



EUAR Fees and
Charges Study - Final
Report

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1 Introduction

- 1.1 The Fourth Railway Package (4RWP) was the Commission’s proposal to amend five legislative acts and repeal a regulation in order to tackle the remaining barriers to achieve a Single European Railway Area (SERA). For the purposes of the legislative procedure, it has been divided into two pillars, one concerning the governance and market opening proposals, the other concerning technical provisions aimed at removing technical barriers. The latter has been called “the technical pillar”.
- 1.2 The technical pillar, which was approved by the European Parliament on 28th April 2016, assigns new responsibilities to the Agency in which it will be empowered to issue market vehicle authorisations and safety certifications, making those procedures faster and easier for railway manufacturers and operators. A key feature of the new regulatory framework is a One-Stop-Shop (OSS) to be administered by the Agency for applications. This will serve as an information and communication system and will function as a single entry point for all applications for safety certification and market vehicle authorisation.
- 1.3 The new responsibilities of the Agency are set out in a Regulation (EU) 2016/796 which repeals Regulation (EC) No 881/2004. Under the new regulation, the Agency is to be retitled as the European Union Agency for Railways (EUAR).
- 1.4 Steer Davies Gleave (SDG) has been commissioned by the Agency to develop a scheme of charges for the issue of vehicle authorisations and safety certificates. As part of this work we have developed a model to aid the process of determining the structure and appropriate level of fees given the requirements set out in the new Agency Regulation and the existing arrangements between NSAs and applicants.

Scope of study

- 1.5 The purpose of this study is to provide assistance to the Agency in the economical/financial areas related to the new tasks of the Agency under the technical pillar of the 4th Railway Package (4RWP). The scope of the study includes the following tasks:
 - Economic/statistical analyses and market studies about the present situation regarding determination of costs for NSAs for issuing and renewing authorisations for placing in service of vehicles and for types of vehicles and issuing and renewing of safety certificates.
 - Analysis and research on the parameters to be considered for determining costs for the Agency for issuing authorisations for placing on the market for vehicles and for types of vehicles, the issuing and renewal of safety certificates and the issuing of ERTMS pre-approvals under the 4RWP.
 - Research, analysis and recommendations for the calculation of fees and charges to be paid by applicants.

- Research, analysis and recommendations concerning the framework model for the financial apportioning of the fees and charges to the Agency and the NSAs.

Report structure

- 1.6 The purpose of this report is to present to EUAR the findings of our analysis, taking into account findings from consultation with stakeholders, case studies and modelling, making a recommendation on the proposed structure of the Agency's scheme of charges.
- 1.7 The report is structured as follows:
- Chapter 2 - summarises the requirements of the new Directives;
 - Chapter 3 - sets out an analysis of current practices informed by consultation with industry stakeholders;
 - Chapter 4 - describes the certification practices and charges in the aviation industry;
 - Chapter 5 - sets out our considerations and approach for developing a mechanism for fees and charges;
 - Chapter 6 - details a specification for a fees and charges model;
 - Chapter 7 - reports results of modelled fees and charges;
 - Chapter 8 – sets out a proposed schedule of fees and charges
 - Chapter 9 - describes the role of the Agency in authorisation of ERTMS trackside installations and information solicited from stakeholders; and
 - Chapter 10 - sets our key conclusions and recommendations.
 - Appendix A - Glossary
 - Appendix B - NSA Questionnaire
 - Appendix A –Model output tables

2 Summary of the requirements of the new Directives

Introduction

2.1 In this chapter we summarise the arrangements that will prevail under the 4RWP. Our understanding has been informed by:

- legislation published in May 2016 as part of the 4RWP;
- documents supplied by the Agency;
- case studies, including interviews with specific NSAs; and
- information captured during discussions with the Agency and in response to our working note prepared during the course of this study.

2.2 Where appropriate, we have stated our interpretation and assumptions for the purpose of undertaking this study.

Legislation

2.3 The following suite of legislation was published in the Official Journal of the European Union on 26 May 2016:

- **Agency Regulation:** Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004
- **Interoperability:** Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union;
- **Safety:** Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast)

Reference sources

2.4 In preparing this document we have taken account of the documents listed in the table below, which have been supplied to us by the Agency during the course of the study.

Table 2.1: Reference documents made available by the Agency

Document Name	Description
20160115 EUAR presentation for kick off meeting.pdf	Agency presentation for the project kick-off meeting including legal requirements related to fees and charges and technical specifications of this study

Document Name	Description
20160311 Draft Report of NSA Questionnaire regarding resources used for authorisation b.docx	Findings from the questionnaire responses by National Safety Authorities (NSAs) regarding resourcing required to perform a vehicle authorisation for placing in service
Practical arrangements for SSC 0 3 (WS 2).docx	Practical arrangements for the SSC process as requested by Art. 10(10) of the proposal for recast of the safety directive
Specifications 3rd draft.docx	Specification for the calculation of the number of vehicle authorisations under the fourth Railway Package (4 RWP)

New responsibilities of the Agency

- 2.5 The Agency will act as the European authority responsible for issuing authorisations for placing railway vehicles on the market and authorisation of vehicle types for vehicles intended for cross-border operations. It will also issue single safety certificates for railway undertakings involved in cross-border traffic. The Agency will perform “entry and exit” checks of the application and of the decision.
- 2.6 For vehicles and railway undertakings involved only in national transport, there will be a choice between submitting a request for authorisation or certification to the Agency or to the NSA.
- 2.7 NSAs will still have an important role in carrying out the necessary assessments. The Agency and the NSAs will have to cooperate and share competencies for the issuing of authorisations to facilitate the practical implementation of the new certification and authorisation system. In specific cases of isolated networks, the Agency may subcontract certain certification and authorisation tasks to the national authorities. Cooperation agreements will have to be established between these various organisations. Such cooperation agreements will have to be in place before the Agency is entitled to receive applications for single safety certificates and vehicle authorisations.
- 2.8 The Agency will be financed in part by fees and charges paid by the applicants for, and holders of, vehicle authorisations and safety certificates and for the provision of other services by EUAR. Fees to be charged by the Agency are to be set in a transparent manner, with due regard to the principle that they must not lead to an unnecessary burden on companies. They should, however, cover the cost of the services delivered. Part of the fees will be shared with the NSAs involved in the process of certification conducted by the Agency. Fees and charges may also be levied for the processing of appeals.

General principles of operation

- 2.9 This section outlines certain principles that must underpin the activities of actors involved in the processes being considered and thus which might be expected to affect the behaviours that should be reflected in the modelling approach described in Chapters 5 and 6.

