



ORGANISATION INTERGOUVERNEMENTALE POUR LES TRANSPORTS INTERNATIONAUX FERROVIAIRES  
ZWISCHENSTAATLICHE ORGANISATION FÜR DEN INTERNATIONALEN EISENBAHNVERKEHR  
INTERGOVERNMENTAL ORGANISATION FOR INTERNATIONAL CARRIAGE BY RAIL

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**Commission d'experts techniques  
Fachausschuss für technische Fragen  
Committee of Technical Experts**

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## **EXPLANATORY DOCUMENT ON ATMF 2015**

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Practical information for the application of Appendix G to COTIF

*This paper sets out the general principles underpinning ATMF, in the version entering into force on 1 July 2015, and summarises the tasks and responsibilities of the different actors involved in the implementation of ATMF. The aim of this paper is to help the reader in understanding ATMF. This is an explanatory document, not a regulation. The contents of this document are for information only. In case of contradictions, incompatibilities, or any other inconsistency between this document and ATMF, it should be regarded as an error or inaccuracy in this document.*

## **General principles of ATMF**

*(With reference to Article 1)*

The primary objective of ATMF is to set out rules for the admission of vehicles in international traffic. The concept is that each Contracting State will have the competence to issue international admissions for vehicles and that this admission is recognised by all other Contracting States. In order for this principle to function, it is important that each Contracting State applies the procedures and standards for admission correctly, so that all the other Contracting States can be confident that any vehicle admitted in accordance with ATMF is assessed for compliance with the same rules and with the same level of precision, no matter where the vehicle is first admitted.

The principle underpinning ATMF is that if a vehicle meets all the applicable requirements, it is granted admission to international traffic in all states that apply ATMF.

## **Concepts and definitions**

*(With reference to Article 2)*

A vehicle within the meaning of ATMF is one that is “suitable to circulate on its own wheels on railway lines with or without traction”. This means that train sets (also called multiple units) and locomotives also fall within the scope of ATMF and are considered as vehicles.

In order to structure the functional and technical requirements, the rail system is divided into subsystems in accordance with UTP GEN-B<sup>1</sup>. A vehicle may consist of one subsystem (rolling stock) or two subsystems (rolling stock + onboard control-command and signalling). The former concerns, e.g., freight wagons and passenger coaches, the latter, e.g., locomotives and train sets. In order for a vehicle to be accepted for international traffic, the vehicle must fulfil the applicable technical requirements.

In terms of admission to operation, the single object that is subject to admission is referred to as a vehicle. A vehicle may consist of one (e.g. freight wagon, locomotive) or more segments (train set).

A train within the meaning of ATMF is “a formation provided with traction, consisting of one or more railway vehicles and prepared for operation”. “Prepared for operation” means that the vehicle(s) of which the train consists are in an operational state and that there is a railway undertaking which has ensured correct and safe train composition and preparation, including

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<sup>1</sup> All the OTIF technical requirements, including UTPs, are listed here: <http://www.otif.org/en/technology/regulations-in-force.html>

pre-departure checks. There is a driver, who has the necessary information to operate the train safely and there is a route for the train, etc.

A train is an operational formation, including one or more vehicles, a driver, and a route, which is (prepared for) operation by a railway undertaking.

For a train to be operated in one or more Member States, it must not only consist of vehicles that are admitted to the states concerned, but the railway undertaking must also fulfil the applicable operational and safety requirements.

### **Administrative and institutional requirements to be implemented by Contracting States**

*(With reference to Article 5)*

Granting admission to operation for vehicles in the context of ATMF is the task of the national<sup>2</sup> competent authority in each Contracting State. Before granting admission for a vehicle, it must be checked for conformity with all applicable requirements. This conformity assessment is the task of the assessing entity. Depending on the provisions in force in the State concerned, the assessing entity may or may not<sup>3</sup> be part of the competent authority. The competent authority and assessing entities must be notified to the Secretary General of OTIF<sup>4</sup>.

