available on the ECTA website (www.ecta.com).

2.3 What drives the purpose to share truck and driver data?

Driven by logistics collaboration efficiencies, new EU regulations and more complex combined transport flows, the need for a “continuous” digital exchange of timely and accurate truck and driver data is further increasing. Therefore, a more standard data set of truck and driver information and definitions, is required. However, this in itself is only the starting point towards a more harmonized check in/check out process, because currently each site or location has its own way of working and uses its own technology driven by local safety and security procedures. The ultimate goal is to strive towards more harmonized industry processes so all actors can benefit.

At this moment, the real purpose to share truck and driver data can be identified around two core logistics processes:

1. To identify and check upon arrivals if the right truck moves the right product load with the right transport order reference
2. To secure that the truck driver has all the right legitimations to drive the truck and to move the product load.

Such harmonized check-in/check-out set of truck and driver data can result in several benefits:

- Reduce truck driver waiting time to allow pre-checks
- Avoid data errors and non-conformities
- Avoid truck rejects upon arrival
- Pro-actively processing gate in/gate out checks
- Speed-up the multimodal chain

Despite the overall benefits of sharing truck and driver data fields, in the new digital world it is as important for every transport company to remain in control of their own data. In other words, it is key that a transport company understands which truck and driver data is shared when, with who and for what purpose and stays in control of their data being shared and this to be able to fulfill all GDPR and other legal requirements. Driver data belongs to the driver and full transparency is required for which purpose private data are used in subsequent processes and once they are shared.

2.4 When are truck and driver data exchanged and how frequent?

In **Fehler! Verweisquelle konnte nicht gefunden werden.**, a summary overview is given related to the usage, purpose, timing and frequency when truck and driver data are typically shared.

Actors involved?	For what Purpose?	When required?	Frequency
Loader of the goods - Loading places	Loading Operations support	Before loading	Every transport order
Receiver of the goods – End Customer Unloading places	Unloading Operations support	Before unloading	On order request
Depot/Terminal	Subcontracting-Storage - Heating	Before depot or terminal entry	On order request
Intermodal Operators – Train/Ferry operator	Transport Operations	Before arriving at terminal/by booking	Every intermodal transport order
4PL (transport contracting party)	Identification	Before (un)loading	Every transport order

Table 1: Summary overview related to the usage and purpose of truck and driver data

3. Truck and driver data framework

3.1 Explaining the truck and driver master data template structure

To exchange truck and driver data in a standard, accurate and consistent way, it is crucial that common data field definitions are defined for truck and driver information exchange with interested parties. A descriptive data field definition and common understanding is not enough because digital connotations also have to be added to allow systems to talk to each other without human interference. Without any form of standardization, the IT system connectivity becomes enormously complex and adds costs that can be avoided. Therefore, a truck and driver master data framework is made in which data fields are described, such that a standard format and set of definitions is made for truck and driver data that can be exchanged digitally.

The structure of the truck and driver master data framework is described in **Fehler! Verweisquelle konnte nicht gefunden werden..**

Column(s)	Column title	Explanation
A	Type of data	Indicates if the data is about the truck or about the driver
B	Category	Describes the category of information to share
C	Sub-category	Describes the master data information field
D	Master Data Field	Indicates the “content type” of the data field e.g. drop down field, number, integer, text.
E	Field Type	Indicates the “content type” of the data field e.g. drop down field, number, integer, text.
F	Specifications	Describes the length of the field or the maximum number of digits.
G	Definition	Gives further information of the data field.
H	GDPR relevant	Indicates if the data field is sensitive ('X') or not.
I	Use Case example	Describes specific use case where truck and driver master data is being shared.

Table 2: The structure of the truck and driver master data template

3.2 The truck and driver master data template and file

The truck and driver master data template is maintained as a excel file separately from this ECTA guideline. This is to ensure template revisions can be made more easily when required.

In this framework one use case about the arrival of a truck driver at a gate is described. In the framework it is indicated if the data field is applicable (=‘x’) or not for this use case.