Principles of charging

2.10 The level of fees and charges levied by the Agency for the authorisation of vehicles and issuing of safety certificates must be governed by the principles set out in Article 64 of the 2016 Agency Regulation, and must¹:

- cover the full cost of the service delivered (including overheads), including as appropriate the relevant costs resulting from the tasks assigned to the NSAs;
- be equal to or lower than the current average for the relevant services;
- be set in a transparent, fair and uniform manner in cooperation with Member States;
- not jeopardise the competitiveness of the European railway sector, such that the fees and charges should:
 - be established on a basis which takes due account of the ability of RUs to pay
 - not result in the imposition of an unnecessary financial burden on companies
 - take into account, as appropriate, the specific needs of small and medium sized enterprises.

2.11 We have interpreted the requirement for the revenue to be sufficient to cover the full cost of the services delivered as relating to any relevant costs at the Agency level (including any costs levied by NSAs to the Agency).

One-stop shop

2.12 The Agency will be required to establish a 'one-stop shop' (OSS) as a single entry point through which applicants submit application files for type authorisation, vehicle authorisations for placing on the market and single safety certificates. This is an administrative function, largely affected through an IT system².

2.13 This will provide a common information exchange platform, providing the Agency and NSAs with information about all applications for authorisations and single safety certificates, the stages of these procedures and their outcome, and, where applicable, the requests and decisions of the Board of Appeal.

Principles of cooperation and resourcing

2.14 The 2016 Agency Regulation states that the Agency should have sufficient resources to enable it to carry out its new tasks, and the timing of the allocation of those resources should be based on clearly defined needs."³

2.15 Cooperation agreements, including cost elements, should be concluded between the Agency and the NSAs which will determine the amount paid to those NSAs for their work in the vehicle authorisation and the single safety certification process. Both the safety and interoperability directives discuss these cooperation agreements, stating that these shall contain a detailed description of tasks and conditions for deliverables, the time limits applying to their delivery and an apportionment of the fees payable by the applicant.

2.16 The cooperation agreements may also include specific cooperation arrangements in the case of networks requiring specific expertise for geographical or historical reasons, with a view to

¹ See 'Whereas' 16 of Agency Regulation 2016/796/EU

² See Article 12 of Agency Regulation 2016/796/EU

³ See 'Whereas' 15 of Agency Regulation 2016/796/EU

reducing administrative burdens and costs to the applicant. Where such networks are isolated from the rest of the Union rail system, such specific cooperation arrangements may include the possibility of contracting tasks to the relevant NSAs when this is necessary in order to ensure efficient and proportionate allocation of resources for certification.

- 2.17 The Agency will encourage the secondment of national experts and the cooperation agreements will also cover this requirement⁴.
- 2.18 At the time of writing it is understood that these cooperation agreements are not yet in place and we have therefore made assumptions about their contents.

Pre-engagement

- 2.19 The concept of pre-engagement exists for both safety certification and vehicle authorisation, although it is not expressly provided for in the legislation. It provides the opportunity to:
- facilitate early contact;
 - develop the relationship between assessor(s) and applicant;
 - gain familiarity with the expected content of the application;
 - baseline the application, including the standards to be applied, area and type of operation;
 - where applicable, discuss the findings of previous supervision;
 - develop an initial set of milestones for the project plan; and
 - verify that the applicant has been provided with sufficient information so that it knows what is expected from it and the way the assessment process will be conducted and how decisions will be made.
- 2.20 The Agency's view (expressed specifically in relation to safety certification) is that pre-engagement should not be a means for the applicant to abuse the system, and therefore it is a service that should be subject to a fee.
- 2.21 Evidence from NSAs is that the workload associated with pre-engagement is significant (generally more than for the application itself), which indicates that charging for this is absolutely essential to meet the principles set out. Given its variable length and workload, NSAs generally charge for this phase on a time and materials basis, but this is not universal and we recognise that the workload for pre-engagement may in part be the result of differences in charging approach. We also recognise that the fact that some NSAs do not apply such charges may cause a distortion in the choice of assessment entity made by an applicant.
- 2.22 Indeed, the length of the pre-engagement phase ranges from months to years before the final authorisation or safety certificate. The Agency recommends a minimum of six months for applications for safety certification.
- 2.23 The differing processes that we encountered during meetings with NSAs complicate the task of identifying the boundary between pre-engagement and the formal start of the application process. If the process is as simple as envisaged by the legislation, the process commences with the submission of a complete set of documentation. We have heard that, in some cases, NSAs accept the progressive submission of these 'final' versions of the documentation and thus it seems reasonable to consider that any activity associated with evaluating these documents forms a part of the assessment of the application. This must be considered to be

⁴ See 'Whereas' 19 of Agency Regulation 2016/796/EU

qualitatively different from receiving and commenting upon early versions of technical files, which is pre-engagement.

Principles governing the issuing of safety certificates

What is a safety certificate?

- 2.24 A safety certificate is required by anyone intending to operate vehicles on mainline railways. Currently, the certificate is issued in two parts:
- Part A - a 'European portable' certificate demonstrating that the NSA has acceptance of generic safety management system (SMS) components. This sets out the organisation's general safety management arrangements; and
 - Part B - a certificate demonstrating NSA acceptance of the national provisions adopted by a railway operator.
- 2.25 Under the new Safety Directive 2016/798/EU, a single safety certificate will be introduced. In the future, the single safety certificate will be the only form of safety certificate for RUs. It will be required for an RU to operate in any Member State, with the exception of certain agreed (short) cross-border workings from a third country into a neighbouring Member State under special arrangements to ensure safe working.
- 2.26 The single safety certificate provides evidence that the RU concerned has an established SMS and that it is able to operate safely in the intended area of operation⁵. An Undertaking may also operate (short) cross-border workings from a Member State into a neighbouring Member State without a safety certificate for that neighbouring Member State provided that they have a valid Single Safety Certificate for which the former Member State is included in the intended area of operation.
- 2.27 We note for completeness that an Infrastructure Manager (IM) must also have a 'safety authorisation' to be authorised to manage and operate rail infrastructure but the issuing of these is outside the scope of this study as such authorisations will continue to be undertaken solely by NSAs.
- 2.28 EUAR guidance on issuing safety certificates states that the companies operating track maintenance vehicles can decide to apply for a safety certificate or can be subcontractors of the IM operating under its SMS. Most of these companies operate at national level and their operations must be covered by an SMS, be it assessed for the purpose of delivering a safety certificate or a safety authorisation.
- 2.29 Based upon evidence from the Belgian case study as summarised in chapter 3, we must provide for the possibility that some freight operators will include one or more Member States in their area of operation speculatively and that the application for that area may be unsuccessful. We were also told by the UK NSA of completely speculative applications from companies that are not yet RUs but are interested in market entry. It is worth noting that these are both cases where the applicant does not get charged for an application that is unsuccessful (or, indeed, at all in the UK) and thus we should not expect this to occur if the Agency is charging a fee for submitting an application.
- 2.30 To ensure that these problems do not arise, the fee should be payable for all applications, including those which are not authorised or which are abandoned by the applicant.