In order to avoid conflicts of interest and to ensure that admissions are only granted to vehicles which fully meet all applicable requirements, the assessing entity must be independent from all entities that have an interest in the admission. This means that railway undertakings, infrastructure managers, keepers, entities in charge of maintenance or designers and manufacturers of rail vehicles should have no role in the conformity assessment of vehicles. The minimum qualifications for staff who work in conformity assessment are set out in UTP GEN-E.

Each State that applies ATMF should ensure that a competent authority is established, notified to OTIF and that staff involved in the assessment of conformity have no conflict of interests and fulfil the applicable requirements.

If a competent authority or assessing entity does not meet the conditions regarding qualification and independence as set out in Article 5 § 3 and in UTP GEN-E, it should not grant vehicle admissions to international traffic.

In OTIF Member States which are also members of the European Union, the role of the assessing entity is fulfilled by Notified Bodies<sup>5</sup> (NoBo). Some non-EU states also use this model, e.g. Switzerland. In accordance with UTP GEN-D point 1.3.2, the competences of NoBos are also recognised in COTIF. As a result, competent authorities of non-EU Member States may choose to outsource (some or all) UTP conformity assessment to NoBos. The

<sup>2</sup> ATMF Article 5 also provides for the possibility of an international competent authority, but at the time of writing, no such international authority exists.

<sup>3</sup> In EU Member States, the role of the assessing entity is fulfilled by Notified Bodies, which are independent from the competent authority, which in EU Member States is called the National Safety Authority.

<sup>4</sup> A list of the competent authorities, entities and bodies notified to OTIF can be found here:

<http://www.otif.org/en/technology/competent-authorities-of-the-member-states.html>

<sup>5</sup> A list of NoBos can be found here:

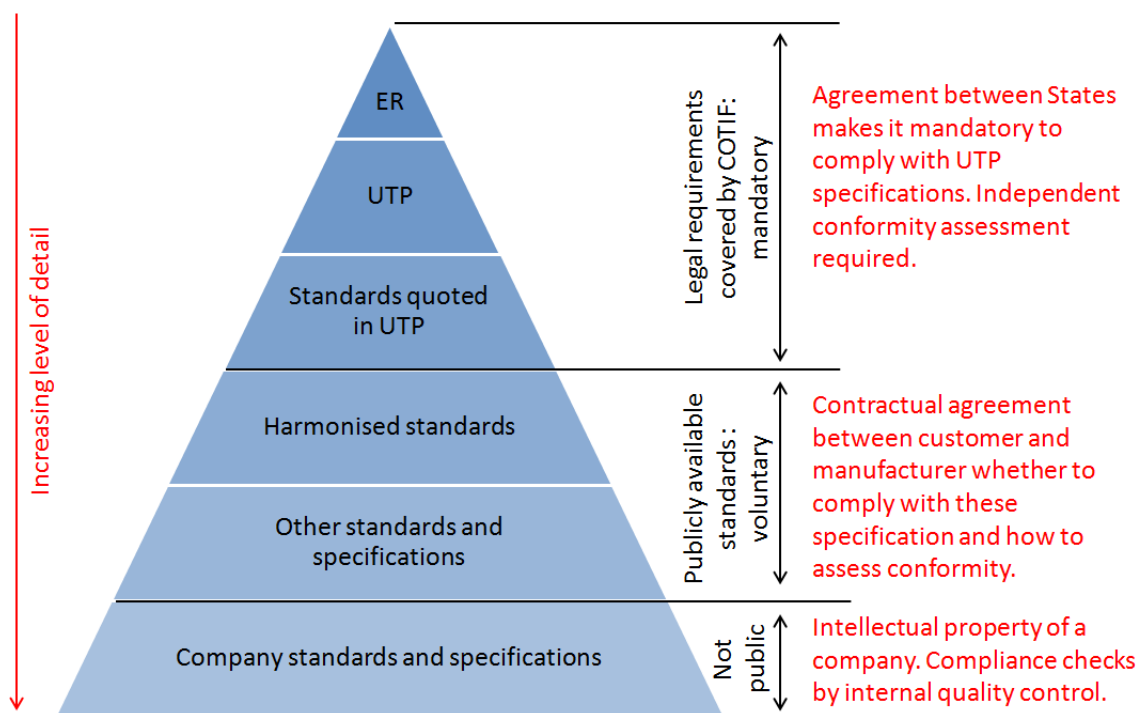
[http://ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=directive.notifiedbody&dir\\_id=30](http://ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=30)

benefit of such an approach is that specific knowledge can be acquired from NoBos when it is needed.

