

Title: The Railways (Interoperability) Regulations 2011 PIR No: DfTPIR011 Original IA/RPC No: DfT00126 Lead department or agency: DfT Other departments or agencies: Click here to enter text.	Post Implementation Review
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	Type of regulation: EU
	Type of review: Statutory
	Date measure came into force: 16 January 2012
Recommendation: Amend RPC Opinion: Green	
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1. What were the policy objectives of the measure?

Interoperability is designed to improve the competitive position of the rail sector through the introduction of a regulatory framework for technical harmonisation and common approval processes in Member States.

The changes introduced by the Railways (Interoperability) Regulations 2011 (RIR 2011) were intended to contribute to the further development of the interoperability of the EU rail system, including facilitating the through running of trains across the EU. The policy is also intended to help lower the cost of the railways and achieve the progressive creation of the internal European market in equipment and services.

The 2011 regulations amended the UK's interoperability regime under the 2006 Interoperability Regulations in order to transpose the 2008 Interoperability Directive. The impact assessment that accompanied the introduction of RIR 2011 only considered the impact of the changes that were made to the then existing regime under the 2006 domestic interoperability regulations as this was the requirement at that time. However, this Post Implementation Review (PIR) for RIR 2011 has considered the impacts of the whole of RIR 2011, and not just the changes that were introduced to the domestic regime, because this is the requirement under the review provision in the regulations.

The regulations place the following requirements on projects that are building new rolling stock or rail infrastructure, or carrying out upgrade and renewal work:

- To seek an authorisation from the national safety authority so that the rolling stock or infrastructure can be used;
- To employ a third party to check that the work is compliant with the relevant Technical Specifications for Interoperability (TSI) and to provide sufficient evidence.

A number of key changes were introduced by RIR 2011, such as: enabling a streamlined authorisation process for vehicles and infrastructure against technical standards, and to make

it easier to use vehicles which have already been authorised outside of the UK. The intent when making the 2011 regulations was to fully transpose the requirements of the 2008 Interoperability Directive, as well as ensuring that UK rail businesses were not put at a competitive disadvantage through unnecessarily increasing the costs of projects.

A number of specific changes were introduced by the 2011 regulations where there was effectively no choice but to include them in the regulations in order to effectively transpose the Directive. These “no choice” issues can be summarised as follows:

- To ensure the requirements set out in EU specifications for a register of infrastructure and vehicle registers are met by stakeholders in order to increase asset knowledge and help assess if new vehicles are technically compatible with the routes where they are intended to operate.
- Widening of the scope of the interoperability authorisation process beyond the EU Trans European Network (TEN);
- To introduce a more streamlined “type” authorisation process for vehicles so that when applicants produce more of the same type it is easier for them to obtain an authorisation to place into service from the national safety authority. This was intended to reduce the burdens on the industry and safety authorities;

There were also a number of provisions included in RIR 2011 where there was a choice whether to include them or not and it was identified as beneficial to do so. These can be summarised as follows:

- To exclude from the scope of authorisation certain lines and vehicles such as metros, trams and light rail and to create a list of exclusions to provide clarity to users of the regulations. The policy intent was to exclude from the interoperability requirements as much as possible.
- The regulations enable a project to voluntarily seek an additional authorisation in the UK for a vehicle that is already authorised in another Member State. The intent was to help facilitate the “cross-acceptance” of vehicles; the UK approach was to opt for a light touch form of regulation instead of imposing a mandatory requirement for an additional authorisation which would also have been an available option when transposing the Directive.
- To enable conditions and restrictions to be included in authorisations to place into service for vehicles and infrastructure.
- Extra provisions were also added to RIR 2011 in order to give greater flexibility to rail projects through extending the facility to use the type authorisation process to infrastructure projects.
- A provision was also added to the regulations to create a pre-screening list of projects that meet the definition of upgrade or renewal to help provide greater clarity to projects.

