

Removing the burdens – a European rail system fit for the future

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SUMMARY

Developing and promoting a strong and robust approach to safety management across the European rail network is a challenge for the European Rail Agency (here after called the 'Agency'). Alongside this challenge is the desire to make the railway system work better by simplifying the existing regime but continue with the existing good levels of safety. A fully open and transparent system will provide a positive European market for rail services. The development and implementation of the single safety certificate will help remove unnecessary administrative burdens and ensure a European rail system fit for the future.

INTRODUCTION

Rail transport is a key necessity in today's industrial society. It is more environmentally friendly than road transport and offers a competitive alternative to certain major segments of the market. However, the European rail network needs to be effectively managed and maintained to ensure it provides an economically safe form of transport. The Rail Safety Directive (RSD) [1] was introduced to provide the mechanism to ensure that safety is maintained and where reasonably practical, continuously improved. This is to be achieved in a co-ordinated and managed way with all the major players involved actively taking forward their responsibilities in controlling the risks. It is acknowledged [2] that rail transport is safe and indeed compares favourably with road transport. Rail safety over the last 15+ years has steadily improved, even with the opening of the rail transport market to competition and separation between infrastructure managers (IMs) and railway undertakings (RUs). In fact, the RSD states that: *"Safety levels in the Community rail system are generally high, in particular compared to the road transport"* So if EU railways are safe and working well what more (if anything) needs to be done?

EU STRATEGY FOR A SINGLE TRANSPORT AREA

Transport is the foundation of any economy as it constitutes the heart of the supply chain. This is recognized in the EU white paper [3] on European transport which acknowledges its importance and promotes the concept of a Single European Transport area. Without good transport networks, a proper functioning of the internal market is not possible. Transport infrastructure investments boost economic growth; create wealth; enhance trade, geographical accessibility and the mobility of people. They are a highly effective engine of job creation. In today's financial climate, it is crucial that Europe maintains its competitive position. Market integration, economic growth and transport activity are strongly related. The link between internal market and transport was clearly recognised from the beginning of European integration. Transport policy was included, as one of the common policies, in the Treaty of Rome.

But the positive contribution that railways can bring needs to be considered alongside increasing transport costs (fuel costs and congestion levels). These will hamper strong economic growth. The well-being of people and the competitiveness of businesses in Europe will continue to depend on the ability to access opportunities using efficient transport systems. So **how** can we maintain and improve safety in financially challenging times? **By making the system simple and flexible; but also more effective at controlling the risks.** It also means that the Safety Management System (SMS) must be at the heart of the RUs and IMs day-to-day operation [4].

There also remains considerable scope for improving the efficiency of the transport system through the removal of regulatory, administrative and technical barriers. For railways, different technical specifications and lack of interoperability hinder the development of multimodal intelligent systems and the operation of cross border services. Different administrative requirements – such as multiple transport documents – increase the cost of international and multimodal operations and have a negative impact on the commercial speed of freight flows. Key to this drive is moving away from the nationalised requirements to a more harmonised and European approach. This will help to create a real European market for rail services and make them more efficient and attractive.

CONTRIBUTION OF THE SINGLE EU SAFETY CERTIFICATE

The harmonised European framework under the RSD requires RUs to be issued with a safety certificate by the relevant National Safety Authority (NSA) in order to be granted access to the railway infrastructure. The safety certificate is issued following an assessment by the NSAs of the capability of an RU to operate safely on the network. One of the key aspects of the safety certification philosophy has been to support the idea that safety does not hinder the economic competition. The safety certificate has two parts:

- Part A – is the acceptance of a RUs SMS. This is valid throughout the EU; and
- Part B – is the acceptance of the provisions adopted by the RU to meet the specific requirements necessary for the safe operation of the relevant network. This is valid for the relevant Member State.

The RSD also required the Agency to review the development of safety certification and propose a strategy for how a single (EU) safety certificate might replace the current two part system (Part A/B). It has always been the policy of the Commission (as agreed by Member States through the Council and set out in Recital 15 of the RSD) and the Parliament, that a single safety certificate would be developed and implemented. It was never a question of if but when it would be introduced.

