

Moving Europe towards a sustainable
and safe railway system without
frontiers.

ACCOMPANYING REPORT ERA1226/ACR TO THE RECOMMENDATION OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

on

setting out the procedure for registration of rail vehicles in the Union and the technical and functional specifications for the European Vehicle Register referred to in Directive (EU) 2016/797 of the European Parliament and of the Council and repealing Commission Implementing Decision (EU) 2018/1614

Disclaimer:

The present document is a non-legally binding report of the European Union Agency for Railways. It does not represent the view of other EU institutions and bodies and is without prejudice to the decision-making processes foreseen by the applicable EU legislation. Furthermore, a binding interpretation of EU law is the sole competence of the Court of Justice of the European Union.

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1. Executive summary

NOTE	<i>This report has been prepared by the Operational Data Unit of the Agency.</i>
LEGAL BASE	Article 47(5) of [L1] Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2017 on the interoperability of the rail system within the European Union, Articles 19 and 37 of [L2] Regulation (EU) 2016/796
OBJECTIVE OF THE TASK	<p>The objective of the project is to revise the technical and functional specifications of the European Vehicle Register (EVR), as described in Article 47(5) of [L1] Directive (EU) 2016/797 with the aim to:</p> <ul style="list-style-type: none"> • reduce administrative burdens and undue costs for Member States and stakeholders, by harmonising the vehicles registration process across the Union and by empowering the Agency to provide a vehicle registration service. • Increase data Findability, Accessibility, Interoperability and Reusability by allowing: <ul style="list-style-type: none"> ○ public access to the most relevant set of vehicles' registrations data; ○ reuse existing data from other data sources; ○ machine-to-machine data consumption;
OUTPUT OF THE TASK	The project output is an Agency Recommendation redesigning the legal landscape of the vehicle registration, including revised technical and functional specifications for the European Vehicle Register (EVR). All this considering the evolution of the Agency, the railway system and the technology enabling data provisioning systems.

SUMMARY OF PROPOSED CHANGES

<p>CONTENT AND DATA FORMAT</p>	<p>With this recommendation, we request to enrich the list of parameters of the EVR mainly with:</p> <ul style="list-style-type: none"> - URVIS number, in scope of the Luxembourg protocol; - Parameters related to data availability, required to show which fields are publicly available according to the keeper (in addition to those that are public by default). <p>The data format has not been modified in the recommendation, but the data presentation has been moved into specific technical documents, with the idea of better flexibility in adapting the system to emerging needs.</p> <p>Last, in Table 1 of the Annex, it is specified when the parameters shall be read by an existing data source.</p>
<p>ARCHITECTURAL CHANGES APPLIED TO THE EVR</p>	<p>The current architecture¹ of the EVR includes:</p> <ul style="list-style-type: none"> • A centralised Data Search and Consultation function (DSC) • A centralised User creation and administration function (UCA) • A centralized Reference Data Administration ('RDA') function • An Application, Registration, and data Storage function (ARS), this can be: <ul style="list-style-type: none"> ○ Centralised (C-ARS), or ○ Decentralised (D-ARS), available till 16 June 2024 only. <p>This recommendation does not propose any changes from the architectural perspective, just formalises the need of having only the C-ARS function in place with the new legal text.</p> <p>It is worthy to mention again, the need to provide a machine-to-machine communication functionality.</p>

¹ The EVR architecture is described in Chapter 2 – Annex II of [Commission Implementing Decision \(EU\) 2018/1614 of 25 October 2018 laying down specifications for the vehicle registers referred to in Article 47 of](#)

SUMMARY OF PROPOSED CHANGES

OPERATING MODE	<p>The first change in the operating mode is the possibility for the Agency to operate as a Registration Entity, in specific cases. The legal text is proposed for amendment to clarify the role of Member State in the context of the EVR as Registration Entity.</p> <p>Concerning user management and access rights:</p> <ul style="list-style-type: none">• A substantial part of the EVR data is publicly available unless the Keepers request to keep the full registration (in justified cases only) or the Owner's part only available to the Registration Entities,• It shall be possible to consume EVR data by other means than the web application,• Registration Entities shall have a user management policy in place to make sure that only authorised organisations have access to EVR to submit data,• Only Registration Entities can approve/reject submitted data.
VEHICLE IDENTIFICATION	<p>The recommendation does not suggest changes in this domain, but the transfer of the elements describing the European Vehicle Number in specific Technical Documents will facilitate upcoming changes, to be done in cooperation with Vehicles Registration Entities, Authorities and the representative of the sector.</p>