## Vehicle requirements - from essential requirements to standards

*(With reference to Articles 7, 14, 19)*

The high level requirements that all subsystems, such as vehicles, must fulfil in order to be suitable for admission in international traffic are the essential requirements as set out in UTP GEN-A. The essential requirements are too abstract to assess conformity with them in a harmonised way and for that reason the UTPs set out more detailed requirements which are based on the essential requirements. The UTPs also set out how conformity with these requirements should be assessed. All technical UTP requirements are based on the essential requirements.



**Figure 1. Pyramid of requirements**

Although UTPs do not exhaustively cover all possible constructions and components that constitute a vehicle, the UTP requirements do cover exhaustively all parameters that are necessary for interoperability in international traffic. The basic concept of UTPs is that all parameters that are relevant in terms of compatibility between the network and the vehicle are defined in a technical (as opposed to a functional) manner. An example of such a parameter is the wheel profile, for which exact dimensions are prescribed. Parameters that do not directly influence compatibility with the network are specified in a functional way (or as a performance), meaning that several technical solutions may fulfil the functional UTP requirements. For example, the functional requirements for passenger doors could be fulfilled by a variety of technical solutions, e.g. based on either pneumatic or electric systems. This principle leaves room for innovation and also for voluntary standardisation by the railway industry. Parameters that are not considered necessary for interoperability in international

traffic are not covered by UTP requirements at all. As an example, a vehicle may have an air compressor on board, but the UTPs do not contain requirements for air compressors. Similarly, a freight wagon may be equipped with a cooling system to condition the load, but there are no UTP requirements for it.

From the above it follows that UTPs are not full design specifications. This means it is likely that there are components on a vehicle for which there are no specific requirements in the UTP. The basic principle is that all functions, parts or components, even if not specified in the UTP, must fulfil the essential requirements and where there is a UTP requirement covering the function, part or component, it is mandatory to comply with the UTP.

UTPs are not full design specifications for constructing rail vehicles; they do however cover exhaustively all parameters that are necessary for interoperability in international traffic.

Freight wagons which are intended to be used for the transport of dangerous goods should, in addition to the UTPs, also comply with the applicable vehicle requirements set out in RID (Appendix C to COTIF).

Subsystems not covered by a UTP, or open points in UTPs, should be covered by National Technical Requirements in force in accordance with Article 12 APTU. At the time of writing, the only vehicle-related subsystem not covered by a UTP is Command Control and Signalling (CCS), meaning that vehicles with an on-board CCS system should be verified in accordance with the requirements in force in each Contracting State. Open points that are **not** related to technical compatibility with the network need to be checked only for the first admission to operation and should be accepted by subsequent States where the vehicle is admitted.

New UTP requirements have no retro-active effect on existing vehicles, with the exception of provisions related to vehicle marking, maintenance and, where applicable, RID. This is governed by ATMF Article 19 § 5. According to this paragraph and only for duly justified reasons, the Committee of Technical Experts may also declare new UTP provisions applicable to existing vehicles. Individual Contracting States or authorities should not impose new rules after a vehicle has been admitted.

### **Process for conformity assessment and granting admissions to international traffic for new vehicles**

*(With reference to Articles 4, 6, 10, 11 and 12)*

In order to be admitted to international operation, a vehicle must comply with the UTPs and meet all essential requirements. The process leading to admission to operation may be categorised in two steps or phases: verification and admission. Verification takes place over a period of time, while admission takes effect at the moment the Certificate of Operation is issued.