Exchanging truck and driver data is still in its infancy and updates of this template might be required as we move forward and learn from new Use cases. The latest version of the truck and driver data template can be found [here](#). In case, you have comments feel free to contact ECTA (info@ecta.com).

4. Truck and driver data and GDPR compliance

As described in Chapter 3, the truck and driver master data template refer to data fields. These data fields can identify an individual truck driver. To protect the privacy of these individuals, the General Data Protection Regulation act, also called “GDPR”, explains how businesses and companies should deal with such personal data and describes in more detail the data protection principles, rights and obligations for the actors involved. A very good information source explaining the GDPR and its general principles can be found here: (<https://ico.org.uk>). Although it refers to the UK GDPR, it provides a good basis for understanding GDPR in other countries. In this chapter, the GDPR principles are applied on the truck and driver master template as described in Chapter 3.

Besides that, our intent in this section is to make companies aware of the GDPR principles, however, the ECTA workgroup recommends to reach out to outside legal advice in case of specific questions simply because implementation and interpretation might be different on a case by case basis and is influenced by case law and official opinions of competent authorities.

Please note that this Chapter 4 does not replace the companies’ own transparency obligations which they have under the GDPR. These transparency obligations require that companies provide, amongst others, (i) information on which personal data they effectively process, (ii) the purposes for which such personal data is being processed and the legal basis used therefore and (iii) the rights which a data subject (*i.e.* an individual whose personal data is being processed) has with respect to such processing. Such information must be easily accessible and must be easy to understand. Drivers who want to know more about how their personal data is effectively processed, should reach out to their employer who is processing their personal data.

4.1 What is defined as personal data in relation to truck drivers?

The interpretation of personal data is very broad and it can be any information that can identify a person. . It does not only relate to data in the strict sense, but also to images, movies, sound recordings etc. Below, some categories of personal data related to truck driver data are mentioned:

- Personal identification data (name, gender, age, data of birth, ethnic origin, religion, etc.)
- Personal identification numbers (ID card, driver license, certifications, professional experience, etc.)
- Personal contact data (email address, phone numbers, home address, etc.)
- Personal biometric and health data (face images, hand and fingerprints, health data, etc.)
- Personal tracking data (IP address, cookies, license plate, travel data, etc.)
- Personal location data linked to an individual (mobile phone, GPS, etc.)

When above categories are compared to the truck and driver framework as described in Chapter 3, several fields can be assigned as personal data. These data fields are marked in Column H 'GDPR relevant'.

4.2 The nature and purpose of using/sharing/processing/analysing personal data

The processing of personal data should only happen if the data is:

- a) processed in a lawful, transparent and fair manner, for a specific purpose and not further processed in a manner that is not compatible with the defined purpose;
- b) relevant and necessary for a specific purpose;
- c) cannot be kept for longer than it is needed;
- d) protected by appropriate security measures.

In addition, the person should be aware, informed and give consent about the purpose for what the personal data will be used. Besides, data processing should be minimized, and the person should be informed if data are collected and processed in a matter that is incompatible with the agreed purpose.

In addition to consent, companies can also rely on other lawful bases. More information on appropriate lawful bases can be found here: (<https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/>) .

This ECTA guideline recommends defining in a very clear manner (= per data field) for what purpose (list of activities or services) truck and driver data are being processed and shared. For example, email address of a truck driver may be used for the purpose of sending the pick-up information or other information related to the transport of chemical goods but cannot be used for the purpose of sending offers to such truck driver to purchase chemical goods.

4.3 The partners who agree to share personal data

The organization that determines the purpose and the means of processing, is considered as the controller of the data, the other party is the processor. Often personal driver and truck data is being shared as a result of a contract between the carrier companies and its employees. Subsequently, this data is used by other IT companies or even applications whereby the name and contact details of all these partners should be known. Furthermore, when a carrier, as controller, is using a processor and shares personal driver data, there must be a written legal contract in place specifying the details above.