2. What evidence has informed the PIR?

This is a low evidence review of the whole of the interoperability regime under RIR 2011 and it took into account not just the changes that were made to the 2006 interoperability regulations. The justification for a low evidence review is that at this stage we are only half way through the ten year time period that the impact assessment referred to in terms of when the full benefits of RIR 2011 might materialise (2012-2022). It would not be a cost efficient exercise to carry out a large scale review before those benefits are expected to fully

materialise. Some of the estimated benefits might be evenly spread over the ten year period but in other cases the benefits are expected to materialise later in the ten year period. The latter is particularly the case for the register of infrastructure, which had the largest benefit estimated in the 2011 Impact Assessment, as this will take time to become fully populated with relevant data. Furthermore, a low evidence approach was considered proportionate at this stage as a full stakeholder consultation exercise will be planned as part of the work stream for the transposition of the latest recast of the EU Interoperability Directive (Directive 2016/797). This later piece of work, due to take place in 2017 and 2018, will be an opportunity for a more detailed analysis of the impacts of the current regulatory regime for interoperability, building on the evidence obtained as part of this PIR exercise.

This review was carried out by two DfT officials in the autumn of 2016 through the means of a survey and a short questionnaire. DfT asked about the key issues identified in the impact assessment that accompanied the introduction of RIR 2011, as well as including more general questions about the impact of the whole regulations. It was sent to approximately three hundred stakeholders who subscribe to the DfT's Newsflash service for interoperability. They were given six weeks to respond to the questionnaire and responses were then analysed to extract the key themes within the responses.

The regulations apply to all of the UK including Northern Ireland, so the review was intended to cover the application in all of the UK.

Fourteen responses were received from the following organisations:

- Transport for London
- Private Wagon Federation (freight)
- Axiom Rail (freight)
- Drax (freight biomass)
- John Marriott (private individual)
- Network Rail
- Office of Rail and Road (ORR)
- Parsons Brinkerhoff (consultancy)
- Plasmor (freight)
- Rail Safety and Standards Board (RSSB)
- Thameslink (Network Rail project)
- Touax (freight)
- VTG (freight)
- WH Davis (freight)

The response rate to the survey was low and the achieved sample size is small. Historically, DfT consultations about rail interoperability issues do not generate a high response rate as the issues are of a highly technical nature. For example, only twenty responses were received for the RIR 2011 consultation, so this PIR response rate is in line with expectations. In addition, the questions that were asked were open, qualitative questions. Therefore the methodology does not allow for any statistical analysis of stakeholder views and the responses are not representative in a statistical sense of wider stakeholder opinion.

That said, we sent the survey to a wide variety of stakeholders and have received responses from a broad range of industry bodies (i.e. freight companies, the ORR, RSSB and Network Rail). Some sectors did not respond, such as vehicle leasing companies and manufacturers of passenger rolling stock. The lack of response from these sectors may indicate that they do not have any significant issues or difficulties complying with the regulations as, in our experience, they would usually make these views known. This is also partially supported by a response received from the ORR, which suggested that the impacts of interoperability may have been more positive for the vehicle sector than for the infrastructure sector. It will be possible to seek further clarification on this point as part of the further work, planned for 2017 and 2018, referred to above. The responses received allow us to infer common themes and assess consistency of viewpoints throughout the sectors represented in the responses. The findings from these responses could be used to inform future research in this area.

3. To what extent have the policy objectives been achieved?

Overall, the responses suggest the general policy objectives have yet to be realised. A range of themes have emerged from the responses which can be summarised as follows:

Lowering the costs of UK railways: The high level policy objectives of the regulations to transpose the 2008 Directive were to help achieve a lower cost railway through the application of common technical approval processes across Member States. However, a number of responses highlighted that the benefits of interoperability can take a considerable time to be realised as they rely upon rail systems being gradually upgraded so that both infrastructure and vehicles achieve a beneficial level of TSI compliance. Six of the responses said the application of the regulations is having a negative effect through increased costs for small businesses. Four of the responses said there have also been significant cost increases for larger organisations. The lack of flexibility to use older and cheaper designs of vehicles was highlighted by TfL. It was recognised by Network Rail that realising the benefits of interoperability could take significant time and will possibly only be realised when the UK has both TSI compliant infrastructure and vehicles.