The entity requesting a Certificate of Operation is referred to as the applicant. The applicant should be seen as a role which can be fulfilled by, for example, the railway company ordering the vehicle, the manufacturer, the future vehicle keeper, etc. It would be logical to assume that the entity that has the contractual obligation to obtain admission for a new vehicle is the applicant, but this is not a formal requirement.

Verification of UTP compliance is checked by the assessing entity in conformity with the assessment modules set out in UTP GEN-D. The type of modules that are used depend firstly on what is permitted by the structural UTP<sup>6</sup> in question. This assessing work starts during the design phase of a project and continues until the last unit is produced. This means that the assessing entity should be involved from the start of a project. The result of these checks should be valid and recognised in all other Contracting States for subsequent admissions in accordance with Article 6a ATMF.

If more than one vehicle of the same design is to be admitted, the first vehicle constitutes a type. For the admission of subsequent vehicles of the same type, it is sufficient to prove that the vehicles are built in accordance with the type.

The complete vehicle, including all its parts, should comply with the essential requirements; this includes elements of the vehicle which are not covered by the UTPs. This compliance must be ensured by the manufacturer, and confirmation of compliance should be given by the competent authority that issues the first Certificate of Operation, based on COTIF and the rules applicable in the State concerned<sup>7</sup>. The Certificate should be issued in the uniform format published on the OTIF website.

The competent authority issues the Certificate of Operation to the applicant (Article 11 § 7). Before the admission to operation can be issued, the applicant must compile a technical file. “Technical file” means the documentation relating to the vehicle containing all its technical characteristics. The technical file fulfils the function of a user manual. The content of the technical file is defined in UTP GEN-C. The technical file is attached to the Certificate of Operation and is kept by the vehicle keeper throughout the life of the vehicle.