⁵ See Article 10, Section 1 Safety Directive 2016/798/EU

- 2.31 Some international operators may in practice establish independent railway operators in different Member States. They may have differing reasons for doing so. We will presume that there is no change in this preference.
- 2.32 It is understood that the OSS will seek to detect applicants that apply for a new safety certificate in a Member State when they already hold one in another Member State, with the aim of ensuring that the application is changed to being an application to extend the area of operation of the original safety certificate. The OSS will also detect where an RU has previously made an unsuccessful application for a safety certificate. We presume that this activity by the OSS will not prevent an international operator from establishing two distinct RUs and applying for separate safety certificates where this is a deliberate choice.

By whom are safety certificates issued?

- 2.33 The default position is that the Agency will issue a safety certificate (or inform the applicant of its negative decision)⁶. The exception is where the area of operation is limited to one Member State (we expect this to apply to the majority of cases) where, at the request of the applicant, the NSA may, under its own responsibility (and taking full responsibility), issue a single safety certificate⁷.

Submission of applications

- 2.34 All submissions must be made via the OSS, even if the application is being made to an NSA. All the stages of the relevant procedures and their outcome, and, where applicable, the requests and decisions of the Board of Appeal, will pass via the OSS⁸.
- 2.35 In cases where an applicant has the option of making an application to the NSA, the applicant must choose to commence the process with either the Agency or the NSA as assessing body. It will be possible for the applicant to change this decision, but the process would have to be restarted⁹.
- 2.36 The application for a single safety certificate shall be accompanied by a file including documentary evidence that the RU:
- has established its SMS in accordance with Article 9 of the Safety Directive and that it meets the requirements laid down in TSIs, CSMs and CSTs and in other relevant legislation in order to control risks and provide transport services safely on the network; and
 - meets, where applicable, the requirements laid down in the relevant national rules notified in accordance with Article 8 of the Safety Directive¹⁰.

Assessment of applications

- 2.37 The involvement of NSA(s) concerned by the proposed area of operation is mandatory in the evaluation of applications submitted to the Agency. Note that this requirement is distinct from

⁶ See Article 10 Section 4 Safety Directive 2016/798/EU

⁷ See Article 10 Section 3 Safety Directive 2016/798/EU

⁸ See Article 10, Section 3 Safety Directive 2016/798/EU

⁹ See Working Paper Practical Arrangements for SSC V0.3, 3.3.1

¹⁰ See Article 10, Section 3 Safety Directive 2016/798/EU

any arrangements for provision of NSA staff to the Agency to support the Agency's own activities.

2.38 The respective roles of the organisations are:

- the Agency assesses the SMS regarding TSIs, CSMs and CSTs and in other relevant legislation; and
- the NSA for the intended area of operation makes an assessment of the compliance with the national rules¹¹.

2.39 The workflow associated with the processing of an application for a safety certificate will be handled by an automated tool in the OSS. This will ensure that the complete application file is passed to the NSA(s) concerned immediately upon its receipt. The Agency will then work in collaboration with the NSA with the objective of reaching a shared conclusion.

2.40 The assessment of an application for a safety certificate may or may not include audits and / or site visits by the Agency and / or the NSA(s): they will be required to work together to coordinate these. Our research indicates that some NSAs do this currently and others do not. Where the Agency undertakes site visits these are likely to incur more costs than when this is done by the NSA. Audits and inspections are expected to be undertaken in the case of demonstrable doubts on the maturity of the application file which could not be identified beforehand through past supervision activities. As it can be a significant cost driver, the Agency considers that it would be appropriate to charge the applicant in a similar way to that done for pre-engagement.

Timescales

2.41 The workload for the Agency when it is assessing an application for a safety certificate includes assessing the completeness of the whole application, including not only the part that it will assess itself, but also the elements related to national rules and infrastructure that will be assessed by the NSA(s). This assessment must be completed either within 4 months for the whole process if the file is complete or up to 1 month for completing the file and 4 months for the assessment if the file is not complete at the beginning¹².

2.42 The Agency, or NSA where it is the assessing body, shall issue the single safety certificate, or inform the applicant of its negative decision, within whatever time is predetermined, which must not be more than four months after all information required and any supplementary information requested have been submitted by the applicant¹³.

Renewal of a safety certificate

2.43 A key activity will be the renewal of safety certificates, including those issued under the previous arrangements. We note that, whilst the maximum duration that can be granted for a safety certificate is five years, it may be less¹⁴. The fact that the date of renewal is predictable assists the Agency in planning its activity. Our understanding is that the Agency will normally issue a safety certificate for five years. It may be that some NSAs will continue to issue for a

¹¹ See Article 10 Section 5 Safety Directive 2016/798/EU

¹² See Article 10 Section 6 Safety Directive 2016/798/EU

¹³ See Article 10 Section 4 Safety Directive 2016/798/EU

¹⁴ See Article 10, Section 13 Safety Directive 2016/798/EU

shorter duration (Belgium, for example, issues a safety certificates for three years) but this is not within the scope of our modelling

Updating a safety certificate

- 2.44 It is necessary for a safety certificate to be updated if the type or extent of the operation is “substantially altered”¹⁵. The definitions of type and extent are:
- type of operation: characterised by passenger transport, including or excluding high-speed services, freight transport, including or excluding dangerous goods services, and shunting services only; and
 - extent of operation: characterised by the number of passengers and/or volume of goods and the estimated size of a Railway Undertaking in terms of number of employees working in the railway sector (i.e., as a micro, small, medium sized or large enterprise).

2.45 For an application to extend the area of operation of a single safety certificate, the assessment will involve not only the NSAs affected by the extension but also those covered by the original safety certificate (although to a much more limited extent). This is because changes of some SMS procedures in order to meet the requirements of the new infrastructures may have an impact on the result of the original assessment. As it should not be necessary to examine further the elements of the SMS assessed by the Agency, we assume that this will have no impact upon the Agency costs.

2.46 There is special provision for multilateral arrangements for extending the area of operation of safety certificates within the Baltic States.

Disagreements over assessments

2.47 There may be occasions when there is a difference of views between the Agency and a NSA about an application. The arrangements for managing this situation are set out in the Safety Directive¹⁶.

2.48 We observe that the arrangements will create situations where an NSA is required to supervise a RU employing an SMS that it did not approve and may therefore cause the NSA some concern. It is impossible to forecast whether this will have any effects upon the actions of actors in the process.

2.49 Whilst the arbitration process would consume resources, the Agency has advised us that the costs of this should not be recovered through the standard application fees but should be subject to a separate fee.

