Safeguarding the Area of Use of RIV Wagons and RIC Coaches

1. Purpose

This Joint Memorandum is supported by the Representative Bodies CER, UIP, ALLRAIL and ERFA, as the European Rail Sector Associations ("the Associations") representing members that hold existing vehicles that have been authorised before 15 June 2016 under the International Regulation on Wagons (*Regolamento Internazionale Veicoli - RIV)* or the International Regulation on Coaches *(Regolamento Internazionale Carrozze - RIC)*.

The Associations support the **preservation of the area of use** historically granted to vehicles authorised under the RIV and RIC arrangements. In the Association's view, **the authorisation of such vehicles should not be restricted solely because a vehicle is modified** and consequently requires a new authorisation after a change.

The issue is particularly relevant for **large-scale retrofitting programmes**, including the deployment of the **Digital Automatic Coupler**, where a restrictive interpretation could reduce the authorised area of use of substantial numbers of vehicles and thereby **undermine their operational flexibility**. It can also be a major obstacle to certain life-prolonging and safety or comfort improving modifications on existing vehicles.

The Associations therefore seek a common approach with the European Union Agency for Railways on the treatment of RIV wagons and RIC coaches when a new authorisation is required following a change under Article 14(1)(d) of Commission Implementing Regulation (EU) 2018/545.

2. Joint Position

The **Interoperability Directive** (EU2016/797) expressly provides in Article 54(2) that **authorisations issued under the RIC and RIV arrangements remain valid** in accordance with the conditions under which those authorisations were granted. The Associations consider that **the area of use forms an essential part of those conditions**. The preservation required by Article 54(2) must therefore cover not only the formal validity of the authorisation, but also its geographical scope.

> Article 54(2) of the Interoperability Directive: "*Authorisations for the placing in service of vehicles which have been granted pursuant to paragraph 1 and all other authorisations granted prior to 15 June 2016, including authorisations delivered under international agreements, in particular RIC (Regolamento Internazionale Carrozze) and RIV (Regolamento Internazionale Veicoli), shall remain valid in accordance with the conditions under which the authorisations have been granted.*"

For RIV wagons, this means retaining authorisation for operation throughout the European Union. For RIC coaches, it means retaining authorisation in the Member States and on the networks covered by the original bilateral or multilateral RIC approvals, as evidenced, where applicable, by the authorisation markings on the vehicle.

Historically, the state-owned railways performed both operational and authorising functions. They authorised their own vehicles, accepted vehicles belonging to other state-owned railways and approved privately owned wagons for operation on their networks. The Associations therefore consider these organisations to be the predecessors of the authorising entities designated by the Member States for the purpose of Article 54(2) of Directive (EU) 2016/797.

The **historic authorisations should consequently be recognised according to their original scope**. For RIV wagons, that scope was broadly European. For RIC coaches, it was determined by the individual railway administrations that accepted the coach, normally on a bilateral or multilateral basis.

2.1. Why the current interpretation is problematic

Point 7.2.2.4(7) of the WAG TSI states that RIV wagons are to be considered authorised in accordance with the **conditions under which they were used, including the area of use in which they were operated**. Point 7.1.4(7) of the LOC&PAS TSI contains an equivalent provision for RIC coaches.

> WAG TSI 7.2.2.4(7): "*In accordance with Article 54(2) of Directive (EU) 2016/797, wagons used under Regolamento Internazionale Veicoli (RIV) shall be deemed authorised in accordance with the conditions under which they were used, including the area of use where they are operated. Following a change which requires a new authorisation for placing on the market in accordance with Article 21(12) of Directive (EU) 2016/797, wagons accepted under the latest RIV agreement shall conserve the area of use in which they were operating without further checks on the unchanged parts.*"
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> LOC&PAS TSI 7.1.4(7): "*In accordance with Article 54(2) of Directive (EU) 2016/797, coaches used under Regolamento Internazionale Carrozze (RIC) shall be deemed authorised in accordance with the conditions under which they were used, including the area of use where they are operated. Following a change which requires a new authorisation for placing on the market in accordance with Article 21(12) of Directive (EU) 2016/797, coaches accepted under the latest RIC agreement shall conserve the area of use in which they were operating without further checks on the unchanged parts.*"

However, point 3.11.1.9 of the Practical Arrangements for Vehicle Authorisation Guidelines applies this reasoning to the separate case of a new authorisation following a change under Article 14(1)(d). It interprets the area of use of the resulting authorisation as **being limited to the vehicle's actual area of operation before the modification, rather than recognising the full area covered by its historic RIV or RIC authorisation**.

