ATFRIE
ASOCIACIÓN ESPAÑOLA DE EMPRESARIOS DE TRANSPORTES BAJO TEMPERATURA DIRIGIDA

PROFESIONALES DEL FRIO

TRANSFRIGOROUTE ESPAÑA

Madrid, 26 de diciembre de 2024

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ESPECIFICACIONES DE REQUISITOS DE SOFTWARE (SRS) DEL SISTEMA CEMT DIGITAL.

(VERSIÓN EN INGLÉS)

Estimados Asociados:

A continuación adjuntamos el documento "Especificaciones de Requisitos de Software (SRS)", indicado en el comunicado que nos envía la Subdirección General de Gestión sobre el nuevo sistema digital de autorizaciones CEMT y que circularizamos el 26 de diciembre de 2026. Este documento muestra una visión general del proyecto.

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International Transport Forum

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6 May 2024

INTERNATIONAL TRANSPORT FORUM
TRANSPORT MANAGEMENT BOARD

Group on Road Transport

Sub-Group on ECMT Multilateral Quota Electronic Data Interchange

Software Requirements Specification (SRS) for digitalization of ECMT transport licences system by AlfaSoft

International Transport Forum (ITF)

Software Requirements Specification for Digitalization of ECMT Transport Licences System

ECMT Transport Licences System

Document Version: D_ECMT_TLS_DTLS-015 ● March 26, 2024

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Processes Overview	Iaroslav Levinta	D_ECMT_TLS_DTLS-004	12/09/2023
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Note: this document is based on the initial requirements of the system. The final version of the system is presented in the SDD. Some figures and some screenshots are not updated.

Acronyms

The table below includes the list of abbreviations and acronyms used in the report and in the attached BPMN diagrams

API	-	Application Program Interface
BPMN	-	Business Process Modelling and Notation
BPMS	-	Business Process Management System
CI	-	Continuous Integration
CD	-	Continuous Delivery
COTS	-	Commercial Off-the-Shelf
DB	-	Database
ECMT	-	European Conference of Ministers of Transport
ECMT TLS	-	Information System Transport Licenses System
ICT	-	Information and Communication Technology
ID	-	Identification number
IT	-	Information Technology
ITF	-	International Transport Forum
KPI	-	Key Performance Indicator
NIA	-	National Issuing Authority
OECD	-	Organization for Economic Co-operation and Development
OSS	-	Open Source Software
OWASP	-	Open Web Application Security Project
RFP	-	Request for Proposals
RDBMS	-	Relational Database Management System
SLA	-	Service Level Agreement
SDD	-	Software Design Document
SRS	-	Software Requirements Specification
TFS	-	Team Foundation Server
TLS/SSL	-	TLS Protocol, SSL Protocol (cryptographic protocols)
TOR	-	Terms of Reference
UAT	-	User Acceptance Testing
VPN	-	Virtual Private Network
WAN	-	Wide Area Network
WBS	-	Work Breakdown Structure
XML	-	Extensible Markup Language

Purpose

The Scope of Services encompasses a multifaceted approach, covering design, development, configuration, and implementation of functionalities for an innovative information system called the “ECMT Transport Licences System”, henceforth denoted as the "system" or ECMT TLS, aimed at streamlining the production/allocation, operation, and enforcement of ECMT licences.

The main goal is to transform the prevalent paper-based system into a cutting-edge, fully functional digital product. This transformation entails integrating multiple functionalities, ensuring that the new system stands as a complete replacement of the old one, with a set of new features.

At its core, this venture revolves around the development of key components, primarily the creation of a responsive Web Portal, functioning as a gateway to the system. This portal is designed to provide an intuitive user interface, and primary functionalities, and furnish comprehensive reports. On the other hand, the mobile application gives a possibility to be flexible and responsive, for control officers doing their work.

Catering to a diverse set of stakeholders, the system tailors specific functionalities to different entities involved. The International Transport Forum (ITF), for instance, is empowered to create the annual ECMT quota, administer system users, and generate detailed reports along with statistical data. On the other hand, national issuing Authorities are tasked with distributing licences to hauliers and maintaining detailed records of licence usage. They can also seamlessly input licence data directly into the system, utilising API functions as an auxiliary avenue.

Hauliers, drivers, and control authorities all have designated functions aligned with their roles. Hauliers can efficiently assign ECMT licenses to trips and drivers, along with uploading essential certificate documents into the system. Drivers, on the other hand, can easily access all documents pertaining to their trips and licences assigned to them. Control Authorities and control officers are endowed with the power to verify documents (the Licence and the Logbook) and digital signatures through the system's QR codes or Unique Number, ensuring utmost authenticity. Furthermore, they can access the complete trip history of a licence through the web portal (introducing the Unique Number or scanning QR code with encoded URL of the document) or via Mobile application functions (scanning the QR code for mobile application).

In this age of mobility, a smartphone app is an imperative facet of this technological venture. Developed for both Android and iOS platforms, the app serves as a tool for verifying the authenticity of documents and digital signatures, neatly encapsulated within the QR codes generated by the system.

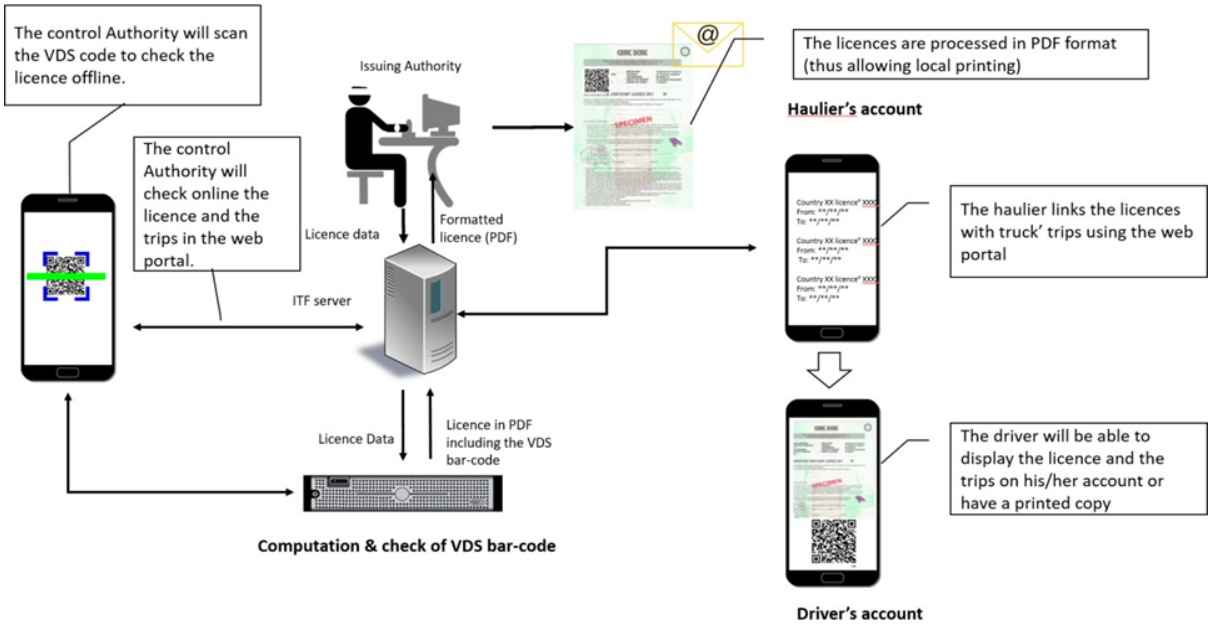
Embedded within this endeavour are essential activities that form the crux of the scope of services. The development of detailed technical specifications and functionalities for the key features is pivotal. Furthermore, the installation and meticulous supervision of system testing utilising the test server provided by ITF is a paramount task.

User manuals, guiding member countries through the labyrinth of this system, should be part of the system. These manuals shall not only provide guidance for system usage but will also delineate data interchange formats catering to all stakeholders, ranging from issuing authorities to control authorities and hauliers/drivers.

Lastly, the ECMT TLS is envisioned as a centralized, web-based solution. With an RDBMS MS SQL 2022 storage database dedicated to each country, it endeavours to foster teamwork and data sharing among authorised users across the system. Equipped with a web-based administration console, the system provides administrators with the tools to effectuate modifications and innovate enhancements. The output generated is tailored to the latest platform-neutral HTML 5.0 format, ensuring seamless accessibility across standard web browsers on UNIX, Linux, and Windows platforms.

Moreover, the system, being compliant with open XML standards, boasts the capability to seamlessly integrate with a spectrum of modern application servers and portals that support XML Web Services, epitomized by SOAP/REST and beyond. This integration potential positions the system at the forefront of technological innovation, promising a seamless and efficient experience for all stakeholders involved.

Figure 1 Paperless User Experience Overview Based on a Web Portal



Note: final user experience will be described in SDD.

Definitions

Database	A collection of data organized as per the design structure describing the core characteristics and relations amongst entities.
Credentials	A set of symbols that establish the identity and authenticity of Users and systems within information systems.
Data	Elementary information units about people, subjects, facts, events, phenomena, processes, objects, situations, etc. presented in a way that enables their notification, commenting, and processing.
Personal data	Any information referring to an identified or identifiable individual (subject of personal data). To this end, an identifiable person is the one who can be identified, directly or indirectly, in particular, through referring to an identification number or to one or more specific elements describing the person's physical, physiological, psychical, economic, cultural, or social identity.
Data integrity	Data status when data maintain their content and are interpreted unambiguously in cases of random actions. It shall be deemed that the data maintained their integrity if they have not been altered or deteriorated (deleted).
Logging	Function of recording the information on events. The records about events entered into the information systems include details about the date and time, User, and action carried out.
IT system	All software and hardware ensuring automatic data processing (the information system automated component).
Information system	A system aimed to process the information along with the associated organizational resources such as human and technical resources, which deliver and disseminate the information.
Web Farm	Server farm refers to efficiently distributing incoming network traffic across a group of backend servers, also known as load balancing or server pool.
Software design document	A guiding Document of the IT System comprising a detailed description of the following approaches: data structures and their constraints, the IT System architecture, which provides all conceptual heading of an IT System, the IT System interface covering the conceptualization of all User Interface components, the IT System functionalities comprising a detailed description of all IT System implemented scenarios.
Software Requirements Specification	The document contains a detailed description of all interaction scenarios between Users and the IT Application.
Data accuracy	The level of data (which are stored in computer memory or in documents) compliance with the real condition of items in the respective area of the system, reflected by these data.
Security Exposure	In the context of disabling a user account, refers to the identification of conditions or indicators that suggest an increased risk to the security of an IT system, typically associated with the user account in question. This may include evidence of unauthorized access attempts, suspicious activities, or other security anomalies that could compromise the user account's integrity or pose a threat to the overall security posture of the IT environment. Disabling

	the user account is a proactive response aimed at preventing potential security incidents and protecting the system from exploitation or unauthorized access related to the identified exposure.
Cryptographically Secured information	Refers to information that has undergone cryptographic processes to ensure its confidentiality, integrity, and authenticity. Cryptographic security measures are applied to the data, making it resistant to unauthorized access, tampering, or interception.

Background

The International Transport Forum (ITF) of the Organisation for Economic Co-operation and Development (OECD) needs to develop and deliver a solution for the digitalization of the European Conference of Ministers of Transport (ECMT) transport licences system managed by the ITF and operated by the 43 European Member countries of the ITF/OECD.

The system of ECMT freight transport licences (referred to as ECMT Multilateral quota) was introduced on 1 January 1974 by the European Conference of Ministers of Transport (ECMT), the predecessor of ITF, to make real steps towards the gradual liberalisation of road freight transport, to be achieved in conjunction with joint efforts of Member states towards the harmonisation of the terms of competition between road hauliers from Member countries.

The ECMT licence is a secure paper permit issued to a haulier by the national issuing Authority of the Member country. It is a strictly accountable document and the total number of licences (a quota) available to each of the Member countries is defined annually by the decision of the ITF Group on Road Transport.

The licences are issued once a year for a set period (one year or 30 days) and allow an unrestricted number of transport operations (subject to certain conditions) carried out between the 43 Member countries of the Multilateral quota system.

The ITF Secretariat manages the process of licence printing and allocation to Member countries, based on the above decision, and supervises the Quota operation.

List of Actors and Their Functions

Human Actors

List of human actors using the functionalities of the information system "ECMT TLS" according to the service tasks and roles provided.

	Actors	Actions
A01.1	**ITF IT Administrator** An employee who is responsible for managing the system and has the role of administrator of the system with all levels of authority and responsibility	§ Disable user accounts of any level in case of security exposure; § Reactivate disabled user accounts following settlement of security risk.
A01.2	**ITF Secretariat** An employee who is responsible for managing the licencing system.	§ Manage (create/close/suspend/reactivate) user accounts for NIAs; § Edit or expand the nomenclatures in the system, so that the data will reflect the actual status of the ECMT quota (add/edit Euro categories, licence types, replacement reasons, etc…); § Manage the ECMT quota and licences in the system for the upcoming year, based on Member countries requests and documents approved by Member countries; § Create or upload in the system files and any useful information, so that they may be used by the other users; § Have access to licence and trip data for statistical purpose, as defined in Annex 2 of the SRS; § When in receipt of a request from an NIA of a member country to evaluate the use of certain licences, have the right to raise an Evaluation Event and request the NIA responsible for the licences concerned for a permission to access the related licence and logbook data; § When permission is granted by NIA to access licence and logbook data related to an Evaluation Event, have access to such data for evaluation purposes. When permission is not granted, the case is closed.