4.4 Transfer of Personal data

The transfer of personal data should be clear and transparent by all parties if and how personal data is transferred from one system or partner to another or if and how it is transferred to countries outside the EU.

5. Truck and driver data implementation guideline

5.1 How to share truck and driver data across actors?

Truck and driver data can be stored and maintained in several ways. Truck data are usually stored and maintained in a Transport Fleet or Transport Management system or a truck database repository, while driver data are typically handled within the Transport Fleet and Human Resource system.

Subsequently, the required truck and driver data are manually or electronically shared with all actors during the “end to end” transport execution process. There are several ways to share this data, which is described in Figure 2. The several ways range from a basic “manual” data exchange (Option 1) to a “highly automated and system integrated” exchange (Option 6).

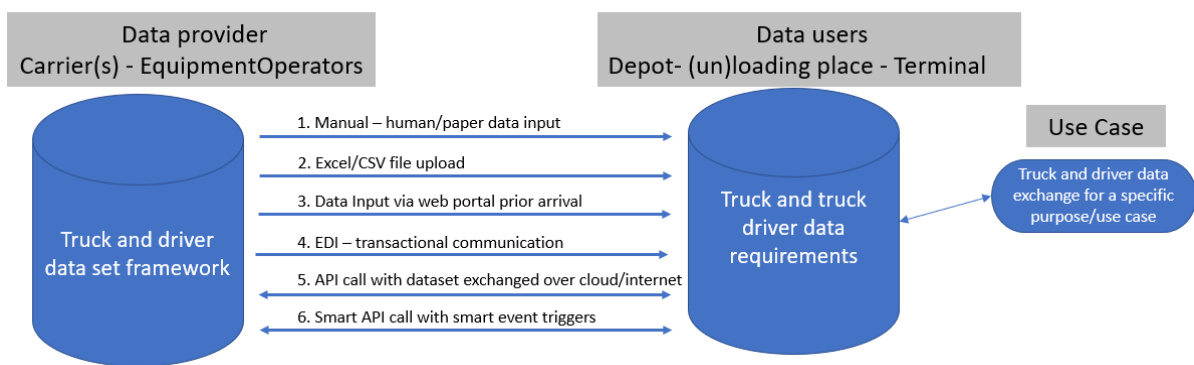


Figure 2 Overview of truck and driver data sharing options

Currently, the first four options are most commonly used. Data is still shared manually or via Excel/CSV file (Option 1 and 2). These options are easy to understand and set up. However, these options are also time consuming, error sensitive and when sharing sensitive data the data is not protected well or the ownership is unknown.

Option 3 is a typical internet based web or portal solution. While this option is simple, relative low cost and attractive from a (un)loader/terminal point of view, such portal solutions are not recommended because they are very time consuming due to double data inputs, are customized and increase the overall costs and complexity for carriers due to any lack of data and process standardizations.

In a digitally transformed future, it can be assumed that sharing specific truck and driver information with those actors who need them will be possible in a much smarter and securer way, while respecting data ownership and GDPR data privacy rules. To do that, a standardized data set is kept decentralized at each company premise (or centrally via a digital twin in the cloud).

Option 4 is via an EDI or Electronic Data Interchange connection which is typically set up privately and via “point to point” connection between 2 collaborating actors. Such EDI connections do exchange data at periodic intervals and via private protocols. While EDI connections have the advantage of proven security, they are much harder to leverage across a network of multiple actors because such EDI connections often are custom build and not standardized.

From a standardized truck and driver data set, data can also being shared via the internet and using API calls in function of the requirements and needs of each actor (Option 5). This way, the carrier remains in full control of its own data by establishing technical mechanisms to steer data flows in the

way that the data owner decides which actors can use which type of data within the cloud platforms. Obviously, such internet based connection requires to set up the right data security protocols and governance.