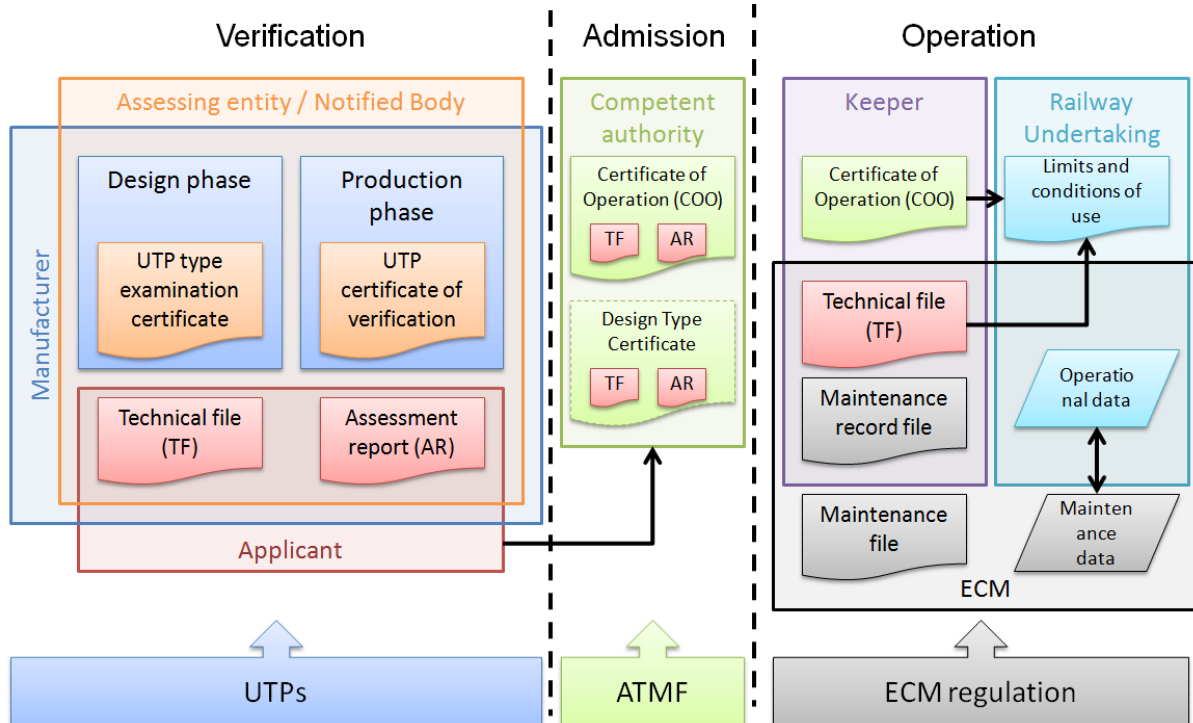


Figure 2. Verification, admission and operation

<sup>6</sup> For vehicles, “structural UTPs” mean LOC&PAS, PRM, Noise, WAG.

<sup>7</sup> In the EU such confirmation is given by the EC Declaration, in which the applicant declares on his sole responsibility that all essential requirements are met.

For subsequent admissions of vehicles that comply with all the UTP requirements, compliance checks in other States should be limited to:

- Subsystems that are not (yet) covered by UTP. At the time of writing, the on-board part of the command control and signalling subsystem is the only vehicle subsystem not covered by UTP.
- Specific cases that affect technical compatibility with the network of the State concerned.
- Open points in the UTP that are related to compatibility with the infrastructure.
- Elements of the vehicle which deviate from the UTP specification, e.g. due to a derogation in accordance with Annex B to ATMF.
- National technical requirements, which are notified and valid in accordance with Article 12 of APTU.

The admission is granted, in principle, for an unlimited period, meaning the entire operational life of the vehicles. This means that changes to the regulations should not, in principle, affect the Certificate of Operation of existing vehicles. However, in accordance with Article 19 § 5, the Committee of Technical Experts (CTE) may decide that, for justified safety or interoperability reasons, certain provisions should be complied with within a certain deadline. In accordance with Article 16 § 4, the CTE may also instruct Contracting States to suspend Certificates of Operation of types of vehicles following accidents or incidents.

Vehicles not meeting all the applicable UTP requirements cannot be admitted to circulation in international traffic. Such vehicles may however be admitted to operation consecutively by two or more states in accordance with Article 6 § 4, making it possible for the vehicle to run only in these states.

### **Existing vehicles in international traffic**

*(With reference to Article 19)*

Many existing vehicles running in international traffic have not been admitted in accordance with the procedures set out in ATMF. Many have been ‘homologated’ and put into service according to the agreements between railway companies that were set out in RIC for coaches and RIV for wagons. If this took place before 2011, the provisions of ATMF do not affect the admission of these RIC and RIV vehicles. However, these existing vehicles should also be marked and maintained in accordance with the UTPs and ECM requirements respectively.

### **Continued regulatory compliance and maintenance while vehicles are in use**

*(With reference to Articles 7, 11, 15, 19)*

Vehicles should comply with all UTPs which are applicable at the time of admission. Compliance with the UTPs in force when the vehicle was first admitted should be permanently maintained during the vehicle’s operational life. There are well-defined shared responsibilities between the keeper, the railway undertaking and the entity in charge of maintenance (ECM) to ensure compliance and use the vehicle correctly. For some vehicles, e.g. certain passenger trains, the roles of keeper, ECM and railway undertaking are all fulfilled by the same company. Other vehicles, e.g. certain freight wagons, may be used by many different railway undertakings. These differences do not affect the principal responsibilities of the different actors; keeper, railway undertaking and ECM.



Before it is admitted to operation or used, each vehicle should have an ECM assigned to it and it is the responsibility of the keeper to designate the ECM. ECMs for freight wagons should be certified in accordance with the provisions of ATMF Annex A. The ECM is responsible for keeping the vehicle in a safe state of running by means of a system of maintenance. It should also ensure, either directly or via the keeper, that reliable information about maintenance and restrictions affecting operations is available for the railway undertaking.