A02	**National Issuing Authority (NIA)** A responsible person who is authorised to act on behalf of the National Issuing Authority.	§ Have access to the NIA's account; § Manage (create/close/suspend/reactivate) accounts for other officers within the NIA; § Manage (create/close/suspend/disable) admin accounts for Control Authorities and Hauliers; § Enter the allocated licence data (manually or by uploading .csv file or through API); § See the issued licences in the ECMT portal and liaise with hauliers; § Access data about ECMT licences assigned to their own country, trips performed with them, and relevant documents stored in the system; § Generate and access the statistical report showing summarized licence usage and trip data for each year or for shorter periods; § Cancel any issued licences; § Replace any cancelled licence with reserved one.
A03	**Haulier** Authorised by NIA to perform international cargo transportation, and assigned one or more ECMT licences.	§ Manage (create/close/suspend/reactivate) accounts for other employees of the haulier and drivers (optional); § Upload to the system certificates for the trucks used with the ECMT licences; § Associate trip(s), vehicle and a driver(s) to any of the ECMT licence assigned to the haulier for any given transport operation, at a time; § Manage (create/change) a trip plans; § Modify, during the trip, the planned date of arrival of the trip; § Give driver(s) permissions to edit the attributes of trips, if applicable; § Access data about ECMT licences assigned to the haulier, and trips performed with those licences; § Replace the vehicle associated with a licence with an operational vehicle in order to continue the trip in case of a road accident or vehicle damage, including the declaration of a statement confirming such accident or damage; § Ability to see, in real time, which licences assigned to the haulier are in use and which are available for a new trip; § Generate/download licence and/or logbook files in pdf format.

A04	**Control Authority** A national control body created in the ECMT TLS by the respective NIA, and employing control officers. Applies in the same way to Control Authority's subdivisions.	§ Manage (create/close/suspend/reactivate) accounts for its Subdivisions with Subdivision Administrators and control officers; § Access the results of the controls performed by any of registered control officer in accordance to the national legislation. When creating the account for a control officer, the control Authority admin can choose of these options: 1. The control Authority admin can see the results of the controls performed by its control officers and the control officer can see the results of the controls performed by the entire unit; 2. The control Authority admin can see the results of the controls performed by its control officers and the control officer can only see the results of the controls he/she performed; 3. The control Authority admin can't see any control results and the control officer can only see the results of the controls he/she performed.
A05	**Driver** (optional) An employee of the trucking company (haulier) who performs trips.	§ Access data concerning licences assigned to the account, and the related documents stored in the system; § Access the licence to edit the attributes of this trip, if haulier chooses to delegate this responsibility; § See the trip plan for the assigned licence by accessing the driver's account on the ECMT portal.
A06	**Control Officer** Employee of a Control Authority authorized to control trucks for compliance with the User Guide of the ECMT Multilateral Quota System.	§ Query licence and logbook data by Unique Number; § Access data related to a single vehicle that is being inspected, licence linked to that vehicle at the time of inspection, trips related to the licence and all related documents stored in the system; § Scan the QR code on the licence document and access the licence information, including the company name (as well as other additional features such as truck number plates and details of the trip); § Perform online checks through the web portal, using the Unique Number printed on a license or logbook or the QR code with encoded URL, and view the related data stored in the ITF server in real time; § Perform online checks using the mobile application by scanning the QR code of a licence or logbook and get confirmation from ITF server of the authenticity of the licence or logbook data encoded in the QR code ; § Perform offline checks using the mobile application buy scanning the QR code on a licence or logbook and view the licence or logbook data encoded in the QR code. § Request the generation and downloading to the officer's device of a timestamped evidence file,

		including a inspection report and the licence and logbook document including all relevant data at the time of inspection; § Download the mobile application from the app store for IOS and Android or provided as a standalone package.

Process Overview

List of Processes

a) ECMT License management

   1. ECMT licence quota creation by ITF;
   2. ECMT licence assignment from NIA to hauliers;
   3. ECMT license usage for trip;

b) User account management

   1. User account registration;
   2. User accounts cancellation;
   3. User accounts suspensions;
   4. User account reactivation.

c) Licence, Logbook and vehicle inspection;

d) API for issued licences management;

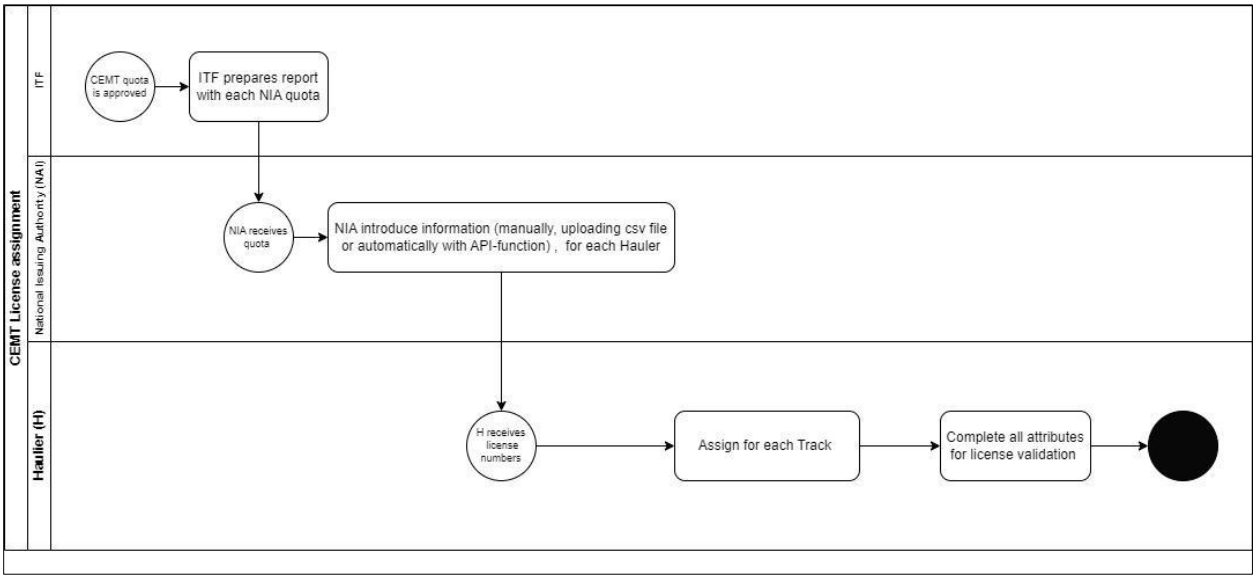
e) Error and incident management;

f) Report management.

ECMT Licences Quota Management

At the beginning of December each year, ITF creates the quota of available ECMT licences for each Member country for the next year. This includes a breakdown of available licences, by licence types (annual, short-term, reserve), Euro category, and territorial validities.

Figure 2 BPMN Scheme - ITF Quota assignment and distribution



6.1.2 ECMT licence assignment by NIA to hauliers

Each Member country distributes its available ECMT licences to companies from that country qualified for carrying out international road haulage (hauliers). After an ECMT licence is assigned to a haulier and all its attributes are defined, all data are uploaded (stored) in the system, and the licence is considered issued and ready for operations.

Uploading ECMT licence data is done by NIAs by any of the following methods:

- Manually entering data in the web portal;
- Uploading pre-prepared CSV file with licence data in the web portal;
- Automatically with API function.

When a licence is issued, the system generates the document containing ECMT licence attributes and the QR code for verification. QR code contains the licence attributes plus a signature, used to verify them. This signature needs to be cryptographically secured.

Throughout the year, the NIAs can cancel or replace any issued licence. Cancelled licences are displayed then with the corresponding status but are no longer accessible to hauliers and drivers to operate with. Replacement licences may be issued only from the pre-defined reserve quota available to each Member country and can have different attributes from the original licence. For active short-term licences, the validity dates of replaced licences cannot be changed with respect to the cancelled licence.

When a NIA introduces wrong data in the system, after an explicit request explaining the case in details, the ITF Secretariat can undo changes for the issued ECMT licence from the system so it can be issued again.

The system shall monitor a predefined set of rules on licence distribution and validity to be followed and not allow any misuse of the available quotas.

● 6.1.2.1 ECMT Certificates storage

Each lorry and its trailer using the ECMT licence is accompanied by the ECMT certificates of Compliance with safety and environmental standards and Roadworthiness test (cf. Annexes 4, 5, 6 or 9, 10 of the User Guide). Each lorry may have from 2 to 4 certificates.

Hauliers can upload to the system the certificates for the trucks used with the ECMT licences and if needed vehicle leasing to be available for online inspection by control Authorities. Printed copies of these certificates and documents must still be available on the truck during inspections.

■ 6.1.3 Trips management

The haulier, through the system, associates an ECMT licence assigned to it by the NIA a vehicle and one or more trips and drivers for any given transport operation, at a time. The indication of the driver is optional.

The system generates a document defining the trip(s), that contains:

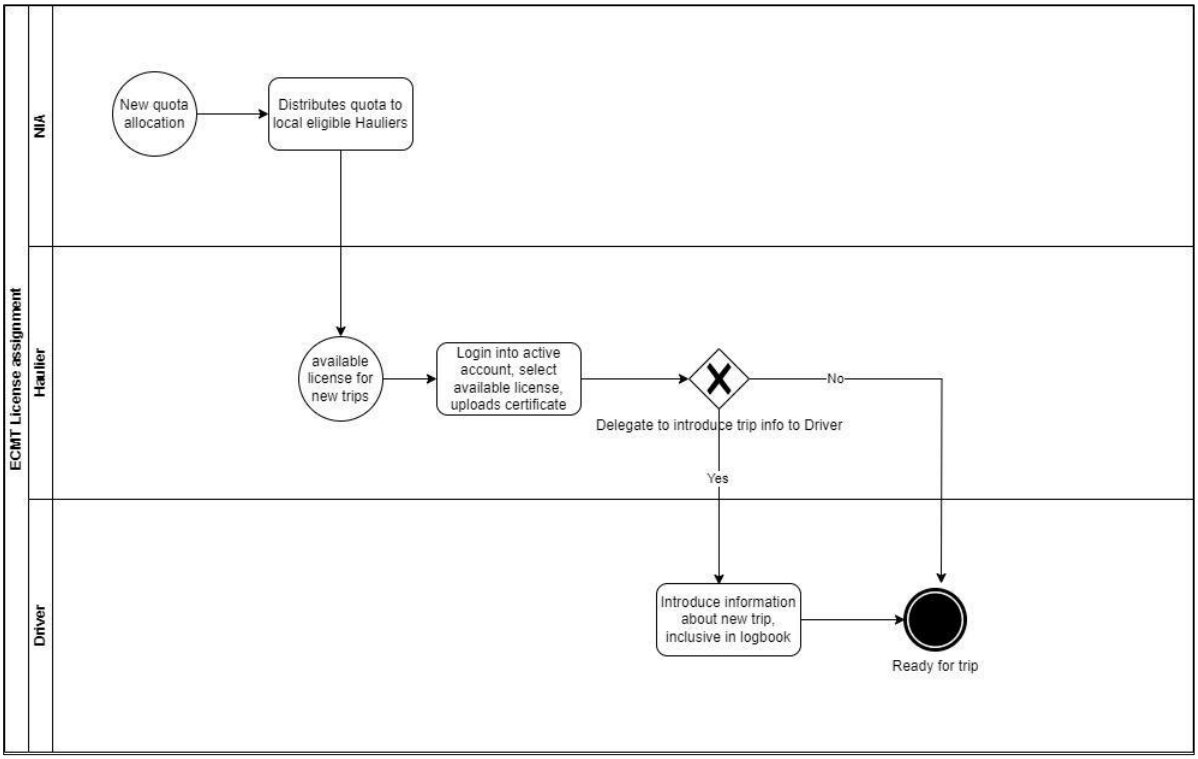
- a Unique Number;
- a digitally signed and cryptographically secured QR Code containing all attributes of the trips presented in the document and which can be decoded by Mobile Application only;
- a basic QR Code with encoded URL of the document; and
- a list of the last 10 (ten) trips performed with the associated licence.

Reports about the associated licence and a logbook can be generated by the system and downloaded by the control officer during online control.

Haulier may decide when creating a trip to give the driver permission to edit the attributes of this trip.

The system shall monitor a predefined set of rules (as described in the User Guide 2022, Chapters 3 to 6, and will be defined in detail during the technical specifications stage) to be followed and not allow any misuse of licences or trips by the hauliers and the drivers.

Figure 3 BPMN Scheme - ECMT License assignment for a new trip



■ 6.1.4 User Account Management

When a user is created in the system by the administrator, a notification is sent to the user's email asking it to change its password based on best practices for password policy.

Users can change their own password following the same best practices for password policy.

ITF IT Administrator can disable/reactivate user accounts of any level in case of security exposure (according to OECD/ITF Security rules).

ITF Secretariat can create/close/suspend/reactivate the accounts for NIA.

NIAs can create/close/suspend/reactivate the administrator accounts and the profiles of the hauliers and the control authorities.

The haulier administrators can create/close/suspend/reactivate accounts for other haulier employees and drivers.

Control Authority's administrator can create/close/suspend/reactivate accounts for other control authority's subdivisions, employees and officers.

After every user creation/cancellation/suspension/reactivation, a log entry will be created in the system to show who performed what action to which user.

Once a month (or, bimonthly – once in two months) the user will confirm their identity. When logging in to the account, will receive a code on the e-mail address specified in the system, which has to be entered in a special place within 2 minutes.

The system can automatically suspend inactive accounts according to predefined rules.