[Directive \(EU\) 2016/797 of the European Parliament and of the Council and amending and repealing Commission Decision 2007/756/EC](#)

2. Introduction

In June 2016 the technical pillar of the Fourth Railway Package entered into force:

- [L1] DIRECTIVE (EU) 2016/797 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 May 2016 on the interoperability of the rail system within the European Union.
- [L2] REGULATION (EU) 2016/796 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004.
- [L3] DIRECTIVE (EU) 2016/798 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 May 2016 on railway safety.

Article 47 of DIRECTIVE (EU) 2016/797 requires the European Commission to adopt by means of implementing acts the technical and functional specifications for the European Vehicle Register on the basis of a recommendation of the Agency.

This report accompanies the Agency Recommendation on the revised technical and functional specifications for the European Vehicle Register, which are intended to replace the current EVR Decision.²

3. Working method

3.1. Internal task force

For drawing up the Recommendation, the Agency established an internal task force to prepare the work for a future Working Party to be established in accordance with Articles 19 and 37 of [L2] Regulation (EU) 2016/796 (Agency Regulation).

3.2. EVR Regulation Working Party

A call for the establishment working party was launched in June 2023 and the Representative Bodies, Registration Entities and NSAs were asked to appoint representatives.

Considering the accession of the European Union to the COTIF and in order to cooperate on the vehicle-related registers which are equivalent in OTIF law and EU law, OTIF representatives were invited to attend the working party as observer.

The kick-off meeting of the EVR regulation working party was held on 12th of July 2023. A second and third meeting were held respectively on the 13th of September and on the 5th of October 2023.

² Commission Implementing Decision (EU) 2018/1614 of 25 October 2018 laying down specifications for the vehicle registers referred to in Article 47 of Directive (EU) 2016/797 of the European Parliament and of the Council and amending and repealing Commission Decision 2007/756/EC.

3.3. To address diverging opinions concerning the vehicle registration process, the role of a registration entity and the data accessibility in EVR, the Agency also organised a workshop with the members of the working party on the 4th of October 2023. Methodology

The paragraph describes the main steps taken to achieve the expected final output, i.e. the EVR recommendation:

1. Analyse the legal requirements and identify the objectives of the vehicle registration process and of EVR in terms of:
 - a. Roles and responsibilities,
 - b. Business cases,
 - c. Technology concerning data provisioning systems,
 - d. Legal framework related to data accessibility and interoperability in EU.
2. Identify and analyse the aspects of the current situation that need to be amended in order to achieve such objectives.
3. Identify the key aspects defining the requirements for registering vehicles in the Union and overarching the EVR solution;
4. Perform a gap analysis on the vehicle registration process and on the architecture of the EVR
5. Define the functional and non-functional requirements of the EVR system, including different possible options.
6. Assess the impacts of those options on the users, the Vehicle Registration Entities and the Agency in the working party and via a light impact assessment;
7. Draft new requirements for the harmonisation of vehicle registration and the technical and functional specifications of EVR.

4. Results of the AS-IS Analysis

The main problems are:

- *A registration process which is unnecessarily complex and not harmonised across EU due to:*
 - *additional information requested by the different Registration Entities;*
 - *different approaches in gathering evidences to confirm the Keepers' declarations, requiring supporting documents such as proof of ownership, contracts, etc.;*
 - *limited cooperation and sharing of experience among registration entities;*
 - *the tendency to use the vehicle registration process as a supervision tool.*
- *Registration data is not publicly available.*
- *Suboptimal data quality is considered an issue, mainly because users may make mistakes when manually entering data in vehicle applications, while these data already exist in other ERA's registers and applications.*
- *Partial support of stakeholders' business use cases concerning the different requirements for vehicle registration as part of the approval framework for operating rolling stock in the EU. Indeed, vehicle authorisation and registration processes are not fully integrated/aligned.*