Appeal process

2.50 Similarly, there is a possibility that an applicant may bring an appeal before the Board of Appeal under the arrangements set out in the Safety Directive¹⁷. Again, such costs will be recovered through specific fees and no provision should be made for them through standard application fees.

¹⁵ See Article 10, Section 13 Safety Directive 2016/798/EU

¹⁶ See Article 10, Section 7 Safety Directive 2016/798/EU

¹⁷ See Article 10, Section 12 Safety Directive 2016/798/EU

- 2.51 In determining fees and charges, it may be necessary to make judgements about the provision that would need to be made to meet the costs of any potential appeal, although we are awaiting confirmation from the Agency (after discussion with the Commission) as to whether this is within scope for this study.

Supervision of Railway Undertakings

- 2.52 Unless advised differently, our modelling will presume that all supervision of RUs (as opposed to auditing during the assessment of an application) is undertaken solely by the NSA for the Member State concerned and that this is funded under national arrangements with no element of any fees or charges levied by the Agency contributing to the cost of this.

Revoking of safety certificates

- 2.53 It may be the case that it is determined that a RU no longer satisfies the requirements for certification or the RU stops operations and that the safety certificate should be revoked. This might normally be expected to be triggered as a result of supervision. In the case of the most serious safety breaches, an NSA can suspend operations.
- 2.54 As with other Agency and NSA decisions regarding safety certification, there is provision for appeals but the costs of this will not be covered by the application fee.

Authorisations for placing on the market of vehicles

What is meant by ‘placing on the market’?

- 2.55 The Interoperability Directive defines “placing on the market” as “*first making available on the Union's market of an interoperability constituent, subsystem or vehicle ready to function in its design operating state*”¹⁸. An authorisation for placing of vehicles on the market includes a defined area of permitted use. The applicant specifies the area of use for which authorisation is sought and must include in its application evidence that the technical compatibility between the vehicle and the network of the area of use has been checked.¹⁹

Special case arrangements

- 2.56 Special arrangements exist for non-standard gauge, non-powered rolling stock in shared use with third countries (effectively, the Baltic countries).
- 2.57 Another special case is where an NSA can give permission for short-distance cross-border movements into its country from a third country under suitable arrangements provided for in the RU’s SMS²⁰.

Type authorisation

- 2.58 Type authorisation is described in Article 24 of the Interoperability Directive. This is done systematically every time an authorisation for placing on the market is granted but only for the area of use covered by that authorisation²¹.

¹⁸ See Article 2 Section 35 Interoperability Directive 2016/797/EU

¹⁹ See Article 21 Section 2 Interoperability Directive 2016/797/EU

²⁰ See Article 21 Section 17 Interoperability Directive 2016/797/EU

²¹ See Article 24 Sections 1 and 2 Interoperability Directive 2016/797/EU

- 2.59 When a type is authorised, subsequent authorisation can be granted without further checks on the basis of a declaration of conformity with a vehicle type, submitted by the applicant.
- 2.60 The concept of type is reflected in the difference in product between first applications and subsequent authorisations. The first vehicle authorised will define at the same time a type. Other vehicles are then declared to be in conformity with that type.
- 2.61 In addition to gaining authorisation for the placing on the market of vehicles, before using them, the RU must check that the vehicle is compatible with the route²². It should be noted, that the process of checking such compatibility may require testing²³. This is mentioned for completeness, there is no activity associated with this that falls within the remit of modelling for the current study.

Who issues vehicle authorisations?

- 2.62 Normally it will be the Agency that issues a vehicle authorisation, but authorisation by an NSA may be given where an applicant only wishes to operate in a single Member State (with short cross-border extensions into neighbouring Member States, where appropriate). Even where the assessing body is to be a NSA, the application must still be submitted via the OSS. The decision on which approach is to be adopted lies with the applicant.

Submission of applications

- 2.63 The application for a vehicle authorisation for placing on the market shall be accompanied by a file concerning the vehicle or vehicle type and including the necessary documentary evidence.
- 2.64 If an authorisation for placing on the market is issued, it shall state:
- the area(s) of use;
 - the values of the parameters set out in the TSIs and, where applicable, in the national rules, for checking the technical compatibility between the vehicle and the area of use;
 - the vehicle's compliance with the relevant TSIs and sets of national rules, relating to the parameters referred to above;
 - the conditions for use of the vehicle and other restrictions²⁴.
- 2.65 All applications for authorisation that will be assessed by the Agency must pass through the OSS.
- 2.66 It is noted (though not of direct consequence for the Agency's activity) that, because the authorisation includes confirmation of compatibility with the generic network, test running may be necessary in preparation of the documentation and NSAs may issue temporary authorisations to cover this. We have learnt that a temporary authorisation for test running purposes is only required in some Member States. Elsewhere this is covered by arrangements within the Infrastructure Manager's SMS.

²² See Article 23 Section 1 Interoperability Directive 2016/797/EU

²³ See Article 23 Section 1 Interoperability Directive 2016/797/EU

²⁴ See Article 21 Section 10 Interoperability Directive 2016/797/EU

Assessment of applications

- 2.67 Part of the assessment process made nominally by the Agency is undertaken statutorily by the NSA(s) concerned. There will, of course, need to be mechanisms by which the costs of this are covered and it is assumed that it will form one part of the cooperation agreements to be developed.
- 2.68 On receipt of an application the Agency will evaluate the completeness, relevance and consistency of the file related to TSIs. It will pass the file to the NSA(s) concerned to undertake similar checks related to relevant national rules. The latter activity is a role specifically and exclusively for the NSA(s) concerned, and is different from activity where NSA staff are seconded to work as part of an Agency team. If and when completeness, relevance and consistency of all parts of the file have been confirmed, the Agency and the NSA(s) will assess the content of their respective sections.
- 2.69 For an application made to an NSA (via the OSS), the NSA will undertake all parts of the assessment.
- 2.70 Whilst the typical process might be that the Agency or the NSA(s) assesses an application based upon the assessment of the submitted documentary evidence, there will be cases where [further] tests may be required²⁵. However, there is no reason to expect active involvement by the authorising entity in these tests.

A renewed authorisation

- 2.71 A renewal of an existing authorisation might be required where there is a revision to a TSI. This will be an exceptional case because revisions to TSIs will normally be backwards-compatible.

Modified vehicles

- 2.72 In some cases there is a change to sub-systems on a vehicle which triggers an update of the existing authorisation.

Extension of area covered by an authorisation

- 2.73 In the case of an application to extend the area of operation of an authorisation, the majority of the workload would fall to the NSA(s) concerned (both by the original area and the area of extension) but the application would still be the responsibility of the Agency.
- 2.74 For applications made to a NSA, the area of use within that Member State can be extended on application to that same NSA²⁶.
- 2.75 In the case where an authorisation was originally given by an NSA (for operation only within that member state) but the application wishes to operate in another Member State then the application becomes the responsibility of the Agency.