The hierarchical structure of user accounts:

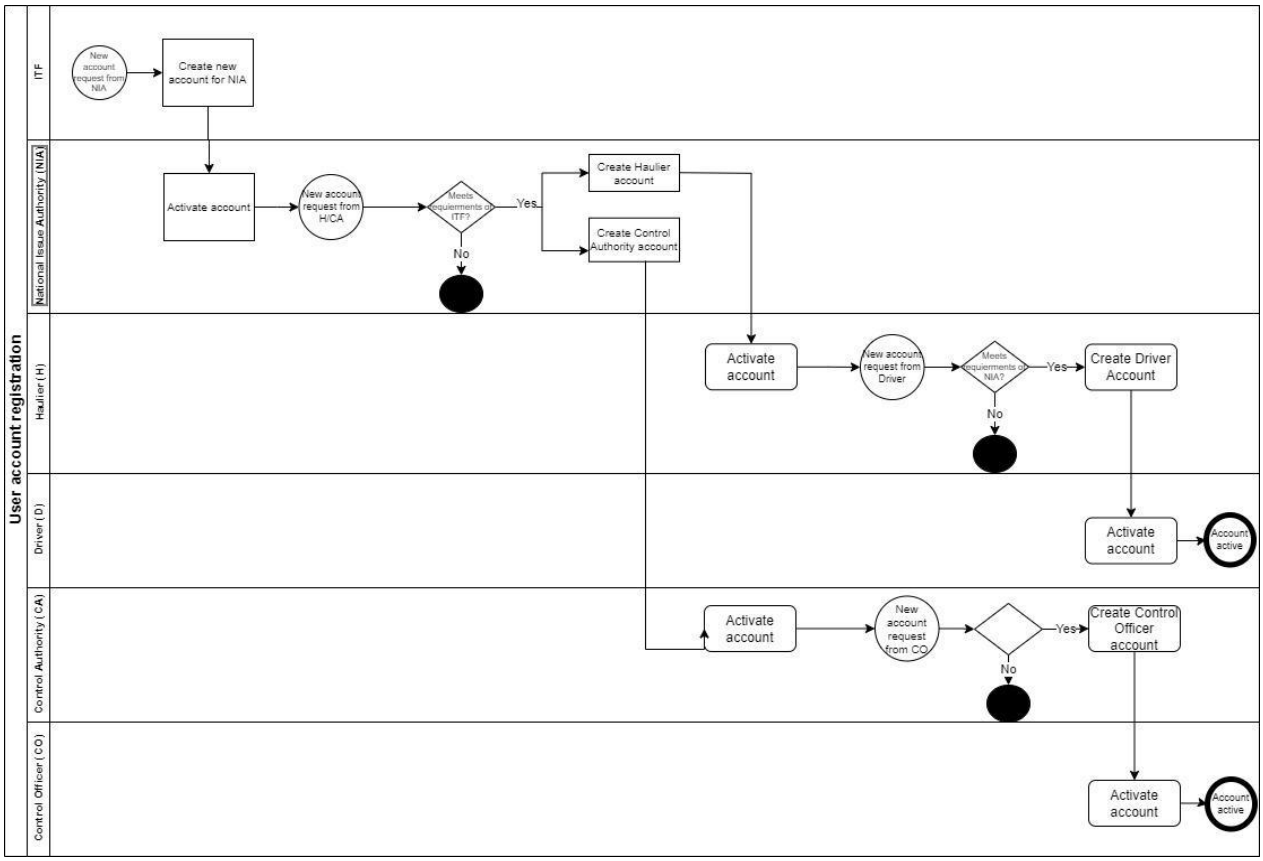
ITF creates user accounts for NIAs.

NIAs create accounts for Control Authorities and Hauliers.

Hauliers create accounts for other haulier's employees and drivers.

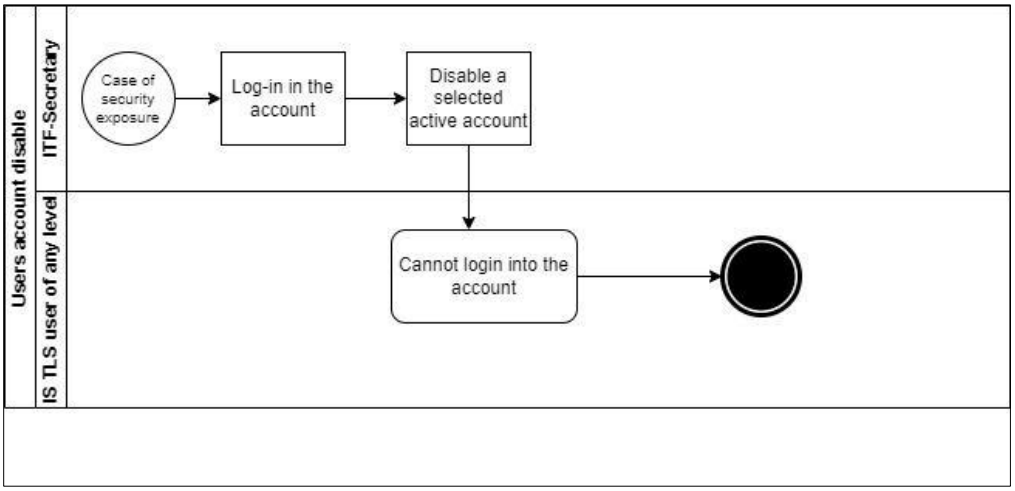
Control Authorities create accounts for Subdivisions, Subdivision's Administrators and Control Officers.

Figure 4 BPMN Scheme - User account registration



Note: the final version will be available in the SDD.

Figure 5 BPMN Scheme - User Account Disabling



Note: the final version will be available in the SDD.

6.1.4.1 Account disabling by ITF IT Administrator

The ITF IT Administrator has rights in case of security exposure to disable any active accounts of any level.

All active accounts opened by the blocked account may also be disabled automatically at all levels of the hierarchy below, if needed. This means that if a NIA account is disabled, all accounts of hauliers and their Drivers, as well as the accounts of control Authorities and their control officers may be disabled, if needed.

In the event of an exposure, the ITF IT Administrator shall:

- access the administrator account;
- select the account(s) that poses a risk to the system;
- choose whether subordinate accounts should also be suspended;
- select DISABLE in the account settings; and
- confirm the selected action.

From this moment this account and, if so requested, all subordinate accounts shall become inactive.

The ITF IT administrator shall have the right to reactivate a disabled account once the security risk is settled.

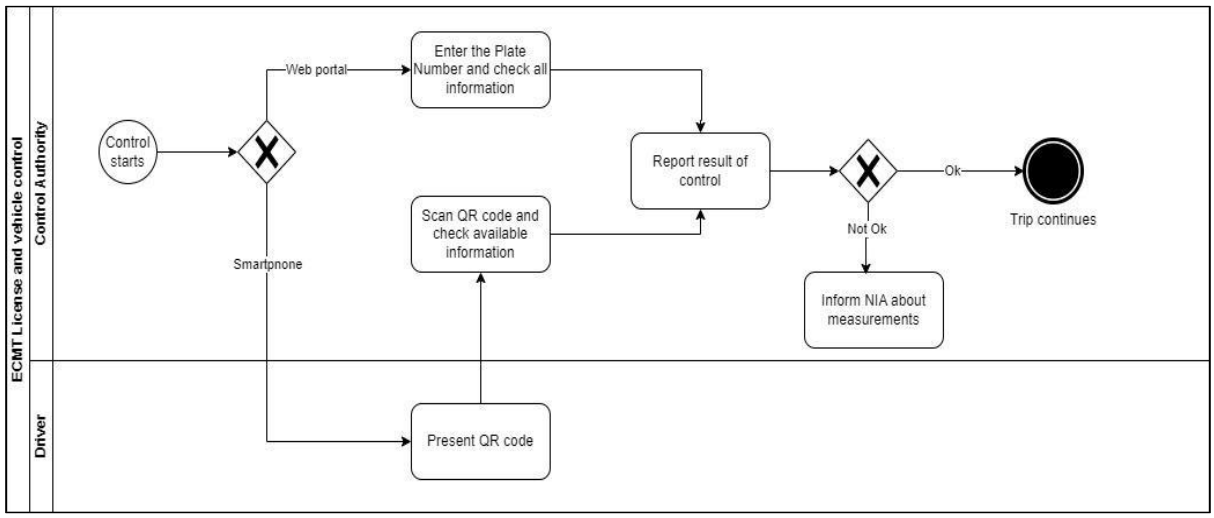
6.1.5 Vehicle Control

Control authorities and officers will be able to log into the web Portal and query data by Unique Number of the licence or the logbook. The Unique Number of the licence will give access only to the data related to the licence. To see the trip history, the Unique Number of the logbook needs to be used.

Full trip history of the licence(s) linked to the truck under inspection, with all relevant trip attributes (cf. annex 7 of the User Guide 2022 – i.e. loading unloading points, loaded or empty, KM indication and weights in tones, if applicable) will be accessible during this online control.

Control authorities and officers will have the option to save the inspection results and related licence and logbook to a file with a proper time stamp to be used later as evidence. The results of the controls will be available to control Authority administrators and control officers in accordance with the national legislation and to the options chosen by the control Authority's administrators in accordance with section 6.1.8.

Figure 6 BPMN Scheme - ECMT license and vehicle control



Note: the final version will be available in the SDD.

6.1.6 API for Issued Licences Management

NIAs will have access to a public-facing endpoint in the web portal where they can automatically upload issued licence data. Data needs to be in XML/JSON or any other suitable data format. Data uploaded by means of e.g. API functions needs to be properly verified (digitally signed or any other method) and cryptographically secured before it is processed by the system to ensure it comes from a legitimate source.

6.1.7 Error and Incident Management

This module should allow users to post short messages about problems or concerns that are instantly communicated to system. They will then be distributed among the designated persons responsible for these tasks.

6.1.8 Report Management

ITF shall have access to licence and trip statistical data in the form of specific, downloadable reports.

ITF shall also have access to data on the system's usage and traffic through specific, downloadable reports.

NIAs will have access to the data about ECMT licences assigned to the respective country, including data on trips performed with them and relevant documents stored in the system, in the form of a specific, downloadable report(s).

Hauliers will have access to data about ECMT licences assigned to them and trips performed with those licences, in the form of specific, downloadable report(s).

Drivers will have access to data about the licences assigned to them and the related documents stored in the system.

Control Authorities and officers will have access to data related to a single licence that is being inspected, all the trips performed with the licence, related vehicle(s) and all related documents stored in the system. Control Authorities administrator and officer will have access to the saved results of the controls in accordance to the national legislation and according to which of the following options is set by the control Authority's administrator:

1. The control Authority admin can see the results of the controls performed by its control officers and the control officer can see the results of the controls performed by the entire unit;
2. The control Authority admin can see the results of the controls performed by its control officers and the control officer can only see the results of the controls he/she performed;
3. The control Authority admin can't see any control results and the control officer can only see the results of the controls he/she performed.

More detailed design of the reports is available in Annex 2.

User Interfaces

The ECMT System user interface is based on the generic concept of responsive web pages, with a horizontal menu located on top of the page, folders located in the left-hand pane, and the data records shown in the right-hand pane also known as the data grid. Each business actor has his/her own personalized workplace that allows for easy search, browsing, sorting, filtering, or grouping of records. User interface should respect the latest technologies and best practices in developing web-based applications.

Some key elements of the ECMT user interface are as follows:

Home page

Licenses

Settings

Monitoring and audit

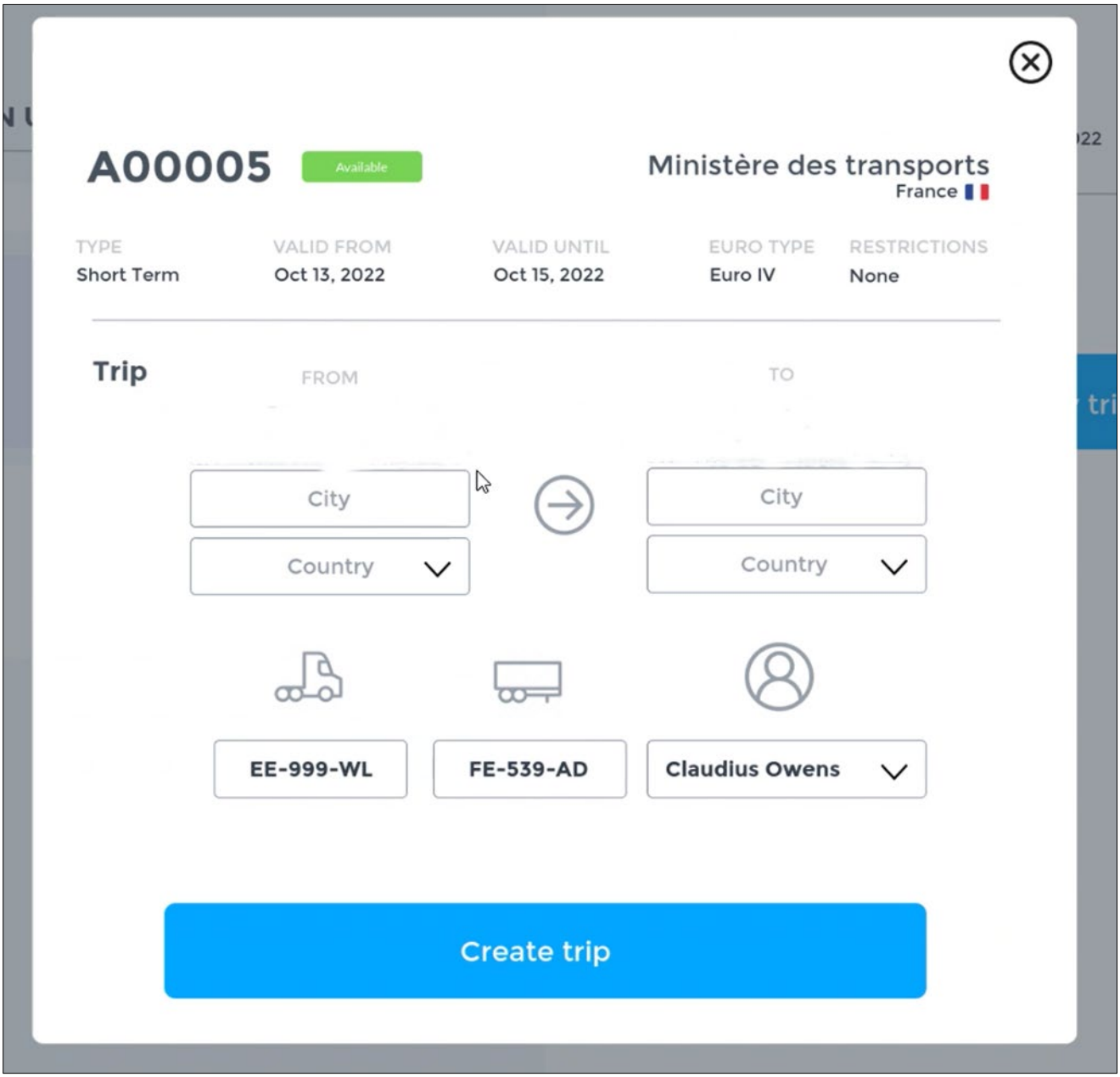
Reports

Help

Samples of possible designs are presented in screenshots below.