During its investigations [5] the Agency has concluded that a simplified system with the development and implementation of a single EU safety certificate was one of the key requirements to make the rail market work more effectively. The Agency believes that there is nothing wrong with the current legal framework. In fact, to completely overhaul the existing system would introduce more risks than benefits. What is needed was a period of stabilisation and consolidation, using the existing legal structure as the basis. Furthermore, the Agency concludes that it is possible to move to a single safety certificate by 2020 and this could be done with minor changes to the current legal framework and utilising the existing Agency work streams with appropriate oversight.

The Impact Assessment (IA) [6] supports the proposals for a single safety certificate and confirms that overall it is expected that the administrative burden should be reduced as the result of a move from two-part safety certificates to a single safety certificate. In addition, the IA estimates cost savings of between 50 000 and 100 000 Euros for an RU for each 5 year period and an expectation that small and medium enterprises and new entrants should be positively affected by the move to a single EU safety certificate. The IA is based on how the system should work according to the current EU legal framework and not how it might be applied in different Member States. Importantly, the reduced cost of safety certification is likely to enhance the business case for companies to enter markets in other countries thereby contributing towards new entry and competition within the railway market. Providing that the legal framework is being correctly applied by both the sector and the NSAs, it is unlikely to have an adverse effect on safety.

THE PROBLEMS

Whilst the Agency has already concluded [5] that the current legal safety framework is still valid, we know that there remains a problem with the lack of implementation and incorrect implementation of the framework by some Member States, and a lack of expertise and maturity in its application by the railway actors, particularly for safety certification. This is six years after the RSD should have been fully and correctly implemented.

Some Member States overlay their existing national requirements for safety onto EU requirements, causing inconsistency in application (requirements in one Member State could be different and more onerous than those in another Member State), duplication and costs for the sector with no added safety benefit. This is against the aim of the Safety Directive which was to prevent safety being used as a barrier i.e. to avoid disguised discriminations. In fact there is an argument that the system is or could become less safe because although it is now “shared” all the actors are not taking forward their responsibilities in a consistent and harmonised way.

Because of this reliance on overlaid national requirements, there is a lack of trust and an assumption that the safety certificate has not been assessed to the same level or the same way. Sometimes it is even viewed that the system could be unsafe which justifies more upfront checking. As a result the Part B is used as the main part of the assessment and it is even seen as the key “operational aspect”. This is in contradiction to what is set out in the harmonised process of the Common Safety Method (CSM) Regulation on Conformity Assessment. [7]

However, the problem is not just at Member State level. Many take on the responsibility for safety because they do not believe that the sector (RU/IM) is doing what they should. Many RUs/IMs have not yet fully implemented the SMS approach described in the RSD and instead have an over-reliance on national rules. As a result they continue with a business as usual approach and do not implement the key requirements under the RSD which makes both the RU and IM are responsible for controlling their risks in co-operation with each other.

The problem needs urgent solutions because it is hindering the liberalisation of the rail market and preventing it being a real contender and contributor to the development of an effective cross-modal transport system. The market needs to be more open and less discriminatory and unnecessary burdens which hinder

technical and competitive progress should be removed. If nothing is done more freight and potential passengers are likely to move to other modes of transport away from what could be a positive rail contribution to the environmental challenge.

THE SOLUTIONS

The solutions are already there. We just have to make it happen. This can be done with the development and implementation of the single safety certificate and the evolution of the existing legal framework. Importantly the single safety certificate is the right lever to improve the functioning of the system because it will help to reduce bureaucracy and be more focused on the market needs and requirements and help to remove:

- ✓ Duplicate requirements by some Member States (re-checking what is in the Part A);
- ✓ Onerous requirements by some Member States;
- ✓ Divergent interpretation of the assessment and acceptance of safety certificates as the single safety certificate should be accepted throughout Europe.
- ✓ Problems with time and costs of issuing certificates.

It will ensure better coherence and consistency of the national legal frameworks because Member States have to accept certificates issued by other Member States and not require additional elements to fit in with their legal framework. Fundamentally, it will also help to safeguard and improve the existing safety levels for the rail network because all the key stakeholders will be focusing on the continuous improvement of the system using a strong and accepted SMS.