Timescales for authorisations

- 2.76 There is an important requirement to expedite the confirmation of completeness of the application. Within one month of receipt of the applicant's request, the Agency shall inform

²⁵ See Article 21 Section 5 Interoperability Directive 2016/797/EU

²⁶ See Article 21 Section 13 Interoperability Directive 2016/797/EU

the applicant that the file is complete or ask for relevant supplementary information, setting a reasonable deadline for this to be done²⁷.

- 2.77 The Directive states that the maximum time period set for assessing applications must be respected (and that this time period must not exceed four months). The Agency's view is that this limit should be set to be the same as that for assessing a safety certificate²⁸.
- 2.78 The time limits for the Agency to undertake tasks means that it will not be practical to respond to peaks in demand by slowing response times. The Agency will need to ensure that it has sufficient competent resources to do this and this will naturally mean that there may be excess staff during periods when the workload reduces. NSAs have told us that their staff do have other responsibilities that they can undertake during periods when the workload for authorisation is low. The Agency similarly has other activities (such as development of secondary legislation) that can be used to balance the workload.

Disagreements over assessments

- 2.79 There may be occasions when there is a difference of views between the Agency and a NSA about an application. The arrangements for managing this situation are set out in the Interoperability Directive²⁹ and in the case that the Agency disagrees with one or more NSA(s) negative assessment of an application, the NSA(s) are able to seek arbitration through the Board of Appeal.
- 2.80 Additional resource (possibly including legal advisors) will be required to deal with this. Consideration is given later in the report to how the costs of this eventuality are taken into account.

Refusals and appeals

- 2.81 There may be cases in which the applicant appeals against the decision made by the Agency. The Agency has advised us that the costs of this should not be recovered through the standard application fees but should be subject to a separate fee.

Notification of non-conforming vehicles

- 2.82 There is a possibility that non-conformances may be identified by the Agency or an NSA. These may be so significant that the Agency may decide to revoke an authorisation. This can reasonably be considered to be an extreme case as only one case of this has been encountered under the current arrangements.
- 2.83 A NSA has the option of issuing a temporary suspension of an authorisation within the scope of its role as a supervisor of the RU. Similarly, a Type Authorisation may be suspended temporarily by either the NSA or the Agency³⁰.
- 2.84 Such a decision might trigger an appeal, which would cause the Agency to incur costs that need to be provided for.

²⁷See Article 21 Sections 6 and 7 Interoperability Directive 2016/797/EU

²⁸ See Article 21 Section 6 Interoperability Directive 2016/797/EU

²⁹ See Article 21, Section 7 Interoperability Directive 2016/797/EU

³⁰ See Article 26 Section 3 Interoperability Directive 2016/797/EU

3 Analysis of the current situation

Introduction

3.1 Information on the current situation within the European rail industry has been solicited from NSAs and IMs through two major channels, stakeholder questionnaires and case studies which have included meetings with selected NSAs. 21 of the 28 NSAs contacted, including Norway and Switzerland, responded to the questionnaire and the majority completed all sections with some gaps (e.g. some NSAs only provided an average cost for a particular application type without providing the range).

Stakeholder Questionnaires

3.2 Stakeholder questionnaires were sent to all NSAs within the EU as well as those of Norway and Switzerland³¹, both of which share borders with the EU and oversee operation of cross-border train services with EU Member States. This was primarily a data collection exercise intended to solicit information to assist the Agency in determining the workload and costs involved in processing Safety Certification and Vehicle Authorisation applications and the basis of the products (i.e. the services to be undertaken) on which it should administer fees and charges.

3.3 The questionnaires were sent by email to NSA contacts stored in the ERADIS database and were additionally sent to members of the NSA Network along with a covering email from the Agency. The questionnaire was reviewed by the Agency prior to issue to the NSAs, however, further feedback related to improving clarity of some of the questions led to a slightly revised version being sent to the contacts. This resulted in some NSAs completing the earlier version and some completing the revised version. The revised version of the questionnaire is shown in Appendix B

3.4 A summary analysis of stakeholder questionnaire responses is given in the sections below. The analysis has been divided into two sections, one covering the questions relating to safety certification and one covering the questions relating to vehicle authorisation.

3.5 At the request of the Agency, the questionnaires sent to NSAs also included a section on assessing technical solutions for ERTMS trackside equipment. In addition, separate questionnaires covering this topic were also sent to a number of IMs to solicit information for the same purpose. The results of these are outside of the scope of this report and will be documented separately.

3.6 Table 3.1 **Error! Reference source not found.** shows the status of NSAs responses to the questionnaire.

³¹ Norway and Switzerland were also consulted as they are members of the European Free Trade Association with significant railway operations.

Table 3.1: NSA questionnaire status as of 11th August 2016

NSA	Questionnaire status
Croatia	Completed
Denmark	Completed
Estonia	Completed
Finland	Completed
France	Completed
Germany	Completed
Greece	Completed
Hungary	Completed
Italy	Completed
Latvia	Completed
Lithuania	Completed
Poland	Completed
Romania	Completed
Portugal	Completed
Slovakia	Completed
Slovenia	Completed
Spain	Completed
Sweden	Completed
Switzerland	Completed
UK	Completed
Austria	Partially Completed
Belgium	No Response
Bulgaria	No Response
Czech Republic	No Response
Ireland	No Response
Luxembourg	No Response
Netherlands	No Response
Norway	No Response

Case studies

- 3.7 A number of 'case study' meetings were held with specific NSAs to solicit more detailed information and aid our understanding of the working practices of NSAs by examining their processes for specific application examples. A summary of each of our findings is given towards the end of this chapter (paragraph **Error! Reference source not found.** and onwards). REF_Ref453859332 \h **Error! Reference source not found.** lists the case study interviews we have held to date.