Create a trip in the logbook interface

Figure 7- Trip Creation



Note: the final version will be available in the SDD.

Creation of the trip may be done by a haulier or a driver (if authorised by the haulier manager). Trip details should be introduced before the trip starts. In addition to the info shown in the Figure 7, the logbook data shown in table below shall be input. The interface also shows ECMT Licence details that are linked to the Logbook on that trip.

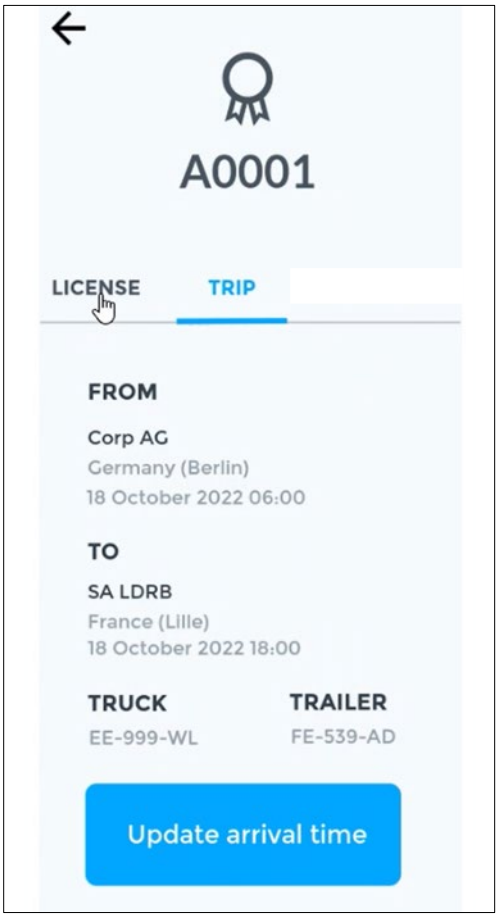
Data input in the Logbook:

Data	Format	Description	Obligatory

Date of departure	Date (dd.Month.yyyy)	Day of vehicle departure from the place of loading	yes
Date of arrival	Date (dd.Month.yyyy)	Day of vehicle arrival at the place of downloading	yes
Place of loading	Text	Name of City	yes
Country of loading	Code	Country code	yes
Place of unloading	Text	Name of City	yes
Country of unloading	Code	Country code	yes
Truck Plate Number	Text (Latin) and numeric	Truck Plate Number of vehicle	yes
Truck Country of registration	Code	Country code	yes
Trailer Plate Number	Text (Latin) and numeric	Trailer Plate Number of vehicle	yes
Trailer Country of registration	Code	Country code	yes
Loading	Numeric (to one decimal place)	Weight of cargo in tonnes	yes
Unloading	Numeric (to one decimal place)	Weight of cargo in tonnes	yes
Number of km at departure	Numeric	ODO meter number at the departure place	yes
Number of km at arrival	Numeric	ODO meter number at the arrival place	yes
Special remarks	Text and numeric	Any marks done by the driver, haulier or control authority	on demand

Updating of arrival details

Figure 8 - Updating of arrival details

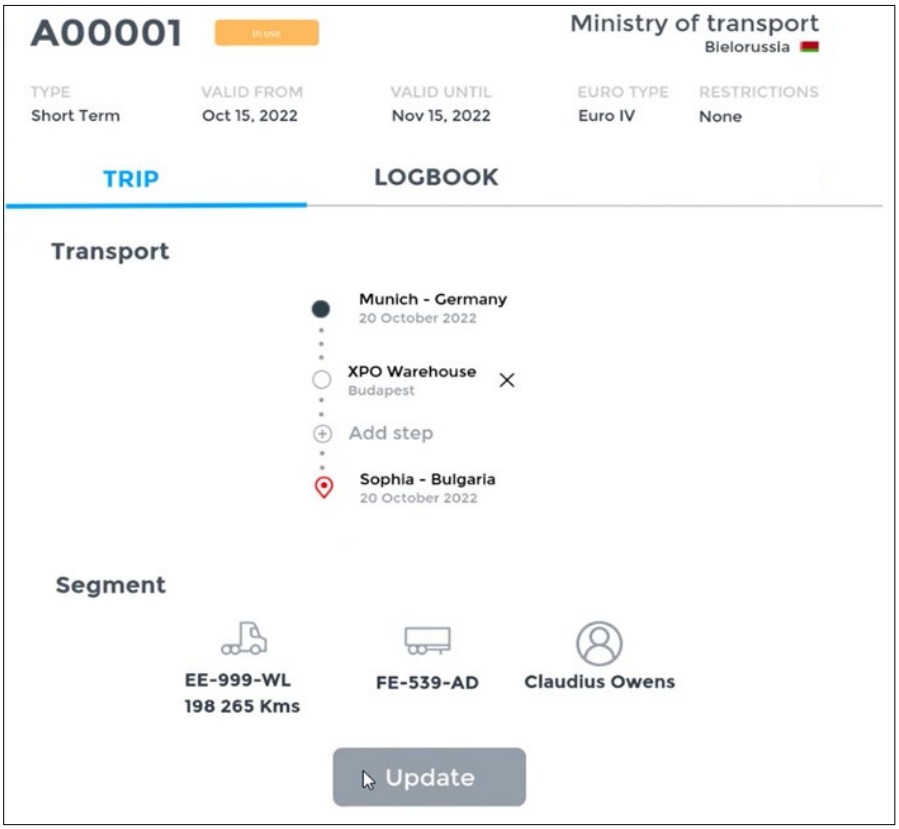


Note: the final version will be available in the SDD.

An haulier or an authorised driver can update arrival details. The date, place and/or KM indication at arrival can be updated for different reasons and this gives the possibility to revise data and update it in the system.

Finishing the trip

Figure 9 - Finishing the trip

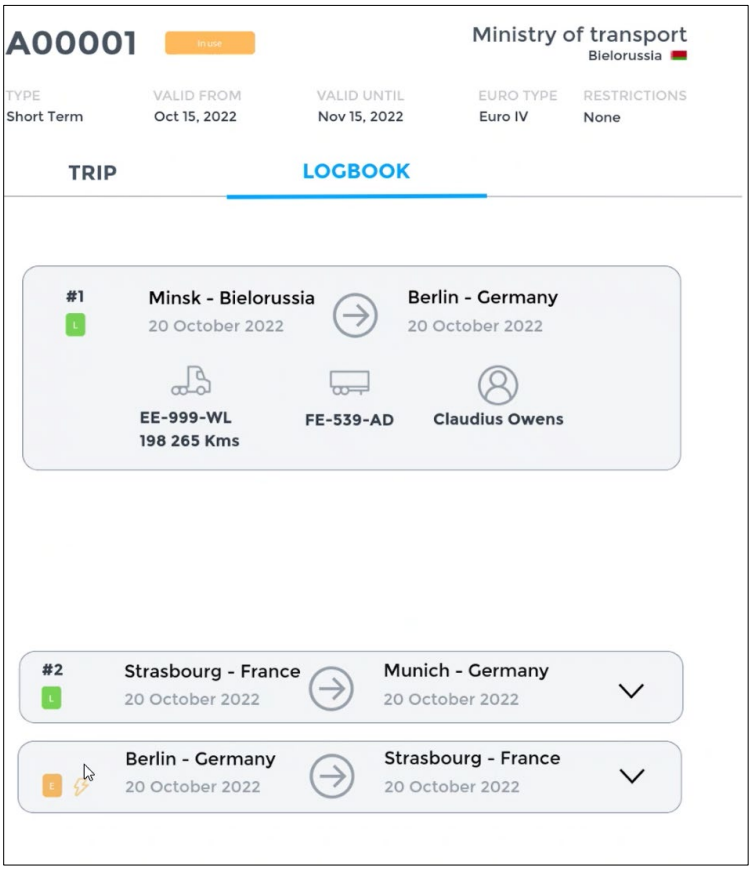


Upon completing the given trip (loaded or empty), the driver or the haulier makes final changes to line b) of the logbook and records the information, at which point the trip is considered finished and the license is ready for the next trip. Some validation rules:

- One ECMT licence is not used in more than 1 trip simultaneously;
- One truck is not used in more than 1 trip simultaneously;
- Periods of the trips performed with one licence and one truck should not overlap.

Logbook checking interface

Figure 10 – Logbook checking interface

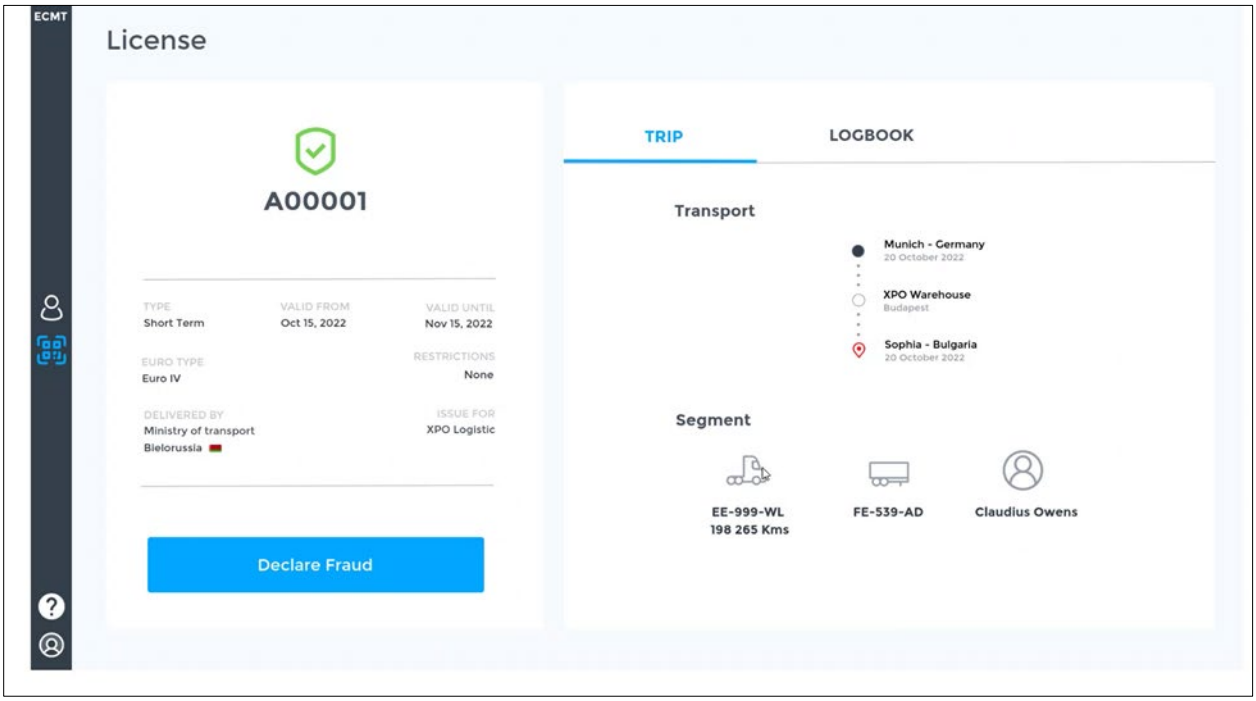


Note: the final version will be available in the SDD.

The Control authority has the possibility to check the logbook and get information regarding the last 10 trips related to the licence.

Control Authorities' reporting tool during the trip control

Figure 11 - Control authorities' reporting tool

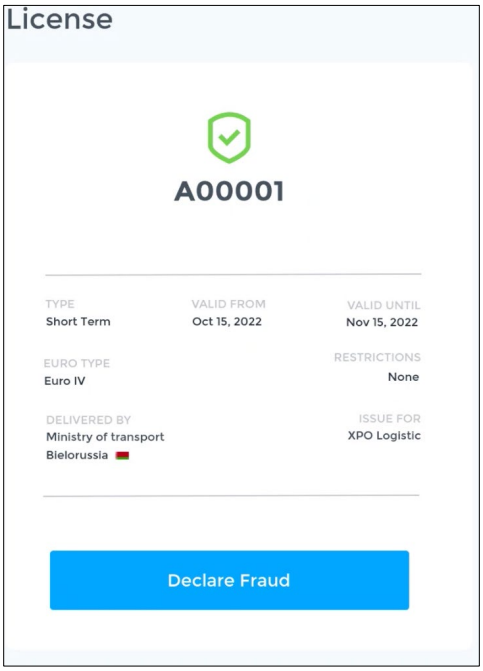


Note: the final version will be available in the SDD.

Control Authorities/control officers in case of irregularities suspected during trip data control will have the possibility to declare it in the system (within the limit of 200 symbols).