The Certificate of Operation, which is the proof of admission, is held by the keeper. Attached to the Certificate of Operation is the technical file, which could be considered as assuming the function of a ‘user manual’ for the vehicle. The mandatory contents of the technical file are set out in UTP GEN-C and include conditions and limits of use and the instructions concerning servicing, constant or routine monitoring, adjustment and maintenance. It is the task of the keeper to make available to the ECM and the railway undertaking the relevant information about the use and maintenance of the vehicle.

### **Train composition, operational responsibilities and exchange of data.**

*(With reference to Articles 3a, 9 and 15a)*

Rail vehicles are operated in the form of trains. A train may consist of one or more vehicles and it is the task of the railway undertaking<sup>8</sup> to ensure that all the vehicles in the train are operated within their conditions and limits of use and that possible operating restrictions are taken into account.

The railway undertaking should only use a vehicle if an ECM is assigned to it. It should provide information to the ECM, either directly or via the keeper, on the operation of the vehicle, including mileage and incidents/accidents.

Railway undertakings should ascertain that all vehicles in the trains they operate have been assigned an ECM.

ATMF does not contain rules for the certification of railway undertakings. Whether or not a railway undertaking is allowed to operate in a particular state depends on the rules and regulations in force in the state concerned. Similarly, ATMF does not harmonise operating rules or safety rules for the operation of trains.

ATMF Article 15a sets out minimum requirements to ensure the safe operation of trains. Article 15a makes the railway undertaking responsible for correct and safe train composition and preparation. Appendix I to the UTP concerning freight wagons and Appendix K to the UTP concerning locomotives and passenger rolling stock contain provisions for the safe operation of rolling stock.

The operational responsibilities set out in Article 15a of ATMF are compatible with EU rules, but cover only part of the EU railway safety regulations.

Insofar as COTIF includes operational rules which are equivalent to EU rules, such as operational rules contained in UTPs, operational activities performed outside the EU in

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<sup>8</sup> Depending on the rules in force in the state concerned, entities other than railway undertakings may also be permitted to operate trains, e.g. infrastructure managers in order to inspect or maintain the infrastructure, or test institutes to test new vehicles. In such a case, these entities have the same responsibilities as railway undertakings.



accordance with these COTIF rules should also be recognised in the EU. This could for example apply to the activities of the ECM, or train preparation activities and pre-departure checks by the RU.

The following three points illustrate the interaction between COTIF rules and EU rules:

1. For traffic between Member States of the EU, EU rules take precedence.
2. For traffic between EU and non-EU OTIF Contracting States:
  - i. For the part of such traffic which takes place on the territory of the EU Member States, EU rules apply, except insofar as there are equivalent rules arising from COTIF on the particular subject concerned.
  - ii. For the part of such traffic which takes place outside the territory of the EU Member States, COTIF rules apply. The COTIF rules should be complemented by national rules, insofar as there is no COTIF rule governing the subject.
3. For traffic between two or more non-EU OTIF Contracting States, COTIF rules apply. The COTIF rules may be complemented by national rules, insofar as there is no COTIF rule governing the subject.