In a further next step (Option 6), it can be imagined that the logistics process starts to control itself by sending proactive auto-notification messages between the actors or also specific “tokens” that can trigger an action. For instance, to reduce waiting times, to allow automatic gate check-ins, to avoid problems or rejects at (un)loading sites or increase compliancy across the “end to end” logistics chain. Such secured tokens can trigger a specific action (e.g. open the gate at check-in) without exchanging any GDPR sensitive truck driver data (e.g. driver biometric data) over the internet.

Option 5 and 6 are cloud-based API solutions and are most advanced in terms of data sharing technology. They do fit a more broad, digital cross-company collaboration strategy where different actors are able to exchange data bi-laterally or multi-laterally within an ecosystem or internet enabled data space. The real value is created when commercially neutral, harmonized and open-source API connections are made allowing exchange of data beyond the boundaries of one single company using the internet. Such digital collaboration solutions can only become efficient and effective when all actors use equally harmonized data field definitions along with an “end to end” interoperable business process. Other challenges related to data sharing have been addressed in the former ECTA equipment master data guideline which can be find on www.ecta.com.

5.2 How to keep truck and driver data up to date?

It is the responsibility of the equipment operator to maintain the truck and driver data. The easiest way to keep the truck and driver data up to date is to ensure there is a central repository from where the required data can be shared with all actors as per Figure 2. This data repository can reside in a Human Resource system or Transport Fleet Management system and/or integrated cloud data repository.

5.3 What are challenges of sharing truck and driver data digitally?

We refer to the ECTA equipment master data guideline on www.ecta.com that already describes the challenges in terms of

- Building trust with data sharing
- Creating interoperability and common definitions
- Coping with IT complexity and costs

In addition, truck and driver data might change very often. It is a real challenge to keep such data up-to-date when dealing with many drivers and assets. This means that a special resource/role is required to ensure that the physical truck and driver data is brought in sink to support the digital data flow.

6. Truck and driver data Use case example

Today, there are several use case initiatives being taken by different IT solution providers to share truck and driver data with the aim to improve and automate “gate access”. The ECTA workgroup did make a use case comparison analysis of different initiatives within chemical logistics and concluded that none of these initiatives is “best in class” yet to include it in this section. All of the investigated initiatives are rather local initiatives (e.g. by local ports and terminals) or by local prototypes (by IT companies and shippers), whereby each use case use own truck and driver data definitions which are not harmonized and interoperable. Typical examples are the different “access cards” for port terminals which can only be used locally. This means that truck drivers and carriers need to comply with the different data structures per location or IT vendor, something which is hard to scale and adds IT complexity, costs and security risks.

Another problem, on top of the lack of interoperability of such initiatives, is that carriers are not yet ready or are simply not willing to share some of the requested data fields, especially when data fields touch the privacy of the driver (GDPR compliance) or are commercially sensitive. Typical examples are the phone number of the driver allowing to track drivers 24/7 or the tractor license plate number allowing to track GPS positions. Such tracking might happen directly or indirectly via other third party IT platform providers that sell truck or GPS tracking data. This practice creates an area of ambiguity and mistrust, especially when extra data are requested that go beyond the data framework as explained in Chapter 3.

The ECTA workgroup understands the value of digital collaboration and is intrinsic not against sharing data as long as it happens with consent in full transparency and with pre-agreed data governance structures. The ECTA workgroup recommends to read and apply the Cefic-ECLIC digital collaboration position paper¹ where principles of data sharing are clearly explained. These principles do not stop any local “gate access” initiatives and innovations, but a more open discussion is required amongst all stakeholders at industry level when data are shared beyond the framework agreed in Chapter 3.

Eventually, moving forward with increased sustainable and effective transport solutions, we all need digital collaboration solutions that shares the right information per Use Case however such Use Cases should respect the business and data privacy in the first place by agreeing on a data governance model.

¹ Cefic digital collaboration position paper: <https://cefic.org/app/uploads/2022/01/Cefic-position-on-transport-and-logistics-digital-collaboration-and-data-sharing.pdf>

7. Contact lists and WG participants



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