Fraud suspicion and declaration

Figure 12 - Fraud suspicion and Declaration (case of documents related violations)



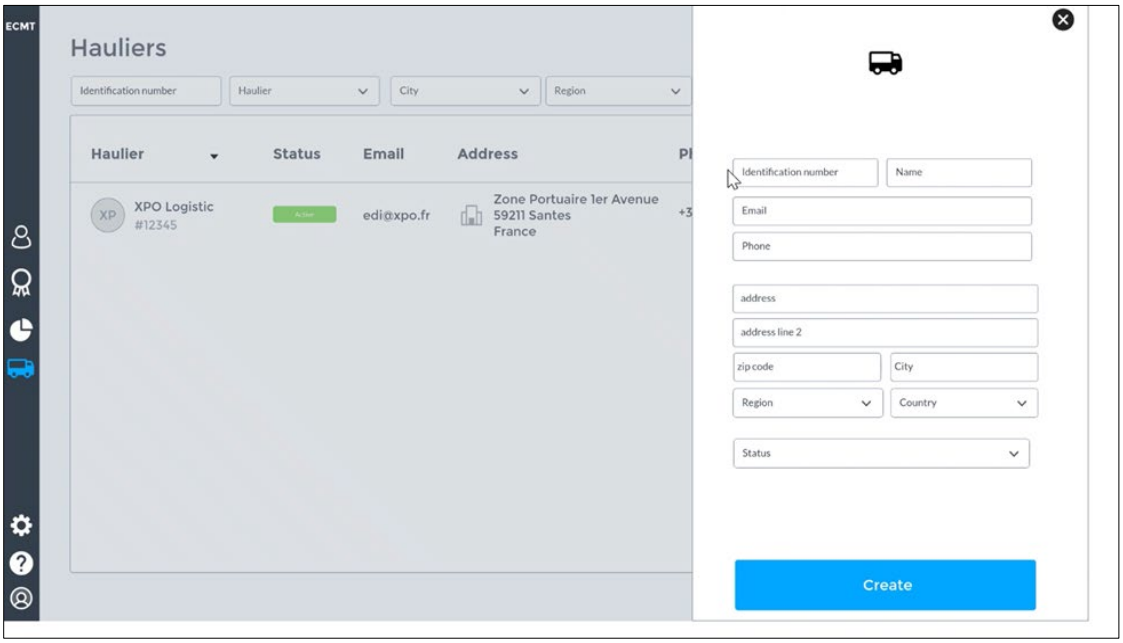
Note: the final version will be available in the SDD.

During the documents' control, the control officer may detect deviations from the rules or even fraud. The system will allow the control officer to save the results of the control. The result of the controls will be available to control Authorities and control officers in according with national legislation.

Also, during the logbook control, the control officer may detect deviations from the 3+2 rule.

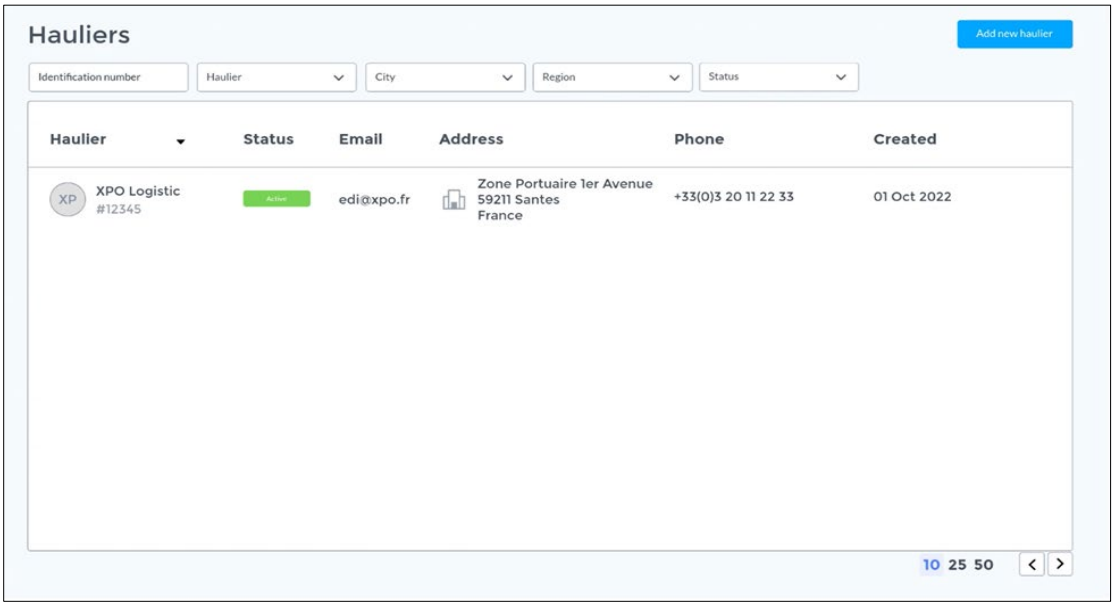
Interface for creating hauliers accounts in the ECMT TLS

Figure 13 - Interface for creating hauliers accounts in the ECMT TLS



Note: the final version will be available in the SDD.

Figure 14 - Haulier record details



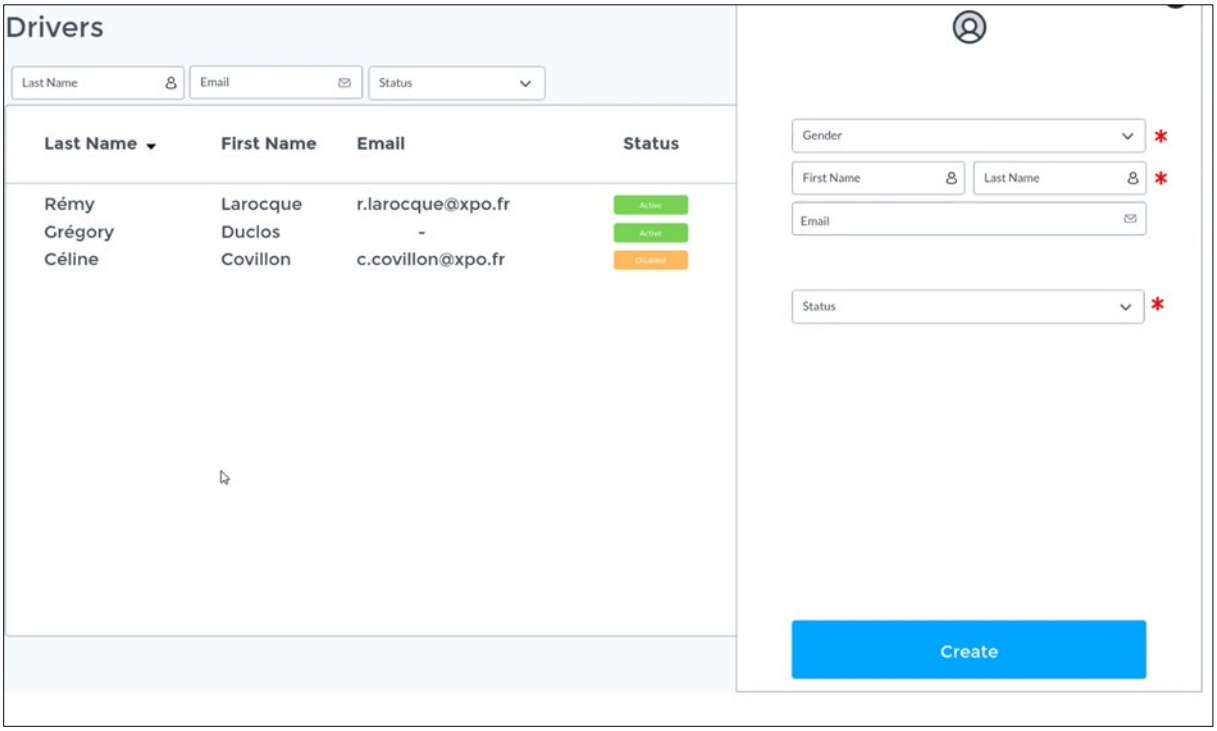
Note: the final version will be available in the SDD.

The NIA shall have the right to initiate an account for each eligible haulier by creating the haulier administrator's account, using the administrator's name, surname and email address. The haulier has to activate the account by giving the consent to the use of the data, changing

the password and populating the system with the other required haulier data, such as the physical address.

Interface for creating accounts for the drivers

Figure 15 - Interface for creating accounts for the drivers

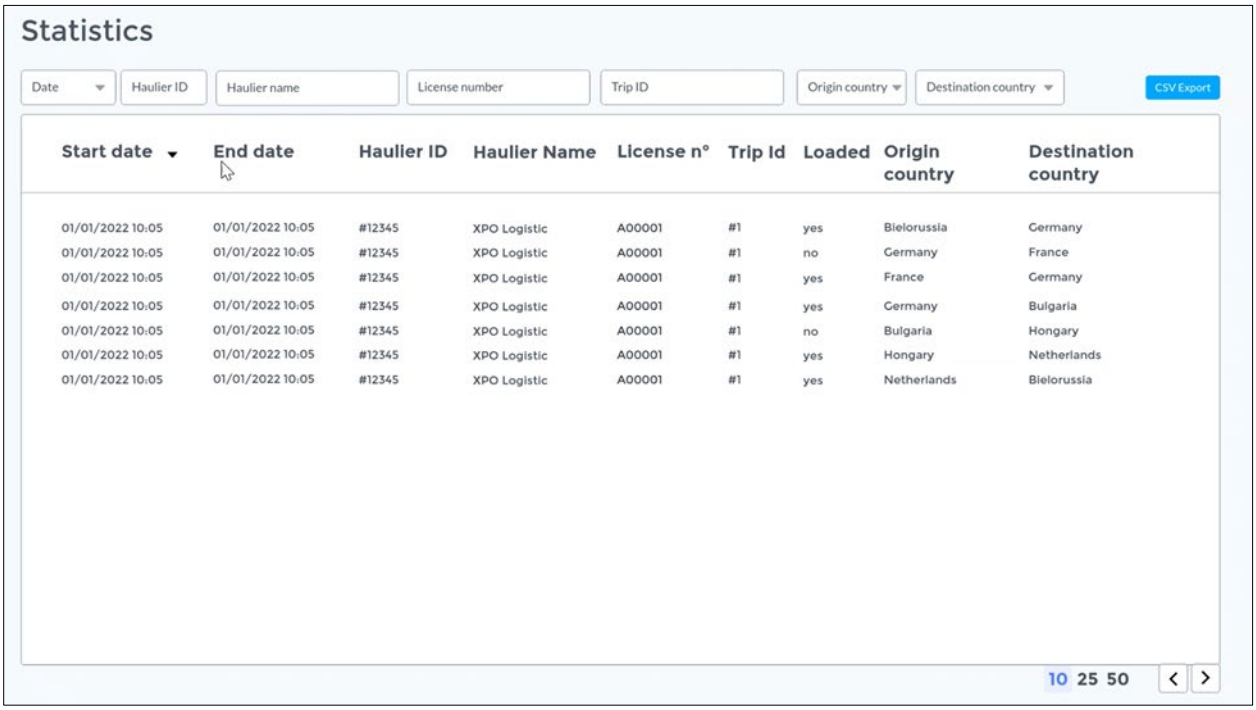


Note: the final version will be available in the SDD.

The haulier may create accounts for its drivers. Drivers must activate their accounts by giving the consent to the use of the data and changing the password once the right to access to the system is granted. Hauliers can use pseudonyms instead of the name and surnames of the drivers and use generic email addresses.

The ITF and NIAs have access to certain statistical information

Figure 16 - Access to statistical information



Note: the final version will be available in the SDD. The haulier name will not be visible to ITF Secretariat.

The ITF Secretariat and NIAs will have the possibility to see or download the **.csv** format statistical information or reports in accordance with their rights in the system.

○ 7.10 Mobile application for control Authorities/control officers

Main functionalities of the mobile application are:

a) QR code scanning. By scanning the QR code on the documents control authorities/officers can verify the authenticity of the contents and the digital signature.

b) QR validation. The application will show the data that is encoded in the QR code and valid or invalid signature. During offline control documents of ECMT licence and trips are being checked. During online checks, the data in the document can be verified with the data in the web portal.

c) After every verification process, the control authority/officer can choose to save the results of control in a document with a timestamp. This document can later be

presented as evidence in case of infringement.

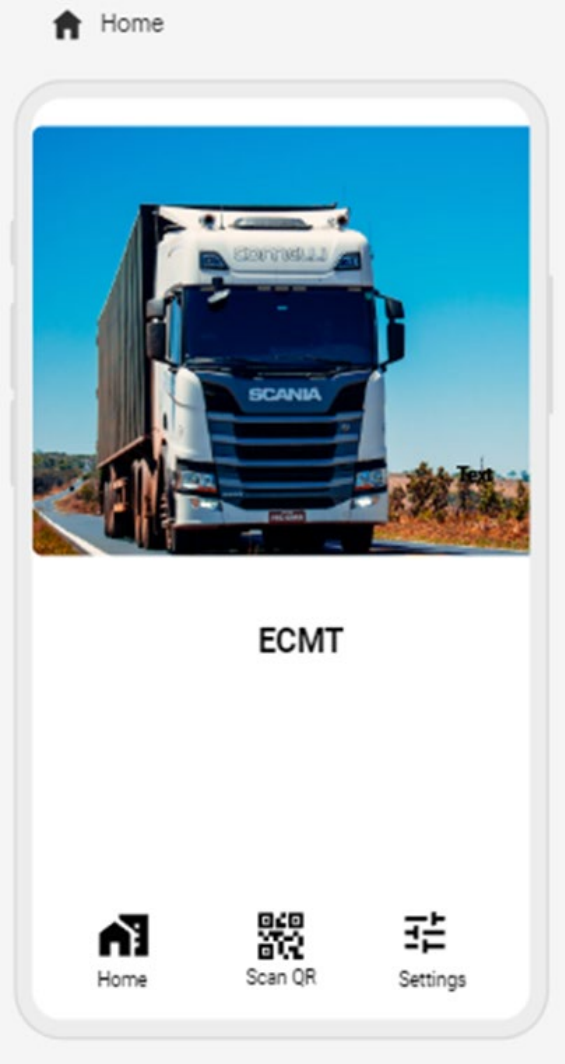
During verification of the trips' document a hyperlink to the web portal will be available. The control officer can view information about the last 10 trips performed using the licence associated at that time to the controlled vehicle.

The smartphone application is available without authentication and allows to view the information embedded in the QR code in offline/online format. To complete the control result, the control officer should register and link a mobile device with the controller's account at the web portal.

The verification app will be available for both Android and iOS platforms, published on Play Store, App Store, and available as a standalone package for manual installation.

After the successful download of the application, the mobile application interface will open on the mobile device.

Figure 17 - The mobile application home page



Verification app will be used for offline control.

App can be used for online control also.

Figure 18 - QR code scanning

By clicking on the Scan QR option on the mobile device a frame will appear, which you need to point at the QR code of the scanning document.

Offline QR code/licence validation will be realised through the following steps:

The verification of the digital signature.