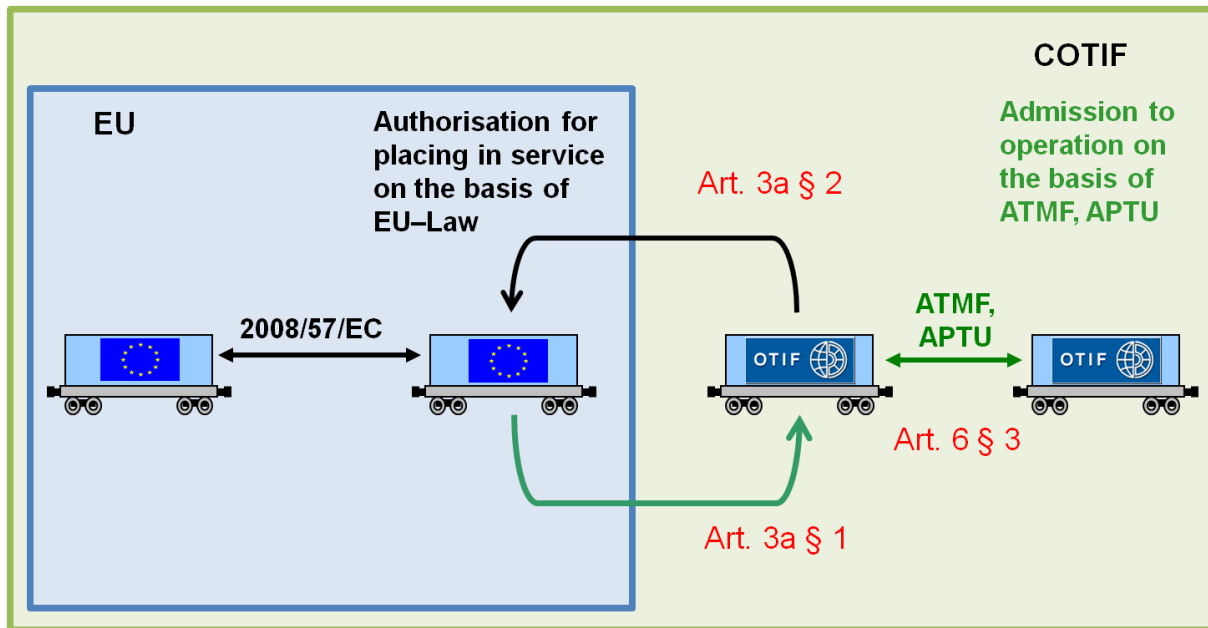
### **International agreements**

*(With reference to Articles 3a, 6, 6a and 6b)*

The basic concept underpinning the international admission of vehicles in ATMF is the equivalence between EU technical requirements, as set out in TSIs, and OTIF technical requirements, as set out in equivalent UTPs. The objective is to ensure that if these sets of rules are complete, fully equivalent and do not contain open points related to the technical compatibility with the network, then a vehicle which

- meets the TSI requirements and
- is not subject to specific cases, and
- is authorised in the EU,

will also be deemed to be authorised outside the EU and vice versa. The principle is illustrated in the following diagram.



**Figure 3. Interaction of vehicle admission between EU and COTIF**

The Agreement on the accession of the EU to COTIF and ATMF Article 3a § 3 both contain a disconnection principle. This means that states that apply EU law<sup>9</sup> will in their mutual relations apply EU law instead of OTIF law, except insofar as there is no EU rule governing the subject concerned.

It should be noted that there is a fundamental difference between the principles underpinning ATMF and those underpinning EU rules on authorisation of vehicles. In the EU, meeting the conditions for authorisation, including compliance with the TSIs, is a condition for placing vehicles into service, either domestically or internationally. Thus, *de facto*, the EU rules prohibit the sale or use of new rail vehicles in the EU unless they comply with the rules, so the obligation to apply TSIs is absolute<sup>10</sup>. In contrast, ATMF sets out the conditions for the right of admission to international traffic. Compliance with the UTPs therefore creates a right. The consequence of not complying with the rules of ATMF is that the vehicle cannot be admitted to international traffic; the vehicle could still be placed on the market or used domestically or between states on the basis of rules applicable in these states.

## Registers

*(With reference to Article 13)*

Each Contracting State should make a national vehicle register (NVR) operational in accordance with the OTIF NVR specifications. All NVRs should be linked to the Virtual Vehicle Register (VVR), which is a central search engine, which connects all NVRs and allows data to be retrieved from all connected NVRs.

Each vehicle should be registered in the NVR of the State where it is first admitted. Vehicles are registered and identified by their unique vehicle number as defined in UTP Marking. The

<sup>9</sup> States that apply EU law are EU Member States and other states which apply EU law on the basis of bilateral agreements with the EU.

<sup>10</sup> With the exception of specific provisions, such as derogations, implementing rules, etc.

NVR links each vehicle to its keeper, ECM and owner and provides information about its admission to operation.