Table 3.2: Case study interviews

NSA	Date	Location	Attendees
Norway	05 May 2016	Norwegian Railway Authority (Statens jernbanetilsyns), Karl Johans Gate 41 B, Oslo	<u>SJT</u> : Bogdan Popa (Principal Engineer) <u>SDG</u> : Gordon Bird, Vernon Baseley

NSA	Date	Location	Attendees
UK	09 May 2016	Office for Road and Rail, 1 Kemble Street, London, WC2B 4AN	<u>ORR</u> : Paul Hooper (Interoperability and Standards) <u>SDG</u> : Gordon Bird, Vernon Baseley
France	11 May 2016	French National Safety Authority 156 Rue du Faubourg , Saint-Denis, F-75010 Paris	<u>EPSE</u> : Jerome Fédélich , (Division Système, Interopérabilité et Interfaces); Laurent Cebulski (Directeur des Autorisations); Virginie Carpentier (Secrétaire Générale); Pascale Richet (Finances) <u>SDG</u> : Gordon Bird, Vernon Baseley <u>EUAR</u> : Stefan Meert
Belgium	25 May 2016	Federal Public Service of Mobility and Transport, Vooruitgangstraat 56, 1210 Brussels	<u>BE NSA</u> : Marc De Groote, Hans Verdoodt <u>SDG</u> : Vernon Baseley, Daniela Phillips
Poland	25 July 2016	Urząd Transportu Kolejowego, Al. Jerozolimskie 134, 02-305 Warszawa	<u>UTK</u> : Magdalena Siemieńczuk, Renata Piętka, Emilia Ejdys, Jan Siudecki <u>SDG</u> : Daniela Phillips

Stakeholder Questionnaire: Safety Certification

Workload Drivers

Significance of selected drivers

3.8 NSAs were asked to indicate how significant some selected aspects of the applicant's operations are to the workload required to process the application for a safety certificate. Below is a list of our suggested drivers and brief description for each.

- **Geographic extent of operations** – to determine the effect of the number of route kilometres covered by the applicant on workload required to process a safety certification application.
- **Volume of train services operated** – to capture the effect of the number of train kilometres covered by the applicant on workload required to process a safety certification application.
- **Number of staff employed by the applicant** – to determine whether the number of employees of the applicant organisation has an effect of the safety certification process workload.
- **Type of operation** – to determine the effect that the operation type has on the safety certification process workload (in our proposal of safety certification products we referred to three operation types: Passenger, Freight and Passenger & Freight).
- **Number of vehicles operated by the applicant** – to determine whether the number of vehicles the applicant operates has an effect on the safety certification process workload.

3.9 All 21 respondents provided answers to this question. Summary results are shown below in Figure 3.1 to Figure 3.5. Notably, there were very few NSAs who responded that the drivers we had identified were either 'Very Insignificant' or 'Insignificant'. This suggests that our identified drivers are important considerations in the development of a fees and charges structure for safety certification.

Figure 3.1: Geographic extent of operations

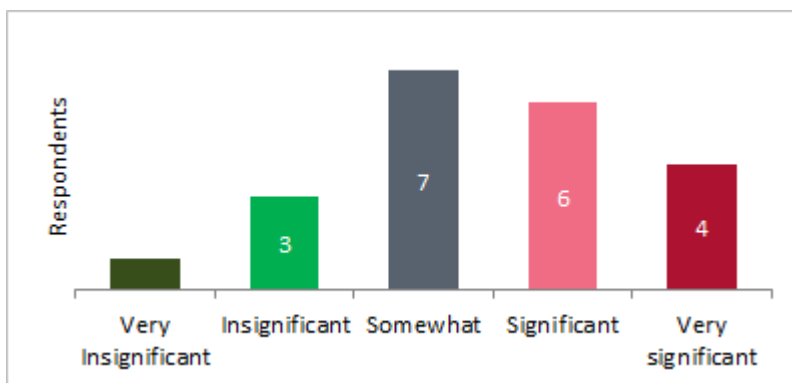


Figure 3.2: Volume of train services operated

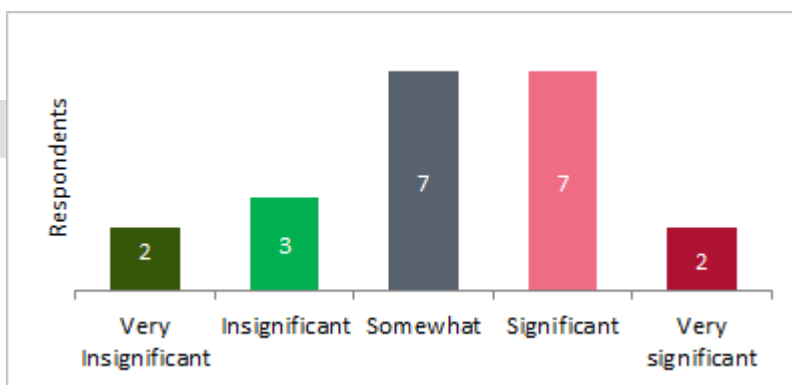


Figure 3.3: Number of staff employed by applicant

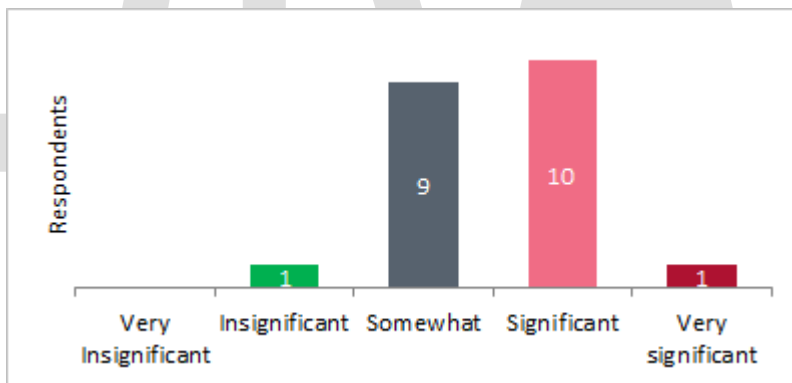


Figure 3.4: Type of operation

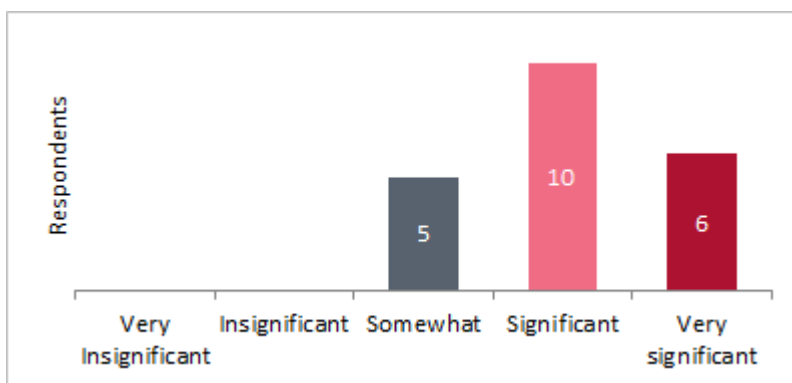
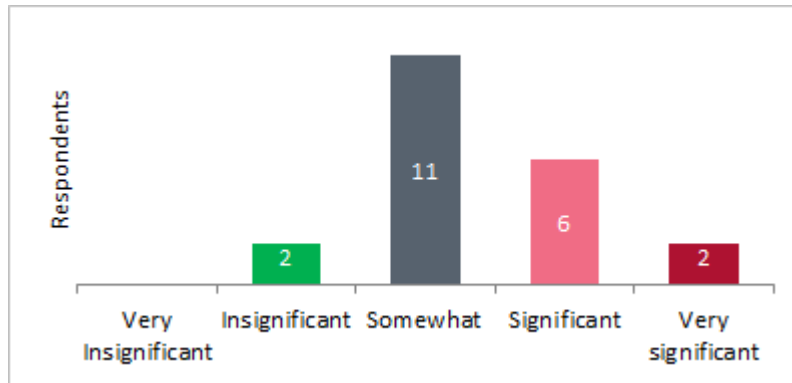