In summary: most of the responses suggest this objective has not yet been achieved and the regulations may be having the opposite effect in some cases.

The UK context is different: Several responses highlighted that for geographical, historical and technical reasons the UK rail system differs significantly to the rest of Europe. Ten of the responses highlighted that much of the UK rail traffic is for domestic only operation, so there is little incentive to prove compliance against EU technical standards if the vehicles will remain in the UK anyway. Smaller businesses, such as rail freight companies, said they are disadvantaged by the application and cost of the interoperability authorisation process because there is very little opportunity for them to use their vehicles outside of the UK. The ORR also made a similar point that the burdens placed upon smaller freight companies compared with larger rolling stock companies may be greater.

In summary: most of the responses suggest that the regulations are not adequately flexible to suit the UK circumstances, which are different to the rest of Europe.

The UK loading gauge: Eight responses highlighted that the UK loading gauge constraints mean that proving compliance against EU standards is not possible or of material benefit. Fully TSI compliant vehicles could not operate in the UK anyway because of the technical differences (all of the freight company responses made this

point). Six of the responses highlighted the limited amount of traffic that can travel between the UK and Europe through the Tunnel as another factor that calls into question the benefits of a regime based on compliance with EU standards.

In summary: most of the responses suggest that the regulations are not sufficiently flexible to suit the UK circumstances, which are different to the rest of Europe.

The UK has gone further in implementation than other Member States: There was a strong theme in the responses about how other European Member States may have managed to perpetuate non-compliances against TSIs. This was referred to in six of the responses. They expressed a view that the UK has put in place the correct measures to implement EU legislation while other Member States may not have been so diligent in this area. Two freight companies noted that the UK has not managed to negotiate as many grandfather rights to reuse older existing designs of wagons, which puts companies within other Member States at an advantage in terms of introducing more of the same vehicle designs.

In summary: the responses suggest the UK's adherence to EU law may have created a competitive disadvantage for domestic businesses.

The different impacts of the interoperability regime upon the infrastructure and vehicle sectors: The ORR made the point that the two sectors have a very different approach to interoperability. Those seeking authorisations for vehicles have adapted well to the interoperability requirements and the regulations have generally had a positive effect due to the increased transparency and fairness in the approval process for vehicles which is considered better than previous approval regimes which were less clear. However, the infrastructure sector, in particular Network Rail, has had more problems adapting their processes to meet the requirements of the regulations. As a result the application of the regulations may be perceived as having a negative economic impact. ORR believe it is more complex to apply the authorisation process under the regulations to the upgrade or renewal of existing infrastructure compared with new vehicles.

In summary: some of the responses indicate that the application of the regulations has been more difficult in the infrastructure sector compared with the passenger vehicle sector.

Helping to create a single market for rail products and services: Seven responses said the regulations have had a limited impact on the single market. One said the impact has been negative due to increased certification costs and one said it has been positive. ORR suggested that the overall regime of applying TSIs across the EU has had a positive impact on the single market. Another response made a similar point and stated the positive impact of TSIs in terms of the global availability of TSI compliant products (California, Israel, South Africa and China were cited as examples). Network Rail highlighted that some products used in the rail industry are not readily identifiable as EU conforming and suppliers may need more time before these become more readily available to be used by UK projects. Network Rail also suggested it may now be harder for products to be certified and that Government should consider how it can assist this process. They suggested it may be difficult to create effective competition across the EU in terms of product certification due to the costs of transporting products to be assessed in another Member State and then returned to the home country where they originated. The European Rail Traffic Management System (using digital technology for signalling systems) was cited by them as an example where products that are compliant with the latest TSI are not yet available for projects to use.