### **Dealing with problems: suspension and withdrawal of Certificates**

*(With reference to Articles 10a, 16 § 4, 17 § 3, 18)*

Article 10a § 2 concerns the withdrawal of Certificates of Operation. This is a rigorous measure resulting in a vehicle no longer being admitted to international traffic. There is a symmetry between Article 10a § 2b, according to which the keeper should remedy the defects, and Article 11 § 8, which stipulates that the keeper holds the Certificate. In the event that an authority intends to withdraw a Certificate in accordance with Article 10a § 2b, the authority should therefore contact the keeper. If withdrawal of the Certificate is not immediate, the keeper may be instructed to remedy the problem to avoid withdrawal, depending on the type of non-conformity or problem. The Certificate of Operation for the vehicle may only be withdrawn by the competent authority that has granted the Certificate. The withdrawal should be documented in the National Vehicle Register under entry 10.

Article 10a § 4 sets out the concept of suspension of the Certificate of Operation. Suspension is a temporary measure, during which the vehicle may not be used in international traffic. Competent authorities have the obligation to suspend Certificates in the event of the reasons listed in Article 10a § 4, irrespective of whether they or another Contracting State's competent authority issued the Certificate. Suspensions should be documented in the National Vehicle Register under entry 13.3. Improper maintenance by an ECM could, for example, be a reason for suspension. If the problem is caused by the ECM, the keeper can remedy the situation by improving the performance of the ECM, or by changing the ECM. This is in line with Article 15 § 1, which states that it is the responsibility of the keeper to designate an ECM. As soon as the reasons for suspension no longer exist, the Certificate becomes valid again.

A Certificate of Operation may be withdrawn only by the competent authority that issued it.  
A Certificate of Operation may be suspended by any competent authority.

CTE may instruct Contracting States to suspend Certificates of Operation of types of vehicles following accidents or incidents in accordance with Article 16 § 4.

Article 5 § 7 gives CTE the competence to instruct Contracting States to suspend or withdraw Certificates of Operation which have not been issued in accordance with the rules.

The legal consequences resulting from failure to comply with the rules should be regulated in the State by which the vehicle was first admitted.

### **Dealing with problems: immobilisation and rejection of vehicles**

*(With reference to Article 17)*

ATMF Article 17 § 1 sets out the basic principle that independently of the origin of the vehicles, vehicles which are admitted to operation should not be prevented from running by a railway undertaking or by the infrastructure manager or the authorities.

This does not mean that every rail transport undertaking must be capable of using every type of vehicle. An admitted vehicle incompatible with the operational environment or fleet of a rail transport undertaking is not prevented from running, but as it simply does not satisfy the technical or operational prerequisites for this rail transport undertaking to operate it, this rail transport undertaking is not in a position to operate it. This means that under the conditions set out above, and taking account of its responsibilities under Article 15a, a rail transport undertaking may decide that it is not able to operate a particular type of wagon that has been legally authorised/admitted for service.

If a competent authority suspects that a vehicle does not comply with the applicable technical rules, it is entitled to immobilise it for inspection. This inspection should be carried out as quickly as possible and in any case within 24 hours. If non-compliance is confirmed, this should lead to suspension of the vehicle's Certificate in accordance with Article 10a.

**Dealing with problems: assessing entity or competent authority not meeting the conditions regarding qualification and independence**

*(With reference to Articles 5 § 7 and 17 § 3)*

Should a Contracting State consider that an assessing entity or competent authority of another Contracting State does not meet the conditions regarding qualification and independence, it should inform the Committee of Technical Experts (CTE). The CTE should, within four months, inform the Contracting State in question of the changes that are necessary for the assessing entity or competent authority to retain the status conferred upon it. The CTE may instruct the Contracting State to suspend or withdraw Certificates issued on the basis of the work done by the assessing entity or competent authority in question. If the Contracting State in question does not follow the instruction, other Contracting States are entitled to immobilise the vehicles concerned in accordance with Article 17 § 3.

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