



Towards a simple single testing and authorisation process

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Rail rolling stock lessors : a unique position within the European rail sector

Lessors : 20 % of electric locos circulating in European Union

**Nearly all of their locomotives are cross border
The half of them are ETCS equipped**

Rolling stock lessor's fleet : a technical laboratory for interoperability

Tests and authorisations identified as significant costs drivers in the deployment of ERTMS On-Board in an official report (Feb. 2025)



Problem

Evolution 2018-2022

Retrofitting costs/vehicle

€450.000 => €900.000

Upgrade costs/vehicle

€200.000 => €400.000

=>

Deployment slowdown
Interoperability undermined

Focus on the most challenging point: the ESC tests

Costs drivers

- Compatibility tests : extensive testing requirements (ESC/RSC): **>30 in some Member States !**
- Lack of tracks/capacity for testing



Mitigation measure/solution

- **Reduction or elimination of ESC tests**

AERRL : significant reduction !

“When it comes to ETCS/Radio System Compatibility (ESC/RSC), tests are more complex with an uncontrolled diversification of testing, in comparison to previously used national class B systems.” ERFA Manifesto 2024-2029



From a pure lessor's point of view ... 2 key issues

1. Infrastructure access rules

- Inventories and terms of access different from country to country
- Format and publication style : different from country to country

The lack of clear, comprehensible and digestible information leads to unnecessary costs to be borne by the customer



From a pure lessor's point of view ... 2 key issues

2. How the ESC tests are conducted

- Tests mainly conducted on site
- Lack of slots on infrastructure for testing
- Every locomotive that will operate on a given infrastructure must undergo testing for that infrastructure

The lack of regulation leads to increased fragmentation, a lack of harmonization and a lack of visibility of the European vision for testing.



Lessor's vision for the future of the ESC test phase



A locomotive authorised on the basis of «Conformity to type » should not be required to undergo the same tests

Problem

Lack of capacity on track for testing

Lack of laboratories

Lack of harmonisation

Too long and costly testing process

Solution (short and medium term)

All locos authorised after a C2T process tested on bench with digital twins

Rapid extension of laboratory testing capacity by allocating new public funding, including for innovation

ERA designing harmonised tests for the future, moving towards a single European testing process

Harmonised tests – locos authorised after a C2T process tested on bench – all tests carried out by the manufacturer

→ Need for a European regulation, through the current revision of ERA mandate

→ Need for targeted public subsidies supporting efficient ESC/RSC testing, before the start of new large-scale deployment programmes

The **Single European authorisation process** moved from dream to reality

By doing so, EU would demonstrate agility and resilience and contribute to make rail transport a commercial success

TURNING DREAMS INTO REALITY



The **Single ESC/RSC European testing** should also move from dream to reality, as soon as possible.

It's urgent because, right now, it's a **real nightmare**.



Conclusions

The current VA process managed by the Agency through the OSS is efficient but can be further simplified.

AERRL is confident that the current VA Task Force will develop appropriate proposals to further streamline this process in the short, medium, and long term.

AERRL **remains concerned about the testing process**, which is a major cost factor and significantly slows down actual deployment.

AERRL calls on the **industry** and **European institutions** to treat this issue as the **top priority** to be resolved among the processes that must be completed before an ETCS-equipped locomotive is authorized to operate on EU infrastructure.

**THANK YOU
FOR YOUR ATTENTION**