In summary: several responses suggest external factors, such as the widespread use of common standards in TSIs, have probably had a greater impact than the application of the domestic interoperability regulations.

Facilitating the through running of trains between the UK and EU: Most of the freight company responses made the point that RIR 2011 has had no real impact because the UK is so restricted by smaller gauge compared with the EU that physically it is difficult to increase this traffic beyond the Channel Tunnel and HS1 networks. Network Rail made a similar point and said there is not a business case to significantly increase UK gauge. They suggested other factors outside of the application of the regulations to infrastructure projects can help increase through running, such as fitting the European Train Control System (ETCS) on trains.

In summary: several responses suggest other factors such as UK gauge are a significant barrier to the through running of trains between the UK and the EU.

The flexibility added to RIR 2011 has had limited impact: The regulations had provisions added to them to try and provide more flexibility so that projects applying the regulations could make use of these provisions where they saw a benefit in doing so. For example, there are provisions in the regulations to help facilitate the introduction of a new vehicle in the UK which has already been authorised in another Member State. Few comments about this provision were received. ORR stated it has a limited impact because this situation does not arise very often. However, when it has been used ORR suggest it has been welcomed. Three responses suggest that the facility for adding conditions and restrictions to an authorisation was generally welcomed as it can provide greater flexibility to ensure infrastructure can be placed in operational service. Three responses said there may be a potential benefit in the type authorisation process for infrastructure, especially for signalling systems.

In summary: a number of responses suggest there has been some limited, positive benefits resulting from the addition of these flexibilities to the regulations.

The register of infrastructure: This is an EU initiative where the policy intent was to help facilitate the technical compatibility checks between vehicles and infrastructure. Five of the responses suggested that this was good in principle but that progress has either been slow or the tool itself is not as useful as it could be and the benefits have not yet materialised.

The national vehicle register: This an EU initiative which is meant to record technical information about vehicles to assist the interoperability and safety regimes, six responses suggested the system needs to be made simpler.

The list of exclusions from interoperability: This was welcomed in seven of the responses as giving clarity, but Network Rail would like to see more railway lines added to the list. ORR welcomed the provision for a list of projects that meet the definition of upgrade or renewal as it could help stakeholder's planning and estimates for funding.

The type authorisation process for freight vehicles: This has not been greatly utilised and six responses said it needs to be simpler. One reason given was that the type is redundant as soon as a relevant standard changes after the type has been created. This means a new and costly set of assessments are required to determine the impact of the standards change on the type of vehicle.

Environmental impact of the regulations on the EU railway: Eight responses said the regulations have had no impact in this area. Two responses suggested the regulations have had little impact and it was suggested by Network Rail that existing legislation or Euronorms, rather than TSIs, have had more impact. All of the responses from the freight community said that historically UK freight wagons have less of a noise impact compared with other EU wagons because in the UK we tend to use a quieter type of composite break block anyway. Three responses from the freight community highlighted the lack of UK noise testing facilities as adding unnecessary costs in terms of moving vehicles around Europe for testing purposes.

Communications: The need for greater clarity of communication about how and when RIR 2011 applies was also highlighted by Network Rail. ORR highlighted that the RSSB standards strategy for national rules was not well understood in the wider industry.

All of these comments on the policy intentions and outcomes seen to date will be fed into consideration of any future measures to transpose the 2016 interoperability Directive.

Sign-off For Post Implementation Review: Chief economist/Head of Analysis and Minister

I have read the PIR and I am satisfied that it represents a fair and proportionate assessment of the impact of the measure.

Signed: **Lorraine Pearson (Head of Rail Evaluation)**

Date: **03/11/2016**

4. What were the original assumptions?

The 2011 Impact Assessment estimated the overall total costs and benefits for all of the regulatory changes that would be introduced by RIR 2011 over a ten year period (2012-2022). The IA did not examine aspects of the interoperability regime that remained unchanged. The total benefits over this period were identified in the IA as £111M and the costs as £35.8M, with a net benefit of £75.2M.