5. Possible solutions

To solve the problems identified in section 4, the project team has identified the following options:

- **Option 0:** Baseline scenario
- **Option 1:** Revision of EVR decision with limited scope in terms of Agency as registration entity and public data access:
 - Vehicle Keeper submissions of registrations to the Registration Entity:
 - For vehicles authorised by an NSA: to the Registration Entity of that Member State,
 - For vehicles authorised by ERA: to ERA as Registration Entity,
 - Relevant EVR data are public but some data (e.g. owners) could remain protected.
- **Option 2:** Revision of EVR Decision with wider scope in terms of Agency as registration entity and public data access:
 - Vehicle Keeper submissions of registrations to the Registration Entity:
 - For vehicles authorised by an NSA: to the Registration Entity of that Member State or to ERA as Registration Entity (free choice of Registration Entity by the keeper),
 - For vehicles authorised by ERA: to ERA as Registration Entity,
 - All EVR data are public.
- **Option 3:** Revision of EVR Decision with flexible scope in terms of Agency as registration entity and public data access (with mandatory review in 5 years):
 - Vehicle Keeper submissions of registrations to the Registration Entity:
 - For vehicles authorised by an NSA: to the Registration Entity of that Member State,
 - For vehicles authorised by ERA or with an area of use including more than one Member State: Free choice of Registration Entity by the keeper
 - Relevant EVR data are public but some data (e.g. owners) could remain protected.

The options above are the subject of the LIA attached to this recommendation.

6. Description of the proposed solution for EVR

6.1. Users management and access rights

The main roles identified in the EVR are described in [L5] Annex 4.2

6.2. Content

The EVR will contain the information on:

- vehicle identification: assigned EVN and previous vehicle number (if applicable);
- the Registration: identifying the Registration Entity and the Territory in which the vehicle is registered;
- the status of registration;
- the references to the authorisations granted to the vehicle, including status of the authorisation, area of use, conditions of use and other restrictions;

- the manufacturing information (manufacturing year, manufacturing serial number, series, references to the vehicle type the vehicle is in conformity with);
- the identification of the keeper, owner, ECM; including the EIN number of the ECM certificate;
- the reference to the EC Declarations of verifications and its issuing bodies;
- the URVIS number, in the scope of the Luxembourg protocol;
- parameters identifying availability of data: exclusion from required public availability and availability of Owner's data.

6.3. EVR parameters and format of data

Parameters and their format are changed as proposed in [L5] Annex 1.1.

6.4. Functional and technical architecture

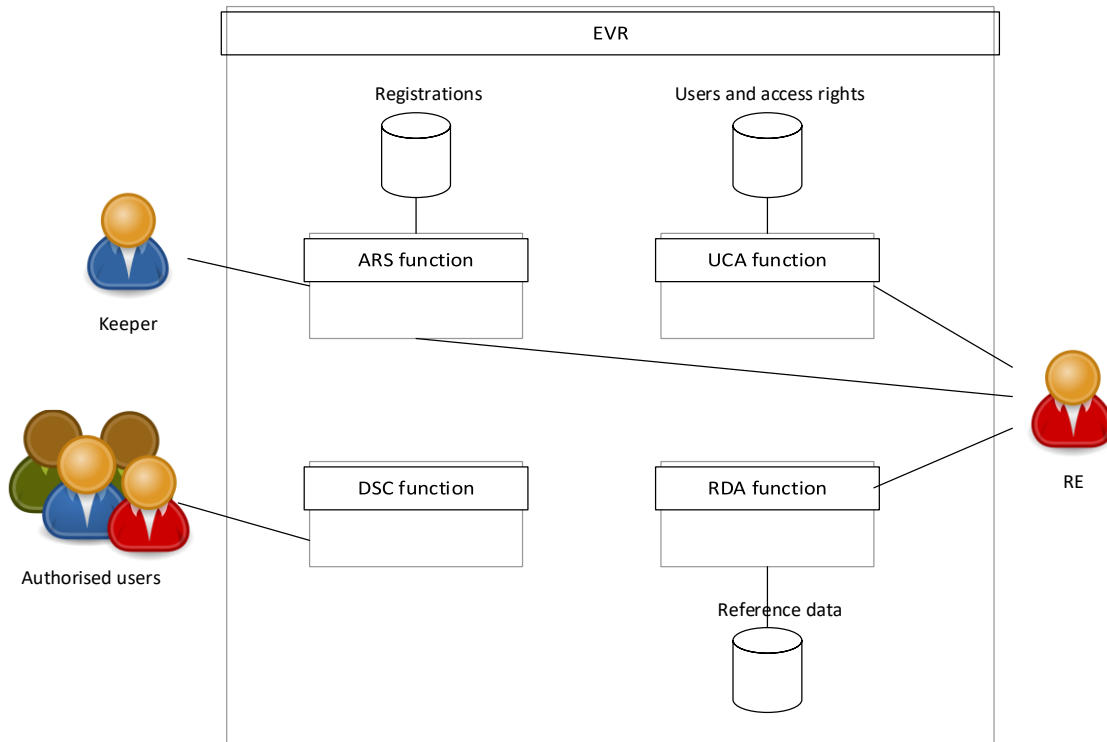
The EVR register will be implemented by means of centralised functions:

- The data search and consultation function (DSC function).
- The user creation and administration function (UCA function).
- The reference data administration function (RDA function).
- The application, registration and data storage functions (ARS functions)

After 16 June 2024, the functions ARS, DSC, UCA and RDA are centralised.

See Figure 1: EVR architecture.

Figure 1: EVR architecture



6.4.1. EVR functions

The EVR functions are described below.

- **Data search and consultation function (DSC function)**

The data search and consultation function is implemented via a centralised web-based tool setup by the Agency and machine-to-machine communication. The function enables users to search and consult data in the EVR.

- **User creation and administration function (UCA function).**

The user creation and administration function (UCA function) is implemented via a centralised web-based tool setup by the Agency. The function enables persons and organisations to request access to EVR data and the competent RE or the Agency to create users and manage access rights.

- **The reference data administration function (RDA function).**

The RDA function is implemented via a centralised web-based tool setup by the Agency. The function enables REs and the Agency to manage the common reference data.

- **The application, registration and data storage functions (ARS functions) of each Member State.**

The ARS function enables applicants to submit applications for registration or update to the relevant RE via a web-based tool and the RE to register the data.

After 16 June 2024, the Member State shall use the centralised ARS function made available by the Agency.

6.5. EVR operating mode

6.5.1. Registration cases

The registration cases available in EVR are listed in [L5] Annex 3.1. and summarized below:

- *New registration*: a new vehicle is registered in EVR. All mandatory parameters are provided within the registration.
- *Update of an existing registration*: an already existing vehicle registration is updated with the provided updated parameters' values. This included automatic data updates, which can be published only after the approval of the Vehicle Registration Entity. Changes to data in registrations will generate automatic e-mail notifications to the relevant actors.
- *Change of keeper of a vehicle*: the currently registered keeper submits all the organisation's data of the new keeper of a vehicle registration. The new keeper accepts its nomination, and it is registered as keeper for the given vehicle registration.
- *Change of ECM of a vehicle*: the organisation's data of a new ECM are recorded on a given vehicle registration once the new ECM acknowledges.
- *Change of EIN of the certificate of the ECM function*: Change of the EIN of the certificate of the ECM of the vehicle registration.
- *Change of references to vehicle authorisation*: This includes any update of the vehicle registration subsequent a newly issued vehicle authorisation.
- *Change of owner of a vehicle*: the organisation's data of a new owner are recorded on a vehicle registration.
- *Change of EVN following technical modifications of the vehicle*: a new registration is created to reflect the new interoperability capability or technical characteristics of a given vehicle while the previously existing registration of this vehicle is withdrawn.
- *Registration or change of the place of registration*: the place where the vehicle is registered, which code within the EVN is changed.
- *Change of Vehicle Registration Entity*: Change of the relevant Registration Entity of a vehicle registration.
- *Suspension or reactivation of vehicle registration*: a vehicle registration is suspended or reactivated.
- *Withdrawal of vehicle registration*: a vehicle registration is withdrawn.
- *Update of organisation data*: the data of an organisation is updated on a vehicle registration.