The Associations disagree with this interpretation. In particular, they do not accept the assumption that a vehicle admitted under the RIV or RIC arrangements cannot be regarded as having an area of use corresponding to the **full geographical scope of its original authorisation**. Such an interpretation would weaken the protection expressly provided by Article 54(2) of Directive (EU) 2016/797.

The approach also fails to distinguish clearly between:

- the area in which a vehicle was legally authorised;

- the networks on which it happened to operate during a particular period; and
- the routes on which it can currently be used following the necessary route compatibility checks.

A vehicle may not have been operated recently in every country or on every network covered by its authorisation. This does not mean that the unused parts of the authorised area have ceased to exist. Actual operational deployment is influenced by commercial demand, traffic flows and fleet management decisions. It should not retrospectively redefine the legal scope of the vehicle authorisation.

2.2. Modifications should not erase historic rights

RIV wagons and RIC coaches could historically undergo modifications that did not require a new authorisation and could subsequently continue to operate across all participating networks covered by their existing authorisations. Under the current EU vehicle authorisation framework, certain changes may likewise be managed without requiring a new authorisation, including changes falling under Article 15(1)(c) of Commission Implementing Regulation (EU) 2018/545.

The Associations consider that the geographical scope of an existing authorisation should not depend on whether the technical classification of a change happens to trigger a new authorisation. Otherwise, two technically comparable vehicles could retain different areas of use merely because their modifications followed different authorisation paths.

A new authorisation following a change should assess the change and its possible consequences. It should not automatically reopen or restrict parts of the existing authorisation that are unaffected by that change. The full area of use should therefore be carried forward unless the modification creates a specific and demonstrated incompatibility with part of that area.

2.3. Differences between historic and current requirements

The Practical Arrangements for Vehicle Authorisation Guidelines point out that the requirements of the current TSIs are not necessarily equivalent to the requirements contained in the former RIV and RIC arrangements.

The Associations do not consider this difference sufficient to justify restricting existing authorisations. Technical requirements evolve continuously. TSIs are amended, previous versions are superseded and individual requirements may be modified or withdrawn. Such regulatory evolution does not automatically invalidate the authorisation of vehicles that were lawfully authorised and continue to operate safely.

Existing RIV and RIC vehicles should therefore be treated in the same way as other vehicles authorised under earlier technical rules. A difference between historic and current requirements may be relevant when assessing a particular modification, but it should not, by itself, remove or reduce the vehicle's established area of use.

For RIV wagons, the numbering system also reflects their international operating characteristics. RIV wagons have first-digit number ranges from 0 to 3. These wagons essentially possess the characteristics of wagons authorised under the WAG TSI together with point 7.1.2 and Appendix C. Point 7.1.2 corresponds to authorisation for a broad area of use, including, where applicable, vehicles equipped for operation on networks with

different track gauges. This supports the Association's view that RIV wagons should continue to be treated as authorised for an EU-wide area of use.

2.4. Technical compatibility remains adequately controlled

The Practical Arrangements for Vehicle Authorisation Guidelines advise the entity managing a change to investigate whether the networks on which a vehicle has previously been operated have changed during any interruption in operation. According to the Guidelines, such network changes could compromise technical compatibility.

The Associations are not aware of changes affecting entire networks that would not already be addressed through the **route compatibility check**. Under OPE TSI, **railway undertakings are responsible for ensuring that a vehicle is used in an appropriate train composition and on compatible infrastructure**. This is verified through the route compatibility check before the vehicle is operated on a route.

The continued recognition of a vehicle's area of use does therefore not mean that it may operate unconditionally on every route within that area. The area of use establishes the geographical scope of the vehicle authorisation. The route compatibility check determines whether that authorised vehicle is compatible with a particular route and the intended operating conditions.

The Associations consequently consider that potential changes to infrastructure or network characteristics should be handled through route compatibility checking rather than by reducing the vehicle's authorised area of use.