This PIR cannot quantify whether the benefits have been achieved yet because we have not reached the end of the 2012-2022 IA time period. Beyond this period there is a possibility that the interoperability regime may bring about further longer term benefits as more of the infrastructure becomes TSI conforming, but these longer term benefits were not estimated as part of the 2011 Impact Assessment exercise.

This PIR focuses on the assumptions made about the changes identified in the IA, as well as looking at some broader questions about the impacts of the overall regime.

Table 1 below examines the costs and benefits to the UK over the 2012-22 period that were identified in the RIR 2011 Impact Assessment and compares these with recent responses as part of this PIR exercise.

Table 1. Summary of the 2011 IA estimated costs and benefits of changes introduced by RIR 2011, over a ten year period, compared with 2016 PIR responses

Provision	Costs (£000's, 2011 prices)	Benefits (£000's 2011 prices)	2016 PIR response
Type authorisation (vehicles)	negligible	19,324	Creating a new facility for type authorisation (£19.3M); the IA assumed subsequent authorisation by use of type would save around 75% of the costs of a full assessment. However, some of the freight sector replies to the PIR survey pointed out that it is often difficult to make use of this facility because a change in TSI invalidates the further use of the type. It may not be economical to try and produce a small batch of the same type if it requires proving compliance with standards that have changed since the type was established.
Extend authorisation process to off-TENs	negligible	negligible	A number of responses from the freight community referred to the negative impacts of extending the geographical scope of the interoperability regulations to off-TENs. They made the point that the scope extension did not deliver benefits for freight operations that are only used in the UK. Network rail referred to increased costs but did not quantify in relation to the extension of scope.
Infrastructure register	35,842	65,426	The register of infrastructure was expected to bring about certain benefits through the accurate recording of information about how existing infrastructure assets conform to EU standards. This assumption was largely based on the EU's own impact assessment of the benefits that creating such a register would bring. The benefits to the UK over 2012-2022 were estimated in the RIR 2011 Impact Assessment as £65.4M. Some PIR responses suggest this work has progressed slowly so the estimated benefits have not yet materialised.
Vehicle register	negligible	negligible	Several comments suggested the vehicle registers in the UK need to be simplified.
Extend type authorisation to non-vehicles (infrastructure)	negligible	1,722	Three responses said there may be a potential benefit in the type authorisation process for infrastructure, especially for signalling systems.
Enable voluntary additional authorisation in the UK	Cannot be monetised as it is voluntary	Cannot be monetised as it is voluntary	Few comments about this provision were received. ORR stated it has a limited impact because this situation does not arise very often. However, when it has been used ORR suggest it has been welcomed.
Conditions and restrictions for	negligible	23,671	Including a facility in RIR 2011 for conditions and restrictions to be included within authorisations (£23.6M). No relevant data about this assumption has resulted from

vehicle authorisations			the PIR other than a few responses highlighting the provision is useful.
Provision for DfT to publish lists	25	861	No relevant data about this assumption has resulted from the PIR other than a few responses highlighting the provision is useful.
Enforcement	0	0	No relevant data about this assumption has resulted from the PIR.
Appeals	Cannot be monetised	Cannot be monetised	No relevant data about this assumption has resulted from the PIR.

5. Were there any unintended consequences?

Small businesses: Eight responses reported that small businesses have been adversely impacted by the regulations, and these impacts are discussed in more detail below, such as the freight community responses which said that the regulations have made it harder instead of easier to introduce new freight wagons in the UK due to the complexity and cost of proving compliance against TSIs. They also mentioned a competitive disadvantage when compared with freight operators in other Member States and the difficulty for small businesses to make use of the potential benefits of the type authorisation process.