- *Automatic notification of changes:*
- *Historical records:* all changes and data in EVR are retained for 10 years, while EVNs are not reused for 20 years.

6.5.2. *Reference data*

The EVR will make extensive use of reference data and will avoid data duplication by consuming data from other systems, when possible.

The common reference data will include:

- Lists of codes (e.g. country codes, authorising entity name, additional conditions applicable to the vehicle).
- Restrictions codes.
- Organisations reference data.

6.5.3. *One Stop Shop (OSS) - Registers – EVR information exchange*

The Agency plans to enable information exchange between the different systems.

EVR shall consume existing data **at least** for the following information:

- Vehicle Keepers, via the VKMR
- Entities in Charge of Maintenance, via ERADIS
- Organisations with an Organisation Code assigned, via SRM
- Vehicle related data, via ERATV
- Authorisation related data, via OSS

6.6. **EVR Guidelines**

The EVR Guidelines will be updated considering the modifications proposed in this document.

Annex 1: Definitions and abbreviations○ **Definitions***Table 1: Table of definitions*

<i>Definition</i>	<i>Description</i>
Agency	The European Union Agency for Railways (ERA)
Application for registration	The request submitted by the applicant (the vehicle Keeper) for the registration of a vehicle according to Article 22 of Directive (EU) 2016/797.
Application for modification	The request submitted by the applicant (the vehicle Keeper) for the modification of a registration of a vehicle.
Authorisation	Vehicle authorisation for placing on the market, according to Article 21 of Directive (EU) 2016/797
Registration	The process of entering, following Article 22 of Directive (EU) 2016/797, in a vehicle register as referred to in Article 47 the required information on a vehicle authorised to be placed on the market. The term also designates the data recorded for the vehicle in the register.

○ **Abbreviations***Table 2: Table of abbreviations*

<i>Abbreviation</i>	<i>Description</i>
COTIF	Convention concerning International Carriage by Rail
ECM	Entity In Charge of Maintenance
ERADIS	European Railway Agency Database of Interoperability and Safety
ERATV	European Register of Authorised Types of Vehicles
EVR	European Vehicle Register as referred to in Article 47 or Directive (EU) 2016/797
EU	European Union
LIA	Light Impact Assessment
NSA	National Safety Authority
OSS	One Stop Shop
OTIF	Intergovernmental Organisation for International Carriage by Rail
RE	Registration Entity, i.e. the body responsible for keeping and updating the vehicle register as designated by each Member State in accordance with Article 47(1)(b) of Directive (EU) 2016/797.
ToR	Terms of Reference

<i>Abbreviation</i>	<i>Description</i>
TSI	Technical Specification for Interoperability
VKM	Vehicle Keeper Marking
VKMR	Vehicle Keeper Marking Register

Annex 2: Reference documents

Table 1: Table of reference documents

Annex 3: Reference legislation

Table 2: Table of reference legislation

<i>[N°]</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
[L1]	Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union.	OJ L 138, 26.5.2016, p. 44.	N.A.
[L2]	Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004.	OJ L 138, 26.5.2016, p. 1.	N.A.
[L3]	Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety.	OJ L 138, 26.5.2016, p.102.	N.A.

<i>[N°]</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
[L4]	Commission Implementing Decision (EU) 2018/1614 of 25 October 2018 laying down specifications for the vehicle registers referred to in Article 47 of Directive (EU) 2016/797 of the European Parliament and of the Council and amending and repealing Commission Decision 2007/756/EC	OJ L 268, 26.10.2018	
[L5]	Draft Commission Implementing [Act] on setting out the procedure for registration of rail vehicles in the Union and the technical and functional specifications for the European Vehicle Register referred to in Directive (EU) 2016/797 of the European Parliament and of the Council and repealing Commission Implementing Decision (EU) 2018/1614	-	-