Figure 3.5: Characteristics of the infrastructure over which vehicles are to operate



Significance Metric

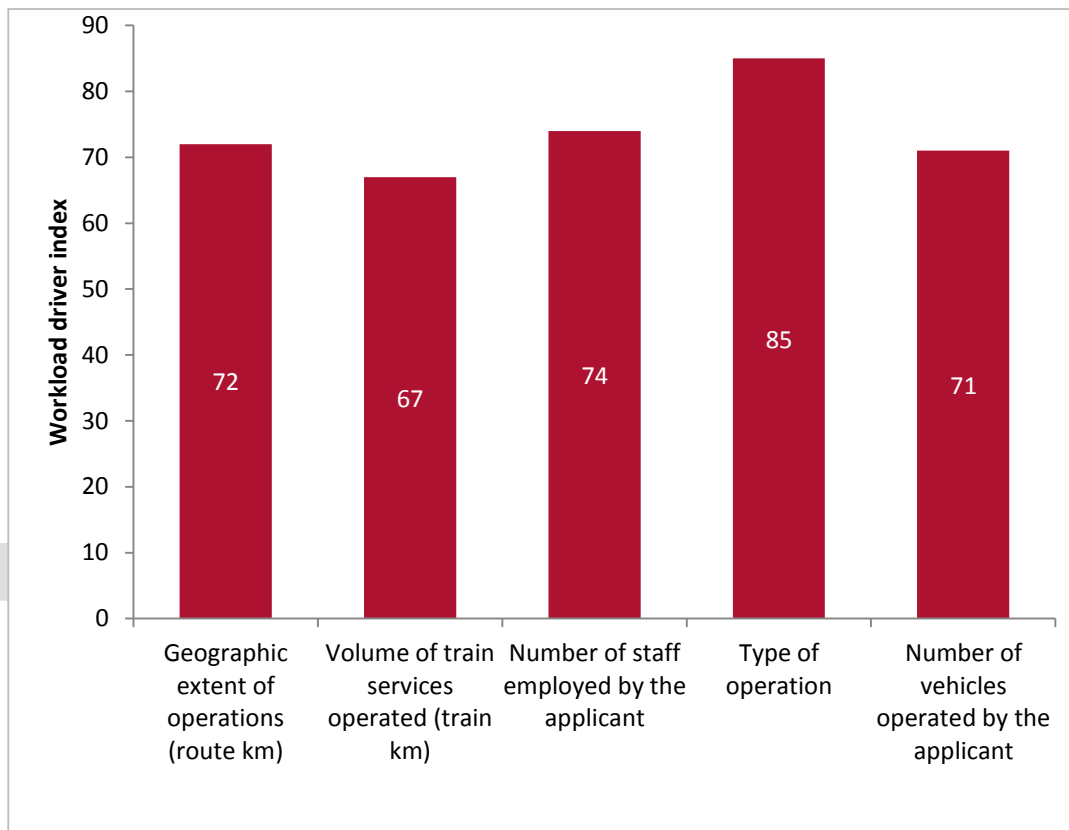
3.10 In order to gauge the aggregate significance of these factors a weighting was applied to each stakeholder response. Details of the weightings are shown in Table 3.3. By adding up the total weighting for each characteristic we can derive a significance score and determine which driver is the most significant and how significant it is.

Table 3.3: Significance weighting table

Significance	Weighting
Very Insignificant	1
Insignificant	2
Somewhat significant	3
Significant	4
Very Significant	5

3.11 With this weighting structure the highest significance score that a driver can be given is 105. This would mean all 21 NSAs had judged the driver to be Very Significant. As can be seen from the chart below (Figure 3.6), ‘type of operation’ is the most significant of the selected drivers with a significance score of 85. This is very high with an average significance weighting per NSA of 4.05, correlating to a level between Significant and Very Significant.

Figure 3.6: Aggregate significance of workload drivers



Other Workload Drivers

3.12 In order to allow Member State NSAs to identify their own workload drivers for our consideration, they were asked whether there are any other factors that affect the workload required to process an application for a safety certificate.

3.13 Their responses are summarised in Table 3.4. The two most cited drivers, experience of company and quality of application, are both drivers which indicate the importance of pre-engagement to the safety certification process. Organisations with little experience in the industry will benefit from support from the NSA in the production of their application. Similarly, pre-engagement will help to prevent the development of poor quality applications.

Table 3.4: Summary of NSA responses –safety certification workload drivers

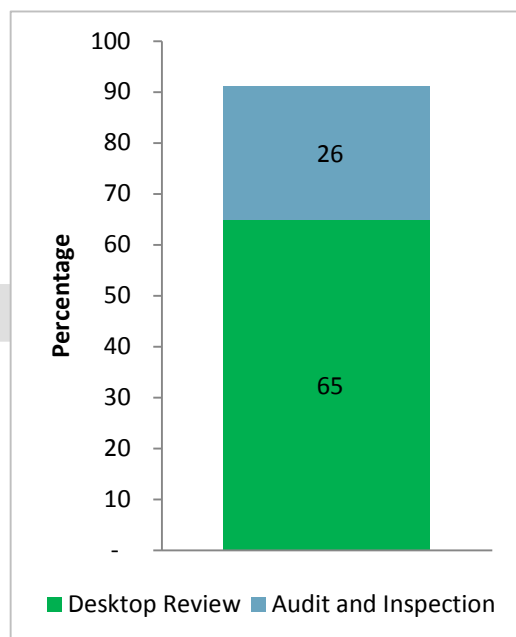
Driver	Number of NSA responses	% of NSAs
Experience of company	5	26%
Overall NSA workload	1	5%
Quality of application	6	32%
Punctuality of Application	1	5%

Workload split

3.14 To provide insight into the type of work involved in safety certification, the NSAs were asked what proportion of the workload relates to ‘desktop’ review of the SMS, and what proportion to audits and inspections undertaken during the assessment period.

- 3.15 Table 3.8 below shows the average split across all member states that provided a response to this question. The total is not 100 due to one NSA allocating 34% to 'desktop' review and 24% to audits and inspections, but not explaining what makes up the rest of the safety certification process.
- 3.16 Four NSAs or 20% of NSAs who responded, stated that they do not carry out audits or inspection during the assessment period.