Online validation will include the following steps:

The verification of the digital signature

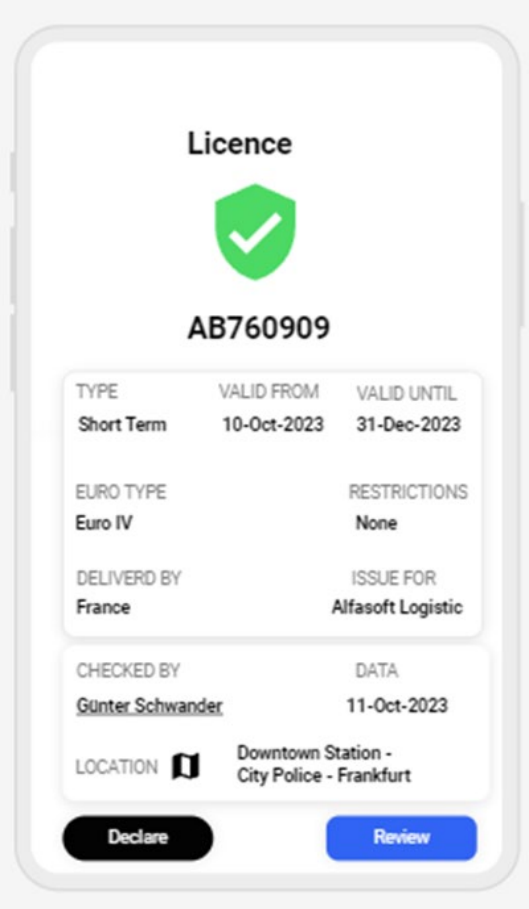
Verification of status licence - valid or invalid

Verification of rule: one car - one licence. This licence is using only this car - yes/no.

QR code for ECMT Licence

The QR code contains a minimum set of information about the ECMT licence that allows you to identify it and confirm its validity at the time of verification. This will allow control Authorities to carry out controls using a mobile application and be confident in the information they receive.

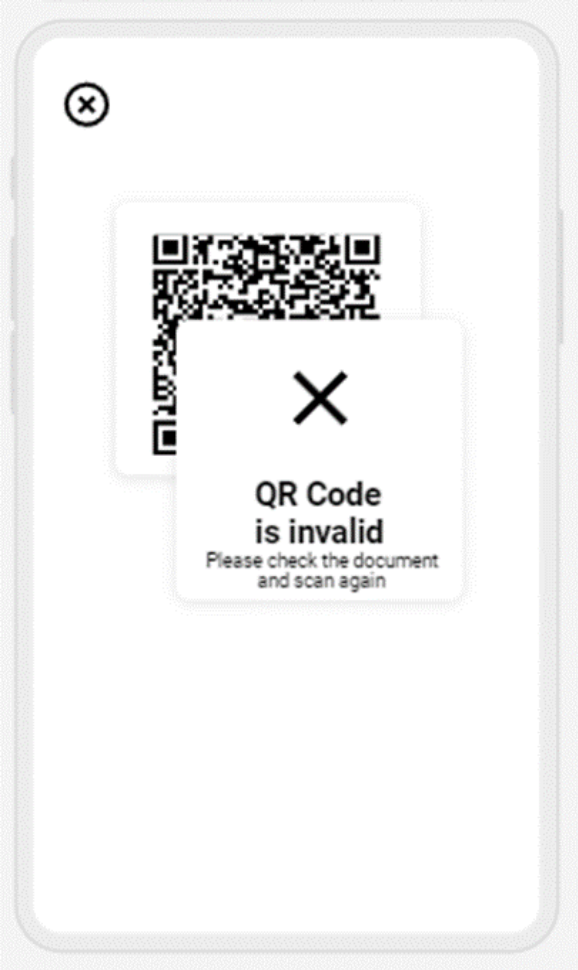
Figure 19 - ECMT licence view



After scanning the licence QR code in case of a successful scenario, will appear the main attributes of the ECMT licence on the screen.

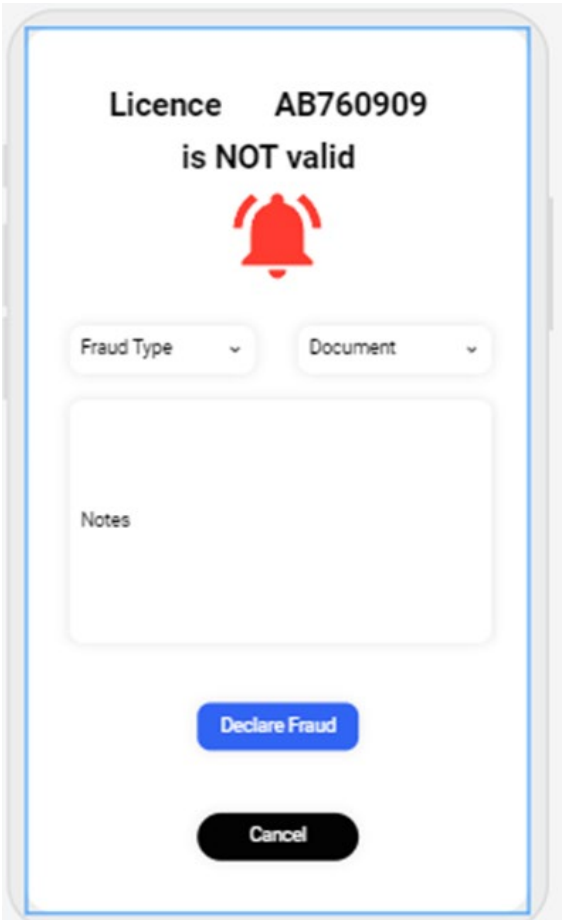
If the control officer is authorized in the ECMT TLS mobile application will give the possibility to declare optionally the result of control. By clicking Review the control officer will have access to the detailed license information.

Figure 20 - QR code is invalid



If the QR code is not available, will appear the announcement on the screen.

Figure 21- ECMT License validity alert

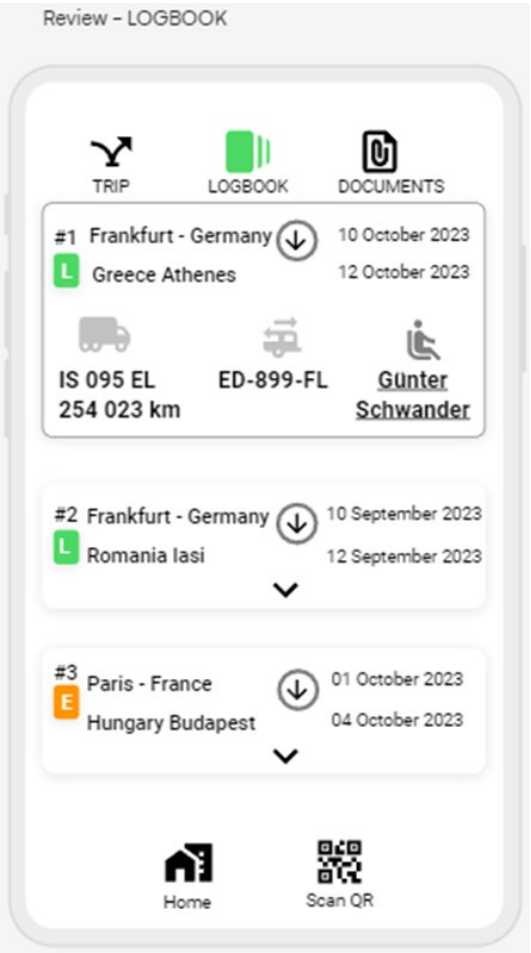


If the scanned ECMT License is not valid will appear warning announcement with the possibility of declaring a negative result control.

QR code for logbook

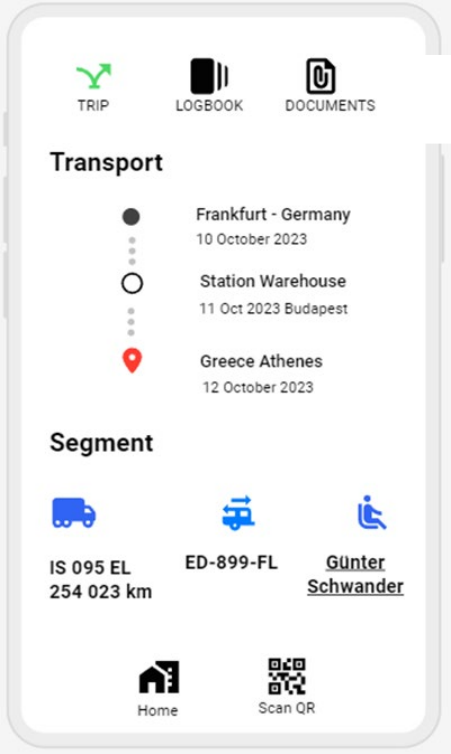
The QR code from the Logbook will allow to overview the Logbook information. After the QR code scanning, will appear the main logbook attributes and information about trips.

Figure 22 - Logbook mobile device interface



The control officer will have access to information of the last 10 trips in the offline mode. Registered control officer in online mode can see all trips on the Web Portal related to this license.

Figure 23 - Current trip information



Also Control Officer will have access to the current trip information by clicking the TRIP icon.

Being online on the Web Portal the control officer will have access to the uploaded documents and will have the possibility to overview them.

System Architecture

The ECMT TLS solution will be hosted in the infrastructure of ITF. Proposed ECMT TLS System architecture. This is a high-availability solution running on Web Farm and includes:

Hardware Part

Two (2) Data centers (DC1 and DC2) to provide an effective virtualization platform and adequate fault-tolerance for the system. One VM Ware host performs as the Primary Application and Database server; the second VM Ware host is used as a disaster recovery (DR) database server and for ECMT TLS Application load-balancing purposes. Additional Application Server virtual machines can be added both to DC1 and DC2 according to system load and overall responsiveness).

Each physical server should include two (10) physical Intel Xeon-class CPUs, with 2 cores per CPU, 38GB of DDR4 RAM, and two (2) 1.5Tb HDD drives - this will be enough to run the system. Since a large volume of files is foreseen, it will be necessary to provide for the possibility to increase HDD in the first years of operation the first year by - 2Tb, and the second year - by 2.5Tb.

Virtualization Part

Two software Network Load Balancers

Minimum of two Applications Server Virtual Machines (App Srv1 and App Srv2) – Windows-based Virtual Machines with .NET Core 7 general-purpose development platform (maintained by Microsoft) installed, with NGINX 1.15.5 engines performing as redundant pair of web-servers to host MTMDR System.

Database Server Engine Virtual Machines (DB Server) – Windows-based Virtual Machines with, Microsoft SQL Server Relational Database Engine installed, configured with streaming replication with automatic failover from Primary to DR (Disaster Recovery) server and manual failover from DR server to Primary server.

Virtualization DC1 and DC2 are located in two separate physical locations

User Characteristics

In the system are identified as 2 main user classes and characteristics

IT Administrators of the ECMT TLS

Roles and responsibilities:

Manage user accounts of any level in case of security exposure.

Oversee system performance and troubleshoot IT issues.

Characteristics:

Strong technical expertise in the ECMT TLS.

Knowledge of ECMT TLS administration, networking, and security.

Detail-oriented with a focus on system reliability and efficiency.

Skills and knowledge:

Proficient in ECMT TLS configuration and maintenance.

Understanding of network protocols and security measures.

Familiarity with the ECMT TLS software's architecture and infrastructure.

Technical equipment:

Personal computer with characteristics sufficient for stable work in ECMT TLS.

Stable internet connection allowing comfortable work in ECMT TLS.

Administrators with user functions (ITF Secretariat, NIAs and Control Authorities, when applicable)

Roles and responsibilities:

Manage and configure the ECMT TLS settings and parameters.

Oversee system performance and troubleshoot issues.

Characteristics:

Strong technical expertise in the ECMT TLS.

Knowledge of ECMT TLS administration, networking, and security.

Detail-oriented with a focus on system reliability and efficiency.

Skills and knowledge:

Proficient in ECMT TLS configuration and maintenance.

Understanding of network protocols and security measures.

Familiarity with the ECMT TLS software's architecture and infrastructure.

Technical equipment:

Personal computer with characteristics sufficient for stable work in ECMT TLS.

Stable internet connection allowing comfortable work in ECMT TLS.

Users (the haulier and the driver, the control Authority, when applicable, and the control officer)

Roles and responsibilities:

Primary consumers of the ECMT TLS.

Utilize the ECMT TLS to perform specific tasks or achieve desired goals.

Provide feedback on usability and functionality.

Characteristics:

A diverse range of technical proficiency and domain knowledge.

Medium levels of computer literacy and experience.

Focus on accomplishing tasks efficiently and effectively.

Skills and knowledge:

Basic understanding of the ECMT TLS domain.

Familiarity with common software applications.

Ability to follow instructions and utilize the software's interface.

Technical equipment:

Personal computer with characteristics sufficient for stable work in ECMT TLS.

Stable internet connection allowing comfortable work in ECMT TLS.

Smartphones are capable of reading QR codes and interpreting the information embedded in them

Specific Requirements

External Interface Requirements

An API is a set of rules and protocols that allows different software applications to communicate with each other. It defines the methods and data formats that applications can use to request and exchange information, ensuring seamless integration and interoperability.

API Types:

Web APIs: These APIs are accessed over the internet using HTTP/HTTPS protocols and are commonly used for web and mobile applications.

Library APIs: APIs provided by software libraries or frameworks, allow developers to use predefined functions and classes in their applications.

Operating System APIs: APIs provided by operating systems to interact with the system's services and functions.

Hardware APIs: APIs that enable communication with hardware devices, such as sensors, printers, or cameras.

Key Characteristics of APIs:

Consistency: APIs should have a consistent structure and behavior to ensure ease of use and understanding for developers.

Scalability: APIs should handle increased usage and data loads without performance degradation.

Security: APIs should implement appropriate security measures to protect sensitive data and prevent unauthorized access.

Versioning: APIs should support versioning to allow for backward and forward compatibility as the API evolves.

API Endpoints:

An API endpoint is a specific URL where an API can be accessed. Each endpoint represents a different functionality or resource that the API provides.

Examples of API endpoints could include /users to retrieve user data or /products to retrieve product information.