To achieve the single EU safety certificate requires that two pre-conditions to be in place. These are both existing and not new requirements. They are that:

1. Both RUs and IMs take forward their full responsibility under Article 4 (3) of Directive 2004/49/EC for managing, controlling and monitoring risks of their operation.
2. There is harmonised decision making for the assessment and supervision of the safety of the rail system by NSAs which takes forward their tasks under Articles 16 (2) (e) and (f) of Directive 2004/49/EC.

If these two pre-conditions are in place, then the move to a single EU safety certificate is a simple and straightforward task and will deliver a better system which could even help to improve current safety levels. Nevertheless, the Agency and the Commission will need to ensure that these pre-conditions are in place through rigorous monitoring and review of their effectiveness in delivering the required step change. It will also require that both the Agency and the Commission take a clear leadership and decision role.

NEXT STEPS

The development of a structured and planned approach to the single safety certificate must be undertaken in consultation and collaboration with all our stakeholders in order to obtain their buy-in and support. To do this, three elements need to be put in place:

1. A legal framework which sets out a proportionate, targeted and harmonised approach to managing safety across the EU.

2. Correct implementation and application of the legal framework and collecting information on whether this has taken place.
3. Improving compliance of the actors.

1. The legal framework

The Agency has already started the process of a simplified and harmonised framework with the development of the four Common Safety Methods [7] [8] [9]. Each of these provides a key aspect for ensuring that the complete system is managed in a safe way. The pre-conditions focus on the control of risks through the SMS by RUs and the supervision of the regulatory framework by NSAs. The system for the single EU safety certificate will only work if all the players in the market take forward their appropriate roles. Again the harmonised CSMs (see table below) will play a crucial role in helping to ensure that the safety performance of the RU is being maintained and continuously improved.

RUs and IMs take forward their full responsibility under Article 4 (3) of Directive 2004/49/EC for managing, controlling and monitoring risks of their operation.

RUs	The <u>CSM on risk evaluation and assessment</u> came into force for significant change to technical sub-systems in July 2010 and will be extended to cover significant change to organisational and operational change from 2012. This is applicable to those defined as a ‘proposer’ and includes RUs. The extension to operational change will provide a clear process for dealing with the change in operating. This provides evidence that the RU is managing the risk and this is then mutually recognised in MS.
	 The <u>CSM on monitoring</u> , which is still under development but is expected to come into force 2012/13, provides a system for RUs (and IMs) to monitor the effectiveness of their SMS on managing the risks.

There is harmonised decision making and supervision of the safety of the sector by NSAs (as required by Articles 16 (2) and 17 of Directive 2004/49/EC

NSAs	The <u>CSM on conformity assessment</u> provides a structured, auditable, transparent and consistent process for the assessment of the single EU safety certificate.
	 The <u>CSM on supervision</u> , which is still under development but is expected to come into force 2012/13, sets out a targeted and proportionate system which will help NSAs effectively supervise the safety performance of RUs both existing and new entrants in their Member States.

However, although the framework is in place that does not mean that nothing more needs be done. The Agency asks our stakeholders both the sector and the NSAs to continuously strive for improvement so the Agency should do the same. The most important element is to establish whether the legal framework is fit for purpose and achieving its objective in making the railways work better. To do this the Agency should continue to work with its stakeholders to understand if the harmonized decision making is effective and sufficient. This would involve widespread stakeholder participation to understand the problems/concerns, use of good practice and development of proposals which are fit for purpose. And by doing this the Agency is making the necessary enhancements to ensure that it does. The Agency will also work closely with NSAs to educate and convince them of the importance of supervision and the limited role that certification as a one- off assessment plays in ensuring the safety of the rail system.