Possible restriction of choice for operators that want to introduce new vehicles: In some cases the application of RIR 2011 may have restricted the choice of vehicles that can be used on the UK network. Some responses suggested that more expensive TSI compliant designs of vehicles must be used instead of ordering more of the older and cheaper vehicle designs. This may have increased costs, especially in the freight sector. (Note: the ability to use existing designs may in most cases be a matter that is determined by the text of the relevant Technical Specification or Interoperability rather than provisions in domestic regulations that will only cross refer to the TSI).

Increased costs through application of EU standards in the UK and unnecessary testing of vehicles and proof of compliance: All of the freight community responses pointed out that due to UK gauge constraints they have to use bespoke designs that are only UK compatible. They generally need to be customised vehicles to suit our smaller gauge with higher axle loading capability. They suggest that proving compliance with EU standards is not seen as worthwhile because these vehicles cannot be used outside of the UK due to their technical characteristics. The application of the noise TSI to UK freight wagons is seen as introducing unnecessary costs and burdens that outweigh any benefits. A range of extra certification and testing costs were estimated from £200k - £300k per fleet of new freight wagon project (or £10M-15M over a ten year period for the industry overall). Note the methodology for arriving at the estimated figures was not provided in the responses.

Possible increased costs for infrastructure projects: Network Rail estimated a 1% increase in project costs as a result of applying the interoperability process, however, the methodology for arriving at these estimated figures was not provided. They suggested that the increase in costs can be partly attributed to the third party assessment work that is required in order to obtain an authorisation. They identified that the cost increase attributed to interoperability authorisations might be reduced through seeking more generic route authorisations. It was

also suggested by Network Rail that the implementation of the interoperability regulations has been too rapid and introduced organisation and operational costs for them. They highlighted that it takes time to embed regulatory changes across a large number of UK projects. In terms of applying the interoperability process off the TENs they suggest this has increased costs without benefits. Concerns were expressed by Network Rail that the application of the regulations on regional and rural lines might mean applying a TSI that might over specify and prevent the recycling of cheaper components. It was suggested that it would be beneficial to make it easier not to apply the TSIs in some cases through making the regulatory derogation system less complex. They also highlighted that if non railway organisations are involved in work on infrastructure this can further complicate matters due to poor levels of understanding.

The pace of Change of TSIs has created problems for industry: Network Rail have identified this is an area where they need to improve their own internal processes to keep pace with TSI changes in order to avoid escalating costs through late scope changes to projects. The freight community also identified that changes in TSIs have made it more difficult for projects to utilise the benefits of the type authorisation process because the type quickly becomes invalid due to standards changing.

UK context: domestic freight may be at a competitive disadvantage compared with rest of the EU: New UK freight wagons may have become more expensive to introduce because the UK does not have the same grandfather rights that enable other Member States to keep introducing more of the same older design of wagons (one freight operator estimated that wagons for the UK may be 30% more expensive than European wagons).

Rail freight may be disadvantaged compared with road: One response suggested that road does not have as onerous a regime for approvals against standards.

RIR 2011 adds to the general legal complexity: Four responses highlighted a need for a greater clarity in the interpretation of TSIs and/or RIR 2011 by either the ORR or third party conformity assessors within the UK. ORR highlighted that the overall legislative regime for infrastructure projects can be complex and the interaction between interoperability and health and safety legislation might need to be simplified.

Difficulties in making effective use of the authorisation of vehicles through the type process: Six responses said the requirement to establish a vehicle type authorisation has proved too cumbersome a process for applicants to make effective use of it. The EU system for type has proved too complex and requires too much data.

6. Has the evidence identified any opportunities for reducing the burden on business?

In most cases the extent to which there will be opportunities to address the concerns highlighted in the survey largely depends upon whether the UK is still bound by EU law in the future and whether such changes would be consistent with the latest interoperability Directive.

A strong theme in the responses was the desire to introduce greater flexibilities for parts of the UK rail system, such as freight and lines off TENs. The ability to make changes to achieve this will need to be reviewed in light of any future commitments to effectively

transpose the recast of the interoperability Directive (2016/797) which has a deadline for transposition of June 2019.