Request and Response Formats:

Request Format: Describing the structure and parameters required when making a request to the API, including HTTP methods (e.g., GET, POST, PUT, DELETE) and request headers.

Response Format: Defining the structure of the response returned by the API, usually in JSON or XML format, including status codes, headers, and payload data.

Rate Limiting and Throttling:

Addressing rate limits and throttling mechanisms to control the number of API requests a client can make within a specified timeframe to prevent abuse and ensure fair usage.

Error Handling:

Detailing the error handling process, including error codes, messages, and suggested actions for developers to troubleshoot issues.

Dependencies:

Identifying any external dependencies or third-party services that the API relies on for its functionality and integration.

Integration and Compatibility:

Discussing the compatibility of the API with various platforms, programming languages, and frameworks to ensure seamless integration for developers.

Issuing authorities will have access to a public-facing endpoint in the web portal where they can automatically upload issued license data. Data needs to be in XML, JSON, or any other suitable data format. Data uploaded by means of e.g. API functions needs to be properly verified (cryptographically signed or any other method) before it is processed by the system to ensure it comes from a legitimate source.

Performance Requirements

Number of users - around 100,000 active users

The estimated number of simultaneous connections/requests - 10 000 in peak times (10% of total users) simultaneous connections/all profiles combined These connections will not involve, in general, a big amount of data exchange or time.

Number of Mandatory documents:

110 000 ECMT licences including QR code,

Documents for lorries/trailers: 4 certificates on average X 60 000 lorries,

Trips documents, including QR code – one at a time for 50 000 lorries

Lease or employment contract when applicable (article 4.5 of User Guide 2022)

TOTAL: Approx. 500 000 documents per year

Logical Database Requirement

Database Structure:

Describe the logical structure of the database, including entities, relationships, attributes, and their respective data types, sizes, and constraints.

Data Storage and Retrieval:

Specify requirements for efficient storage mechanisms, indexing, and retrieval of data to optimize database performance.

Data Integrity Constraints:

Define constraints and rules to maintain data integrity, such as primary keys, unique keys, foreign keys, check constraints, etc.

Data Validation Rules:

Detail validation rules and criteria for accepting or rejecting data at the database level, ensuring data accuracy and consistency.

Database Views:

Describe any required database views to present data in a particular format or subset for specific users or use cases.

Data Encryption and Privacy:

Specify requirements for encrypting sensitive data and ensuring privacy and security in accordance with regulatory or compliance standards.

Access Control and Authorization:

Define user roles and permissions, access levels, and restrictions to ensure proper access control and data protection.

Concurrency and Transactions:

Specify requirements related to transaction management, concurrency control, and isolation levels to maintain data consistency and reliability.

Database Backup and Recovery:

Detail backup and recovery requirements to ensure data availability and business continuity in case of database failures or data loss.

Data Migration and Integration:

Specify requirements for migrating data to the database, integrating data from other sources, and handling data import/export processes.

Database Performance:

Define performance-related requirements, including response time expectations, throughput, query optimization, and scalability considerations.

Data Auditing and Logging:

Specify requirements for auditing database activities, logging changes, and generating relevant reports for monitoring and security purposes.

Data Archiving and Purging:

Detail requirements for archiving and purging data based on defined criteria to manage database size and performance over time.

Software System Attributes

Reliability

Definition:

- Reliability is the ECMT TLS's ability to perform its intended functions consistently and accurately under various conditions for a specified period.

Characteristics:

- Fault Tolerance: The ECMT TLS can recover from faults and continue operating without compromising its performance or data integrity.
- Error Handling: The ECMT TLS effectively identifies, reports, and handles errors to prevent system failures or data corruption.
- Availability: The system remains operational and accessible, delivering reliable services to users.

Importance:

- Reliability ensures that users can depend on the ECMT TLS for critical operations without fear of unexpected failures or disruptions.

Availability

Definition:

- Availability represents the percentage of time the software system is operational and accessible to users within a specified time frame.

Characteristics:

- Uptime: The system is accessible and functioning properly, minimizing downtime.
- Redundancy: The system has backup components or failover mechanisms to maintain availability in case of failures.
- Scalability: The system can handle increased user load without significant degradation in performance.

Importance:

High availability ensures users can access and use the software system whenever needed, promoting user satisfaction and business continuity.

Security

Definition:

Security refers to the protection of the software system against unauthorized access, data breaches, malicious attacks, and other potential security threats.

Characteristics:

Access Control: Restricting access to authorized users and limiting privileges based on roles and responsibilities.

Data in the system or coming from the system cannot be tampered or forged.

Data Encryption: Securing sensitive data by encoding it, making it unreadable without the appropriate decryption key.

Authentication and Authorization: Verifying user identity and determining their access rights within the system.

Importance:

Security is crucial to protect sensitive information, maintain user trust, and comply with legal and regulatory requirements.

Maintainability

Definition:

Maintainability is the ease with which the software system can be modified, updated, repaired, or extended over its lifetime.

Characteristics:

Modularity: The system is divided into independent and manageable components, facilitating changes without affecting other parts.

Code Readability: Well-organized and documented code that can be easily understood and maintained by developers.

Error Logging and Monitoring: Systems to track errors, logs, and performance metrics for effective debugging and maintenance.

Importance:

Maintainability ensures that the software system can adapt to evolving requirements, technologies, and business needs without significant costs or disruptions.

Annexes

○ Annex 1 "Use Cases ECMT Transport Licence System" (.doc file)

No	Use case code	Title
1	UC-1	User account registration
2	UC-2	Quota assignment
3	UC-3	Delete the issued license
4	UC-4	User account management
5	UC-5	Report generating
6	UC-6	System Configuration Management
7	UC-7	Trips data monitoring
8	UC-8	Upload files for users
9	UC-9	ECMT License distribution
10	UC-10	ECMT License trip assignment
11	UC-11	ECMT License control offline
12	UC-12	Creation of a new trip in the logbook
13	UC-13	Finishing of the trip

Note: the final version will be available in the SDD.

○ Annex 2 “Reports models for ITF” (.xls file)

Statistical data on the usage of licences.

This report is visible for the NIAs only that can access the data related to their own hauliers.

		From	To				
Period		dd/mm/yyyy	dd/mm/yyyy				
Country of registration	Moldova, MD		**Type of the trip**	All, Loaded, Empty	**ECMT Licence**	Short Term	
Country of unloading	Romania, RO		**Vehicle category**	EURO V	**Licence status**	in use	
Report	**Register**		**Country validity**	Hungary, H	**Licence number**	00073	
Date of report	*26/3/24 16:58*						
Country	*MD*						
Licence	*short term, annual*						
User	*Yaroslav*						

Country	EU, non EU	Old EU, New EU	EEA, non EEA	Haulier name	Haulier ID*	Licence No	Annual, short-term	Licence status	Country validity, H, I, Gr, RU, A	Date of departure	Date of arrival	Place of loading	Country of loading	Place of unloading	Country of unloading	Trip ID	Truck Plate Number	Truck Country registration	Truck vehicle category	Gross weight (tonnes)	Loaded, empty	Trip distance, km	Date of control	Special remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	23	24	25	26	27
MD	non EU	no	non EEA	Name 1	#1234578	00073	annual	In use	H, RUS, GR	03/01/25	06/01/25	Chisinau	Moldova	Bucuresti	Romania	#25	KAS256	MD	EURO V	12.6	loaded	473	01.03.2025, 01.04.2025, 01.06.2025	
						00073	annual	In use	H, RUS, GR	06/01/25	07/01/25	Bucuresti	Romania	Galat	Romania	#26	KAS258	MD	EURO V	-	empty	473		
						00073	annual	In use	H, RUS, GR	07/01/25	08/01/25	Galati	Romania	Chisinau	Moldova	#27	KAS259	MD	EURO V	16.5	loaded	473		
						00125	annual	available																
						20012	short-term	invalid	A,H,GR															
						20025	short-term	in use																
						00115	annual	invalid																
						30035	short-term	reserve																
						20037	short-term																	
						00151	annual																	

ECMT License information

License info

License No	20012	Status	invalid	Replaced by No	30035	
Type	short-term			Canceled	Explanation of cancelation or withdrawing	
Valid				Returned		
from	03/09/2025			Withdrawn		
to	03/10/2025					
validity	A,H,GR					
Category	V					

Logbook No 20012

Trip #	a) Date of departure / b) Date of arrival		a) Place of loading / b) Place of unloading	a) Country of loading / b) Country of unloading		Gross weight (tonnes)		Number of km / Number of km	Special remarks
1	a)	02/01/2025	Chisinau	MD			15.2	147.512	Trip with Assembled
	Step 1	03/01/2025	Bucuresti	RO		-	10.2	147.995	Downl
	Step2	03/01/2025	Bucuresti	RO		+	3.0	147.995	upload
	b)	04/01/2025	Constanta	RO		-	8.0	148.217	End of trip with As. Goods

Quota distribution.

This report is available for everyone.

Country of registration	MD, BG, GE	**Validity Country**	All
License	annual, short-term	**Vehicle category**	V, VI

Report **ECMT Licence Quota distribution**
Date of report *10/5/23 15:09*
Country *MD*
Licence *short term, annual*
User name *Yaroslav*

No	Country	Basic quota	Basic quota EURO V		Basic quota EURO VI		Total basic quota		*Base validity*					Total EURO V licences		Total EURO VI licences		Total licences		Reserve licences	
			Annual	Short-term	Annual	Short-term	Annual	Short-term	A*	GR**	H***	I****	RUS****	Annual	Short-term	Annual	Short-term	Annual	Short-term	Annual	Short-term
1	A	16							--	90	99	16	16								
2	AL	97							16	90	99	50	16								
3	ARM	86							16	90	99	47	16								
4	AZ	135							16	90	99	47	16								
5	B	118							16	90	99	67	16								
6	BG	188							16	90	99	55	16								
7	BIH	129							16	90	99	47	16								
8	BY	266							16	90	99	55	16								
9	CH	93							16	90	99	53	16								
10	CZ	186							16	90	99	55	16								
11	D	229							16	90	99	134	16								
12	DK	90							16	90	99	52	16								
13	E	113							16	90	99	58	16								
14	EST	139							16	90	99	50	16								
15	F	173							16	90	99	113	16								
16	FIN	113							16	90	99	58	16								

Licence status.

This report is visible for the NIAs only that can access the data related to their own hauliers.

		From	To						
Period		dd/mm/yyyy	dd/mm/yyyy						
Country of registration		MD		**ECMT Licence**	Annual, Short Term		**License status**	available, in use, cancelled	
Haulier		All		**Vehicle category**	EURO V				
Report	**ECMT Licence status**								
Date of report	*10/5/23 15:09*								
Country	*MD*								
Licence	*short term, annual*								
User name	*Yaroslav*								

				Annual																Total number of short-term licenses
				Available		In use		Cancelled		A		I		GR		H		RU		
Country	**Haulier**	**All licences**	**Total number of annual licenses**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	**EURO V**	**EURO VI**	
MD	Name 1	0	0																	0
	Name 2	0	0																	0
	.....	0	0																	0
	Name n	0	0																	0
Total MD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Licences and trips

This report is visible for the NIAs only that can access the data related to their own hauliers.

		From	To		
Period		dd/mm/yyyy	dd/mm/yyyy		
Country of registration		Moldova, MD		**Type of the trip**	All, Loaded, Empty
Haulier		All		**Vehicle category**	EURO V
				ECMT Licence	Short Term
Report	**Main indicators of ECMT Licenses usage for trips**				
Date of report	*26/3/24 17:02*				
Country	*MD*				
Licence	*short term, annual*				
User name	*Yaroslav*				

Country	Hauliers	Licence Number	Euro Category	Type of licence	Type of trip	Number of trips	Average trip duration, days	Average trip distance, km	Average cargo weight per one trip, tonnes	Average cargo weight per kilometer, tonnes
MD	Name 1		EURO V	short term	loaded	23	8	2 305		12.5
			EURO VI	short term	loaded	15	9	5 006		13.6
			EURO V	short term	empty	2	5	1 744		-
			EURO VI	short term	empty	3	5	2 034		-
			EURO V	annual	loaded	52	8	2 455		12.9
			EURO VI	annual	loaded	63	9	5 678		14.6
			EURO V	annual	empty	15	8	1 915		-
			EURO VI	annual	empty	21	9	3 564		-

Usage of the system.

This report is visible to ITF. There is no breakdown by country.

	From	To
Period	dd/mm/yyyy	dd/mm/yyyy
Report	**Usage system**	
Date of report	*26/3/24 17:10*	
User name	*Yaroslav*	
	Indicators	All countries
1	**Number of registered users:**	
	- number of Hauliers	
	- number of Drivers	
	- number of Control Authorities	
	- number of Control Officers	
2	**Number active users:**	
	- number of Hauliers	
	- number of Drivers	
	- number of Control Authorities	
	- number of Control Officers	
3	**Entries in the system**	
4	**Entries from mobile app**	
5	**Number of generated QR codes**	
	- license QR	
	- trips QR	
6	**Mobile app downloads**	
	- Android	
	- iOs	
	- manually	
7	**Controls performed**	
	- Controls performed using mobile app	
8	**DOS uploaded documents/certificates**	
9	**Number of eligible lorries**	
	- EURO 5	
	- EURO 6	
	- EURO NEXT	

Statistical report.

This report is visible to NIAs and ITF.