2.5. Operational and economic consequences of restricting the area of use

A restriction based on recent or documented actual operation would create significant practical difficulties. It would require the entity managing the change to **reconstruct the operating history of each individual vehicle and to demonstrate on which networks it has previously been operated**. Older records may be incomplete, and operating history may vary between otherwise identical vehicles.

This would be particularly burdensome in the context of large-scale retrofitting. For the deployment of DAC, or another fleet-wide modification programme, the area of use might have to be determined separately for every wagon requiring a new authorisation.

The resulting authorisations could contain different and potentially smaller areas of use, even for technically identical wagons. Fleets that are currently interchangeable across borders could become fragmented into groups with different geographical restrictions. Wagon owners and railway undertakings would lose the flexibility to allocate vehicles according to operational demand.

The determination of individual areas of use would also create substantial costs and could become a significant blocker for DAC and other large-scale retrofitting programmes including life-prolonging and safety or comfort improving modifications (e.g. installation of a new power supply, installation or renewal of air-conditioning, changes to doors)**.** It would therefore run counter to efficient cross-border rail operations and to the practical objective of carrying out essential modernisation programmes at scale.

The mere creation of a dossier to prove whether a modification is inside or outside of tolerance can be a considerable **financial burden**, especially since documentation of old carriages is often primarily analogue and not always consistent. According to estimations made, between 200k€ and 500k€ of costs per carriage type would not be unrealistic, which is **not economically viable** given the fleet size per type, and the CAPEX required for such a project.

Finally, the preservation of historic areas of use also contributes to the **resilience of the European rail system**. Although technical standards continue to evolve, existing RIV wagons and RIC coaches can provide **valuable backup capacity**. During periods of fleet shortages, delayed vehicle deliveries or supply chain disruptions affecting key components, railway undertakings may rely on such vehicles to maintain transport services. **Restricting their area of use could reduce operational flexibility and make it more difficult to respond effectively to unforeseen disruptions**.

3. Practical measures required

To safeguard the area of use of RIV wagons and RIC coaches, the Associations propose the following practical approach.

First, the existing RIV or RIC authorisation should be identified as the baseline authorisation when a vehicle is submitted for a new authorisation following a change. The area of use attached to that historic authorisation should be explicitly recorded in the authorisation file.

Second, for RIV wagons, the baseline should be an EU-wide area of use corresponding to the international scope of the original RIV admission. The vehicle's recent operational history should not be used to replace or reduce that authorised area.

Third, for RIC coaches, the baseline should comprise the Member States or networks whose railway administrations originally accepted the coach. The authorisation markings and available historic documentation should be used to establish this scope. The absence of recent operation in one of those countries should not, by itself, remove that country from the area of use.

Fourth, an authorisation following a change should focus on the technical consequences of the modification. The existing area of use should be carried forward unless the assessment identifies a specific incompatibility introduced by the change. Any proposed geographical restriction should be supported by a concrete technical justification linked to the modification.

Fifth, changes to network characteristics should continue to be addressed through the route compatibility check required under the OPE TSI. The route compatibility process should not be confused with the determination of the vehicle's authorised area of use.

Sixth, applications involving fleets or series of technically equivalent vehicles should use a consistent approach. Vehicles undergoing the same modification should not receive different areas of use solely because their individual operating histories differ.

Seventh, the Practical Arrangements for Vehicle Authorisation Guidelines should be amended to distinguish clearly between the historic authorised area of use and the vehicle's actual area of operation. The Guidelines should state that a new authorisation following a change does not automatically reduce the area of use protected by Article 54(2) of Directive (EU) 2016/797.

Eighth, the relevant TSI provisions or their application guidance should be clarified, if necessary, to cover expressly new authorisations following a change under Article 14(1)(d). The wording should reflect the objective and intent of Article 54(2), namely the continued validity of RIC and RIV authorisations under the conditions in which they were originally granted.

4. Conclusion

The Associations are in favour of preserving the area of use of RIV wagons and RIC coaches because that area is part of the conditions under which their historic authorisations were granted and is therefore protected by Article 54(2) of Directive (EU) 2016/797.