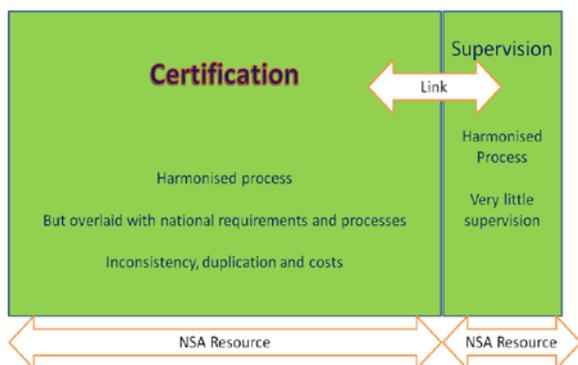
The SMS [9] is enshrined in the RSD and has for the last six years been a crucial part of the ensuring the effectiveness of the legal framework (i.e. those that create the risks, are the best ones to control them). But

having the SMS documented and certified in itself is not sufficient; it must be correctly applied and monitored. Continuous monitoring of the SMS by the RU provides assurance on the management of risks through effective controls and has a forward-looking perspective. This control provides comfort that today's and tomorrow's risks are managed and activities are and will be performed as intended in the SMS. This is key component in the acceptance and success of the single EU safety certificate and indeed all certification schemes. Continuous monitoring is a fundamental component in the risk management process. It provides a way of ensuring that weak, poor or inadequate risk and operational controls (such as processes and procedures) are identified quickly and rectified before they become a big problem. An effective business will want to ensure that it has good governance of its assets and continuous monitoring of safety risks fits into that business objective. RU's SMS will only be effective if business objectives and continuous monitoring are aligned.

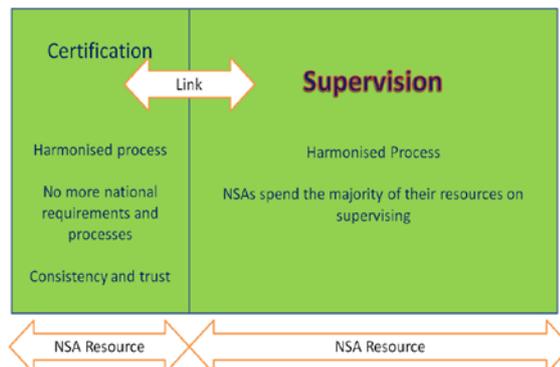
Both the monitoring of the SMS by RUs (and of course IMs, particularly in relation to shared risks) and supervision by the NSAs, will ensure that the rail system is safe and delivering the key objectives of the RSD. Importantly it will move the sector and the NSAs from an approach based on 'react and fix' to one based on 'predict and prevent' using continuous monitoring and supervision to deliver this. It will ensure the EU rail network becomes more effective and efficient and makes a real contribution to the development of a multi-modal transport system of the future.

The application of the RSD requires a refocus of resources away from certification to supervision. Supervision of the safety performance of RUs and IMs provides a better means for ensuring safety levels in their Member States. It is a risk to simply rely on the system of safety certification as a delivery of safety performance as they are only designed to be an upfront snap shot in time of the RU's capability. Therefore for the NSA to spend time and resources on this rather than focus on developing a continuous monitoring of the SMS through their supervision strategy is likely to have more of an adverse impact on safety than the single EU safety certificate. An RU could have a perfectly reasonable SMS on paper but may not always be following their own processes and it is only through prioritised supervision, which targets the key risk activities of RUs (and indeed IMs) that Member States will have a degree of assurance that the safety levels are being maintained or improved.

Where we are now 2012



Where we will be in 2018



2. Data collection on implementation and application

The only way to understand the effectiveness of the implementation is to monitor and review them by collecting information. This includes information to establish whether NSAs are applying the legal framework correctly, including the use of the CSMs and as a result are effectively managing safety performance in their MS. This is being taken forward by a pilot of joint Agency/NSA cross audits which will be evaluated in 2013. The Agency has also undertaken recent research reviewing the powers of NSAs under Article 16 and 32 of the RSD. Early indications are that there are wide variances in the type and range of powers across Member States. Further work will be undertaken on this topic but already this has become an important issue when working with NSAs on how they supervise and enforce their regulatory frameworks. Other ways of collecting information is to work more closely with the NSAs and National Investigation Bodies (NIBs) and the Agency Safety Unit is developing a scheme which will establish a single contact point for each NSA. This contact point will act as their mentor and facilitator to understand where the problems are and to help provide solutions. There is also the issue that the Agency Regulation may need to be strengthened to give a stronger monitoring role to the Agency [5].

Monitoring the system also means establishing whether the sector is taking forward their responsibilities for managing and controlling the risk. Dissemination workshops and conferences are also useful ways to establish information. But establishing information is only useful if it is collected and analysed. There should also be a means to do this and the Agency is currently developing this.