The following opportunities were identified in the responses:

Benefits of applying TSIs: Network Rail recognised there will be a positive business case for applying TSI compliant signalling systems in the UK through the adoption of the ERTMS specifications.

Register of infrastructure: Network Rail is meeting the requirements to populate the register largely through transfer of existing data they hold. However, they suggested the specification for the register could be improved to provide more useful information to operators of vehicles so that they can genuinely establish technical compatibility data between vehicles and the Network Rail infrastructure. The ORR made a similar point.

National Vehicle Register: Three of the freight community responses suggested there is an opportunity to rationalise the domestic vehicle registers as there are too many in the UK. Network Rail suggested this register could be improved to provide more useful data to assist network modelling and capacity management. ORR made a similar point that the EU specification for the vehicle register is not clear. DfT and ORR will feed these views into future discussions with the European Union Agency for Railways as they will be developing a specification for a pan European vehicle register and it will be important to stress that the same flaws should not be repeated.

Type authorisation for infrastructure: Network Rail suggested this could provide benefits in the future but to date the provision has not been fully utilised, for example streamlining the authorisation process for ERTMS. ORR made a similar point.

Create greater flexibility in the regulations: All of the survey responses highlighted a desire for some form of regulatory change. Twelve responses suggested the regulations could be made more flexible, such as: TSIs are only applied on those parts of the network where there is a benefit, or only applied for new vehicles where it makes sense to do so. The ORR highlighted a need for more flexibility to help them deal with the authorisation of infrastructure projects in stages to reduce burdens.

Allow the use of older proven vehicle designs: There may be an opportunity to introduce greater flexibility to keep using older “existing design” non TSI compliant rolling stock where possible. TfL suggested this would be especially helpful on urban networks.

Make use of the provisions in RIR 2011 to create lists of infrastructure upgrade or renewal projects to provide clarity: Note this opportunity is currently being discussed with Network Rail in order to develop a draft list.

Recommendation.

Twelve of the responses suggested that changes were needed to the regulations. One common theme was the desire for greater flexibility to scope out parts of the UK rail system. Two of the responses suggested that the regulations should be removed or replaced.

This initial consultation with stakeholders has identified some key concerns about the unintended consequences of the regulations, such as increased costs for freight operators and manufacturers, as well as those involved in carrying out infrastructure works. Also, the expected benefits from the type authorisation process appear to have not materialised to the extent anticipated to date, after allowing for the fact the full ten year period of the 2011 IA has not been observed.

This PIR recommends that DfT consider amending RIR 2011 at the next suitable opportunity in order to add additional flexibilities sought by stakeholders where possible. At the same time there will also need to be consideration of how much we are bound by EU law in the future and the need to transpose the 2016 Interoperability Directive. Further detailed consultation with stakeholders will be necessary as we develop our plans for transposing this latest Directive. Further research may be required to inform future discussions regarding the regulations given the aforementioned methodological limitations associated with this PIR.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

No information on this matter is publically available, so DfT included a specific question about this issue in order to use the expertise of respondents to gain insights into this subject. However, none of the responses to the questionnaire provided any specific information.

Four of the survey responses suggested that in some unidentified member states implementation has been less thorough than the UK and this has put the UK at a competitive disadvantage. Two responses referred to specific provisions in the TSI for freight wagons that enable manufacturers in other Member States to keep producing older designs of wagons.

The ORR commented that there was limited visibility of how other national safety authorities have implemented the 2008 Interoperability Directive. It was also suggested in some responses that some member states have a competitive advantage over the UK as they have better access to noise testing facilities to prove compliance with the Noise TSI compared with the UK. This means projects have had to transport new wagons outside of the UK in order to be tested.

We recognise the limitations of only seeking views from UK stakeholders. The responses are limited to a perception of implementation in other member states and this PIR exercise has resulted in limited factual evidence about implementation elsewhere.