A modification requiring a new authorisation should not convert an international vehicle into a vehicle with a narrower area of use merely because it has not been operated on every network covered by its authorisation recently. The assessment should concentrate on the technical impact of the change, while route-specific compatibility should continue to be verified through the route compatibility check.

The practical solution is to carry forward the historic area of use into the new authorisation, distinguish legal authorisation from actual operational history, and permit restrictions only where a specific incompatibility resulting from the modification has been demonstrated. ERA's application guidance, and if necessary, the relevant regulatory provisions, should be clarified accordingly. This is essential to maintain cross-border operational flexibility and to prevent the vehicle authorisation process from becoming an obstacle to DAC and other large-scale retrofit programmes including life-prolonging and safety or comfort improving modifications.

5. ANNEXE - EXAMPLES

RIC Example provided by DSB
Example presented in the Copenhagen Simplification Conference



DSB and DB decided in 2022 to deploy DB's IC1-coaches between Copenhagen and Hamburg.

IC1 is a collective term for several types of passenger coaches that can be used in locomotive-hauled intercity trains. All the coaches referred to are owned by DB, which has identified nine different coach types for services between Copenhagen and Hamburg. The coaches were built and entered service before 2010.

It is a requirement of the 4th railway package that the coaches' area of use should be extended in order for them to operate in Denmark. The vehicles have been in interoperable operation in Europe for several decades, but since they do not have a type-authorization accepted in the 4th railway package, a new type-authorisation had to be applied for together with an extension of the area of use.

The ERA clarification note (ERA 1209/100 V1), which was valid at the time of application, sets out how applications for vehicles placed in service before 19 July 2010 should be handled. In particular, it describes the process for authorising a vehicle for an extended area of use where the vehicle did not hold a type-authorisation.

The application was based on the Clarification Note. The application from DSB to extend the area of use also required DSB to apply for a type-authorisation. An application for a type-approval is a completely new approval of the vehicle type, and this had to be completed for each of the nine types.

The application process began in the spring of 2022. It was a long and resource-intensive process which meant that DSB could only use the coaches from June 2023.

The main issue is that coaches already in operation must be authorised under the same conditions as new railway vehicles. Preparing the vehicle's Requirements Capture alone takes approximately three months.

The next step is to develop the system definition. Together with the Requirements Capture, this must be assessed by an independent assessor and documented in a Safety Assessment Report. In addition, national requirements must be verified by a DeBo, which must also issue a report based on its assessment. Consequently, at least two independent bodies are involved in preparing the authorisation documentation.

From DSB perspective, it should be possible to obtain a quick authorisation with minimal requirements for the operator.

Furthermore, the IC1 authorisation case demonstrates that Regulation (EU) 2018/545 cannot stand alone. Only by consulting the detailed guidance in ERA1209/100 V1.0 it was possible to navigate the authorisation process. However, it was very difficult to find the necessary guidance. In addition, applicants must familiarise themselves with numerous other rules and requirements.

It makes sense for a railway vehicle manufacturer to apply for a type authorisation, as this allows the manufacturer to subsequently produce identical vehicles in conformity with the authorised type. However, a type authorisation offers no added value for vehicles that have already been placed in service. No additional vehicles will be produced in conformity with that type, particularly where the applicant - the holder of the type authorization - is not a railway vehicle manufacturer.

One of the most burdensome aspects of the current type-authorisation process is establishing an overview of the legislation and other requirements that applied when the vehicles were originally designed and built. In ERA terminology, this is referred to as "requirements capture".

This was one of the most challenging tasks in the application process managed by DSB, as reconstructing requirements dating back 20–30 years is far from straightforward.

A simpler procedure should be available for extending the area of use of rolling stock that has been in service for many years and was built in accordance with the RIC requirements. Its extensive operational history should provide compelling evidence that it can be operated safely in the extended area of use.

After the deployment of the IC1-coaches it was decided to add a flex coach to the trains with greater bicycle capacity. The flex coach belongs to the same family as the other IC1-coaches. The national rules on technical compatibility were updated, without transitional arrangements, before the application had been completed in the area of electromagnetic compatibility. This was unfortunate, as compatibility had already been demonstrated against the previous rules.

DSB and DB chose to discontinue the application, as demonstrating compatibility with the new rules would have been disproportionately costly. As a result, the planned increase in transport capacity could not be realised.