3. Improving compliance through bringing about cultural change

The final stage of the solution is to bring about cultural change in Member States and the sector and this can only be done when we have a clear and evidence based idea of where the problems are. This may involve a combination of influencing a change in behaviour and even, for Member States, forcing behavioural change (although the latter may be a longer term solution). To make the necessary improvements this will involve the Agency taking forward a number of initiatives. These can be targeted to the needs of both the sector and NSAs/NIBs:

- Developing training packages on specific topics such as the SMS.
- Producing simpler and clearer guidance targeted at particular NSAs or parts of the sector (ECMs).
- Educating NSAs on the importance of supervision over certification as the best way for ensuring the safety performance.
- Making the NSA Network become more action orientated and problem solvers instead of political activists who want the system to stay as it is.
- Encouraging NIBs to focus their investigations on the system as a whole instead of individual technical causes. In particular whether the SMS is implemented, used and monitored effectively.
- More contact with all parts of the sector, not just the incumbent RUs but also those RUs who are not represented by the big sector organisations.
- Better targeted workshops which are evaluated and adapted to the needs of the audience.

All these should be taken forward in a strategic and planned way. The Agency should also provide the leadership to the NSAs and the sector to give direction and to show that we believe that cultural change is not only necessary but we will work with them to achieve it.

CONCLUSION

The Agency strongly believes that a move to a single safety certificate is not only possible but necessary in order to ensure that the rail market is a successful contributor to the 21st Century EU Transport system. A simplification of the existing certification system alongside a robust SMS and monitoring system by RUs and a targeted, consistent and proportionate supervision system by NSAs will deliver a better outcome and stronger regime.

But the Agency recognises that a lot needs to be delivered by the target date of 2020 for the single safety certificate. To achieve this we will work closely with our stakeholders. This will require strong and strategic leadership by the Agency to ensure that our stakeholders are clear about what they need to achieve and how we can and will help. It will require some further changes in culture by the Member States, NSAs and the sector to be better aligned in their decision-making; where continuous improvement is seen a positive contribution to the development of a safe system. Finally it needs a sector which implements fully the safety legal framework and fully endorses its responsibility for the risks that they create.

REFERENCES

- [1] Directive 2004/49/EC on safety on the Communities railways (as amended by 2008/110/EC). <http://www.era.europa.eu/Document-Register/Pages/Directive-on-Safety-on-the-Community-railways.aspx>
- [2] Railway safety performance in the European Union 2012. <http://www.era.europa.eu/Document-Register/Pages/Railway-Safety-Performance-in-the-European-Union-2012.aspx>
- [3] White Paper on transport — Roadmap to a single European transport area — Towards a competitive and resource-efficient transport system.
http://ec.europa.eu/transport/strategies/doc/2011_white_paper/white-paper-illustrated-brochure_en.pdf
- [4] European Rail Agency's Safety Management Systems (SMS) website.
<http://www.era.europa.eu/tools/sms/Pages/default.aspx>
- [5] Recommendation on the migration to a single EU safety certificate (ERA/REC/10 2011) and Final Report to the European Commission on THE DEVELOPMENT OF A MIGRATION STRATEGY TOWARDS A SINGLE SAFETY CERTIFICATE (Article 10 (7) of Directive 2004/49/EC) ***[http link to be added before publication]***
- [6] Impact Assessment – single safety certificate ***[http link to be added before publication]***
- [7] Commission Regulation (EU) No 1158/2010 on a common safety method for assessing conformity with the requirements for obtaining safety certificates. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:326:0011:0024:EN:PDF>.
- [8] Commission Regulation (EU) No 352/2009 of 24 April 2009 on the adoption of a common safety method on risk evaluation and assessment as referred to in Article 6(3)(a) of Directive 2004/49/EC.
http://www.era.europa.eu/Document-Register/Documents/Reg_352-2009_CSM_Risk_Assessment.pdf
- [9] Commission Regulation European Railway Recommendation on CSM on Monitoring and Supervision.
<http://www.era.europa.eu/Document-Register/Pages/CSM-for-monitoring.aspx>