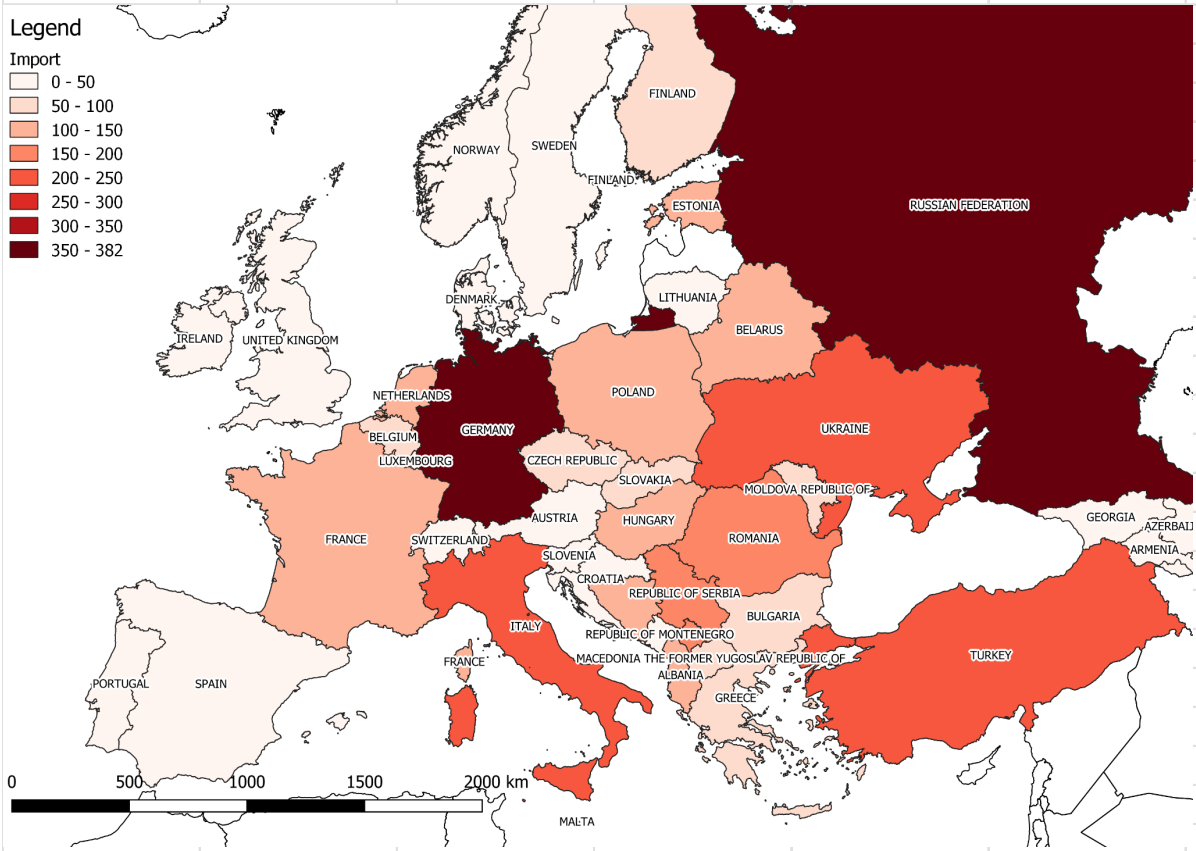
Period	1 January-30 June, 1 July-31 December	Country of registration	Moldova, MD
Report	**Trips review**		
Date of report	3/26/24 17:10		
Country	MD		
User	Yaroslav		

1.1.	Total number of the annual licences issued to the hauliers up to that moment from the beginning of the year under review	
1.2.	Total number of short term licences issued to the hauliers up to that moment from the beginning of the year under review	
2.1.	Number of hauliers holding licences up to the moment from the beginning of the year under review	
3.1.	Total Number of trips (loaded and empty runs) during the selected period	
3.2.	Total number of empty trips during the selected period, incl:	
3.3.	- Number of empty trips during the selected period where the origin or destination is the country of registration	
3.4.	***Percentage of empty trips: 3.2/3.1 = %***	
3.5.	***Percentage of empty trips involving the country of registration : 3.3/3.1 = %***	
4.1.	*Total vehicle-kilometers for loaded and empty trips during the selected period*	
4.2.	*Vehicle-kilometers for empty trips during the selected period*	
4.3.	***Percentage of empty vehicle-kilometers : 3.4/3.2 = %***	
5.1.	Total number of trips (loaded and empty) involving the country of registration during the selected period	
5.1.	Total number of trips (loaded and empty) without involving the country of registration during the selected period	
6.1.	Number of trips between two EU/EEA states (including Switzerland and UK) during the selected period	
6.2.	Number of trips between an EU/EEA states (including Switzerland and UK) and the non EU/EEA states during the selected period	
6.3	Number of trips between two non EU/EEA states (excepting Switzerland and UK) during the selected period	

Maps

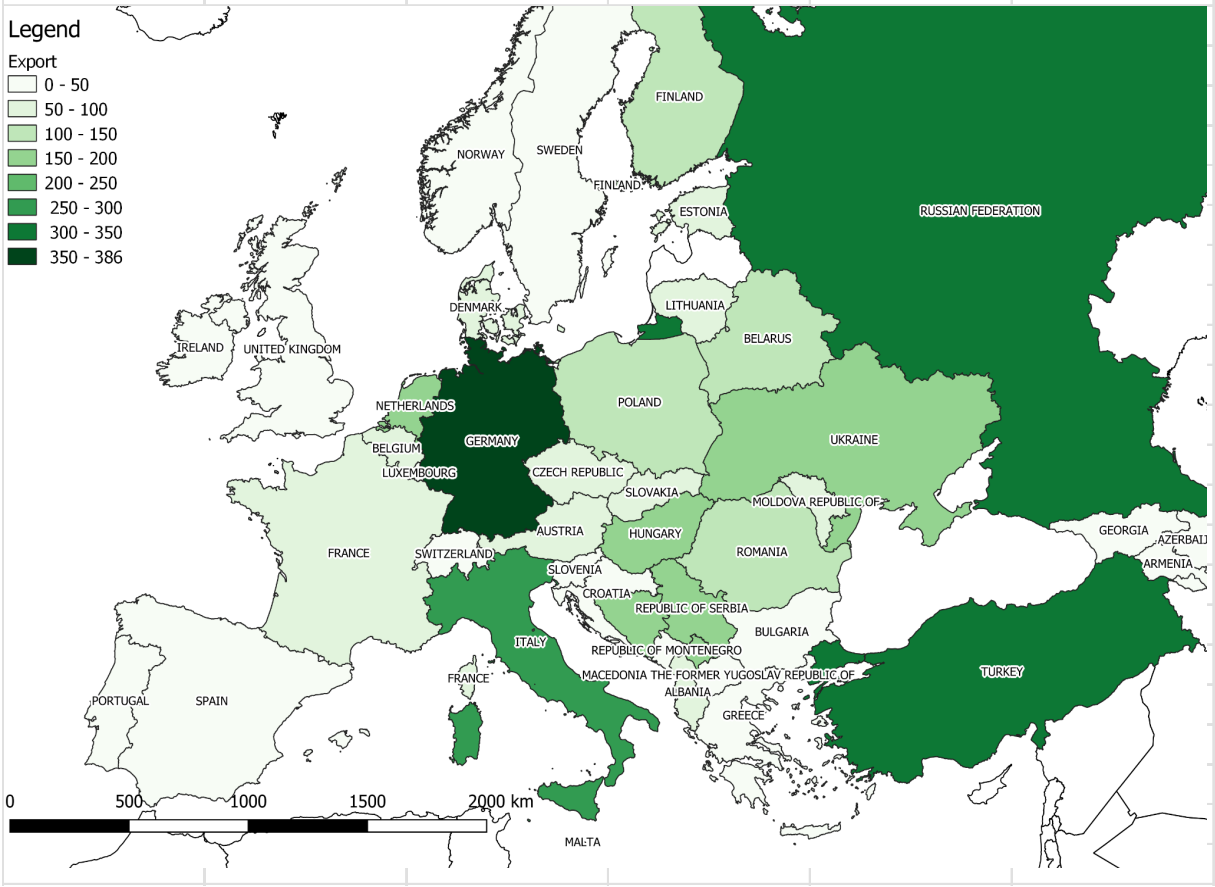
MAP 1	**Import**

The total loaded trips from all member hauliers to any given country of the ECMT. The colour code is in the maps - bigger the number of loaded trips ending the given country – darker the colour (imports)



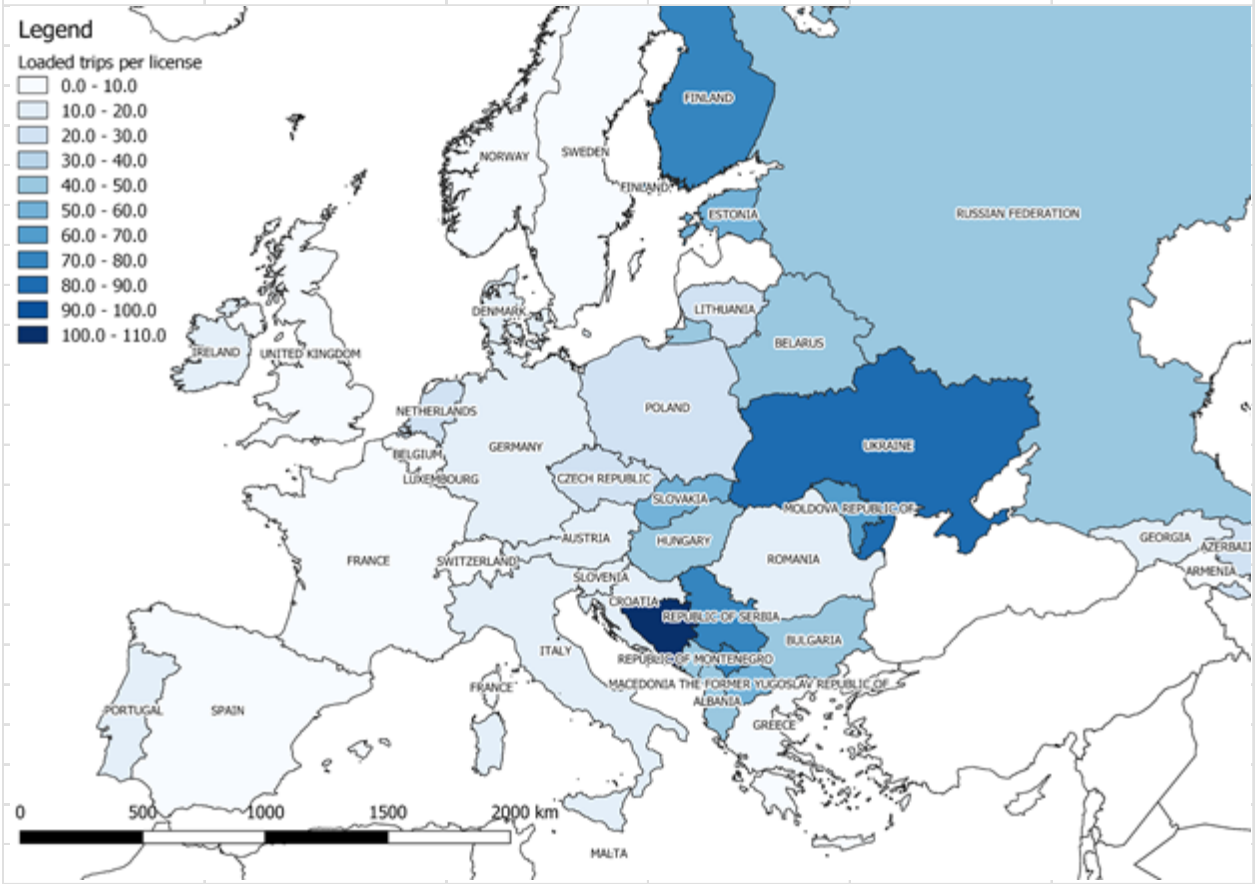
MAP 2	**Export**

The total loaded trips going out from any given country by all member hauliers to any other country export



MAP 3	**Trip per license**

The average number of loaded trips pre one licence performed by the national hauliers of a given country



○ Annex 3 Retention periods

1. Licence data

   - stored permanent:

     - Year
     - Country
     - Number
     - Valid from
     - Valid to
     - Issued on
     - Euro category
     - Territorial restrictions
     - Status (active/inactive/cancelled/replaced)

   - stored for 3 years:

     - Company name (Haulier)
     - Unique document number

2. Logbook Data

   - stored permanent:

     - Starting point
     - Starting date
     - End point
     - End date
     - Ton kilometre
     - Odometer reading
     - Transit points
     - Assembled goods
     - ECMT Licences associated to the specific trip

   - stored for 3 years:

     - Truck registration number
     - Trailer registration number
     - Special remarks
     - Haulier associated to the specific trip

3. List of hauliers from each member country - stored for 2 years after the haulier stops being active in the system.

   3.1. Name
   3.2. Description
   3.3. Local ID
   3.4. Unique ID in the system
   3.5. Address
   3.6. First name

3.7. Last name
3.8. Email
3.9. Phone number
3.10. Status (is valid)

4. List of vehicles (trucks and trailers) used by each haulier - stored for 2 years after the truck stops being active in the system.

   4.1. Plate number
   4.2. VIN code
   4.3. Ownership type
   4.4. Euro category
   4.5. Country of registration
   4.6. Type (truck/trailer)
   4.7. Uploaded documents
      4.7.1. Certificate of roadworthiness test
      4.7.2. Certificate of compliance with safety and environmental standards

5. Control data/documents (offline and online) - stored for 1 years

   5.1. Number of checks performed
   5.2. Results of the performed checks
   5.3. Documents generated after performed checks

6. User data - stored for 1 year after the user stops being active in the system.

   6.1. Username used to log in the system
   6.2. Email address
   6.3. User type
   6.4. Private-public key pair
   6.5. IP address

7. System data - stored as long as the system is operational

   7.1. List of member countries
   7.2. List of national issuing authorities
   7.3. List of Euro categories
   7.4. List of territorial restrictions
   7.5. Private key to sign Licence and Logbook data
   7.6. Set of rules and configurations (number of invalid login attempts before account is blocked, 2 factor authentication requirements, etc.)
   7.7. Audit data (who logged in from where and when, who uploaded a file or deleted a file, etc.) 2 years/or the object is deleted
   7.8. Number of documents stored in the system
   7.9. Backup files - backups are performed every day incrementally, full – weekly and old backups are stored for 1 years.

8. Verify App data - stored on user device, removed when app is uninstalled.

   8.1. Login credentials to connect to the web portal
   8.2. Documents generated after checks