RIC Example provided by the Connecting Europe Express



The Connecting Europe Express was a flagship initiative of the European Year of Rail 2021, designed to promote rail as a sustainable and connected mode of transport across Europe. The idea was presented by the European Commission in November 2020 as a travelling exhibition linking major events across the continent. Originally planned for June and July 2021 between Lisbon and Ljubljana, the project was postponed to September and October 2021 because of the COVID-19 pandemic. Three trains operated across Europe using different track gauges (1,668 mm, 1,435 mm and 1,520 mm), reflecting the diversity of Europe's railway network. The project was coordinated by DG MOVE, while CER managed the technical and operational aspects in close cooperation with railway undertakings and infrastructure managers. Extensive preparations were required, including service agreements, train path allocations, maintenance planning, security arrangements and passenger management. The journey began in Lisbon on 2 September 2021. Despite a few technical issues during the tour, the trains generally operated successfully and demonstrated the feasibility of complex cross-border rail operations.

Despite the original expectation of DG MOVE that CEE can be run as a modern train (trainset), it had to be made clear that there is no recently manufactured train/trainset in possession of an authorization for a wider European area of use. Consequently, coaches compliant with the RIC agreement had to be used, assuming that they can be deemed authorized following the principle of "grandfather rights". Regrettably not even that proved to be fully correct, given the last update of the LOC&PAS TSI, limiting the deemed authorization to the territories where the vehicle used to be operated prior to the LOC&PAS TSI applicability.

An advice of the European Union Agency for Railways has been requested; on that basis a recommendation has been issued, suggesting running the train as an exceptional

transport in case of limited authorization of the vehicles on the territory of the respective Member State. However, as the ERA advice clearly stated, such types of transports need to be managed with the National Safety Authority of the EU Member State concerned.

Due to the insufficient time to process such a type of transport with the NSA, the CEE train has been operated in numerous countries on the responsibility of the RUs following their Safety Management Systems, in absence of either the authorization of the vehicles or provisions for the exceptional transport.

This has not represented any safety risk, thanks to:

- The principle compatibility of the coaches with the European infrastructure thanks to their compliance with the RIC agreement
- The route compatibility check performed by each RU

Nevertheless, it shall be noted that without resolving this issue any pan-European services will either remain impossible or subject to lengthy procedures requiring a new or re-authorization of the vehicles. An Annex to the LOC&PAS TSI enabling a certification of the passenger coaches of "go everywhere" nature is advisable, similarly as the former.

For more information, please refer to the Final report in support of the final payment for the services provided for the contract MOVE/C3/SER/2020-843/SI2.849448

RIV Example provided by Deutsche Bahn



Picture: Güterwagenkatalog DB Cargo

The sliding wall wagons type Hbins 306 have been designed and built in the 1980, under the rules of a state railway: Deutsche Bundesbahn as a state operated entity was responsible for the authorisation of the vehicles, this according to (West)German "Bundesbahn-Gesetz" § 38.

Deutsche Bundesbahn, also as part of UIC, checked compliance with UIC rules and following this, the wagons were marked "RIV" resulting in a "mutual recognition" in all states being connected to the UIC and OTIF regulations. Without changes in the technical design this marking "RIV" is still valid today.

Now changing these wagons, e.g. by removing parts of the wagon structure, permanent coupling of single wagons to a unit etc, should result in a vehicle, which is also marked with "RIV". The responsibility of the keeper, ECM etc of such a changed unit is not affected.

In a project where sliding walls of Hbins 306 wagons have been removed and resulted in a wagon type Laadrs, the keeper was forced by ERA to bring evidence, where the wagons have been in operation resulting in a reduced area of use, namely MS DE, PL, CH, IT, NL and AT. That is a mayor disadvantage related to the idea of economic useful redesign and modernization of the legacy wagon fleet.

The mentioned wagon type Hbins 306 is a wagon compliant with UIC leaflet 571- 3, Chapter 9.1.2, so these wagons are fully interoperable and have been ordered from several Railway Undertakings, e.g. DB, FS. Following changes in the market these have to be modernized and adapted to customers' needs. The actual procedures are not a progress, but regress compared with the procedures in recent years (before the adoption of the 4th Railway Package).