Figure 3.7: Workload split



Fees Structure

- 3.17 The NSAs were asked about their current fee structures.
- 3.18 Of the 21 NSAs who provided a response to the questionnaire, the following 17 NSAs charge a fee for safety certification:

- Austria
- Croatia
- Denmark
- Finland
- Germany
- Greece
- Hungary
- Italy
- Lithuania
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland

3.19 The following four NSAs do not charge a fee for safety certification:

- Estonia
- France
- Latvia
- UK

3.20 NSAs who charged for safety certification were asked questions about the way that their fees are structured. These questions, and the information provided are set out below:

How are fees determined?

3.21 Of the 17 NSAs that charge a fee for safety certification, the majority (59%) charge a fee designed to covers the costs of the workload involved.

3.22 The rest of the NSAs either did not provide a response to this question or they charged a fee determined by other factors. These other factors were:

- fees based on the volume of documentation submitted; and
- fees based on the size of the applicant.

What is the basis for revisions to fees?

3.23 The majority of respondents that charge a fee for safety certification stated that the revision of fees is subject to national legislation.

3.24 When this qualitative data is cross referenced with the fees by product data provided by the NSAs it is clear that there are three broad groups of fee charging approaches as shown in Table 3.5.

Table 3.5: Fee charging approaches

Fee charging approach	Number of NSAs
A variable fee that is reflective of the workload involved in the safety certification process;	2
A flat fee for different safety certification products, but a fee that is substantial enough that the workload has been considered in the development of that fee;	13
A flat nominal fee which is clearly designed to cover nothing but basic administration involved in the safety certification process.	5

3.25 Our analysis of fees shown in the paragraphs below only includes data from those NSAs that charge for services.

Are there any special provisions for small and medium-sized enterprises?

3.26 Two NSAs that charge a fee for safety certification have special provision for small and medium-sized enterprises. The Greek NSA charges small and medium-sized enterprises half the fees that it applies to large enterprises. Similarly, the Swedish NSA states that the fees charged are related to the size of the RU.

3.27 The British NSA does not charge a fee for safety certification, but the safety levy paid by all RUs to cover the costs of safety certification is lower for small and medium-sized enterprises.

Reason for Not Charging a Fee

3.28 NSAs were also asked if they did not charge a fee for their role in the safety certification process, could they state the reason for not charging a fee.

- 3.29 Of the four NSAs that do not charge a fee for safety certification, three indicated that there is a specific tax or levy charged to all RUs which covers the costs of safety certification in the Member State.
- 3.30 It is our assumption that this safety levy is charged in all Member States and it funds the general operations of the NSA. The three NSAs who mentioned it in their response did so because it specifically funds safety certification (and vehicle authorisation).
- 3.31 It is important to note that, with the Agency assuming a significant proportion of the NSA’s responsibilities, the NSAs may have to reconsider the justification of the safety levy and adapt it according to the changed workload burden.

Workload, Costs and Fees Data

Comments on the Product List

- 3.32 We invited the NSAs to comment on the proposed product list for safety certification (shown in), based on the different services to be provided by the Agency, based on its responsibilities set out in the draft of what has since been adopted in the 2016 Agency Regulation.

Table 3.6: Safety Certification Product List

Application types	Operations types
First Single safety certificate	Passenger
	Freight
	Passenger and freight
Renewal of Single safety certificate	Passenger
	Freight
	Passenger and freight
Update of Single safety certificate	Passenger
	Freight
	Passenger and freight

- 3.33 Table 3.7 summarises the response of the NSAs to the product list.

Table 3.7: Summary of NSA responses – safety certification product list comments

Change or addition	Number of NSA responses	% of NSAs
There is no option for 'shunting only' operations	5	24%
These categories do not capture the true drivers of costs, fees and workload	7	33%
An application type capturing 'Amendment of a Single Safety Certificate' is required	1	5%

- 3.34 It is notable that the most common response was that the product list did not capture the characteristics of Safety Certification cases that influenced the workload. With this in mind it will be important to give consideration to the workload drivers, as discussed earlier in this chapter, in the formation of a fees and charges structure proposal.
- 3.35 Our proposal is that the other workload drivers that were specified by the NSAs or were considered of significance be reflected in the fee for safety certification. This will be achieved

by having rates based on charging a time and materials fee for the pre-engagement phase of safety certification and a fixed fee for the safety certificate assessment process.

- 3.36 Experience of the applying company and quality of the application are the two most significant workload drivers as demonstrated by the NSA questionnaire responses in Figure 3.6: Aggregate significance of workload drivers. Our proposal will ensure that the potential workload burden that could be caused by an application from an inexperienced company or by a poor quality application can be mitigated at the pre-engagement phase for which EURA will be fully reimbursed reducing the financial risk to the organisation. Further details about this proposal are provided in Chapter 5 of this report.

Estimates of Safety Certification Workload, Cost and Fees

- 3.37 The NSAs were asked to indicate the maximum, average and minimum, workload, costs and fees involved in the safety certification process. The charts set out in Figure 3.8 to Figure 3.13 below show this data by safety certification product.

Part A Safety Certification

- 3.38 Figure 3.8 below shows that the processing of a First Part A Safety Certification is more time intensive than a renewal or an update. This pattern is reflected in both the costs of that workload (Figure 3.9) and the fees charged for the safety certification (Figure 3.10).
- 3.39 Also notable though is that the workload range is greater for First Part A Safety Certifications and Renewals than for Updates. This is indicative of the fact that the workload levels for Updates are less variable than the other Safety Certificate products.
- 3.40 It is important to note in this chart that the average work load is lower than the minimum for Updates of Part A Safety Certificates. The data presented in the graphs is the average across all NSAs. There is, however, an incomplete dataset, with some NSAs providing information about the minimum workload level, some the average workload level, some the maximum workload level and others not providing data.
- 3.41 In some cases this produces unclear results. However, it does not preclude the charts being useful in the indication of the level and range of workload, costs and fees for different safety certification products.

Figure 3.8: Mean workload involved in a Part A Safety Certification across NSAs



3.42 The higher workload levels for First Part A Safety Certificate and for Renewals in comparison to Updates are reflected in the costs. There is a far smaller range in costs for Updates than for Renewals and for First Part A Safety Certificates which shows the lower levels of variability of the costs for Updates.

Figure 3.9: Mean cost of a Part A Safety Certification across NSAs



3.43 The cost and workload is reflected in the fees for the different safety certification products (Figure 3.10). However, there is not the same disparity between the variability of fees that was seen with costs and workload. First Part A Safety Certificate, Renewal and Update all have a similar variability in the fees that are charged.

3.44 Fees for Part A Safety Certification exceed costs on a minimum, maximum and average basis. This is notable given that the majority of NSAs responded that the basis for their fees was that they covered costs.

Figure 3.10: Mean fees for a Part A Safety Certification across NSAs

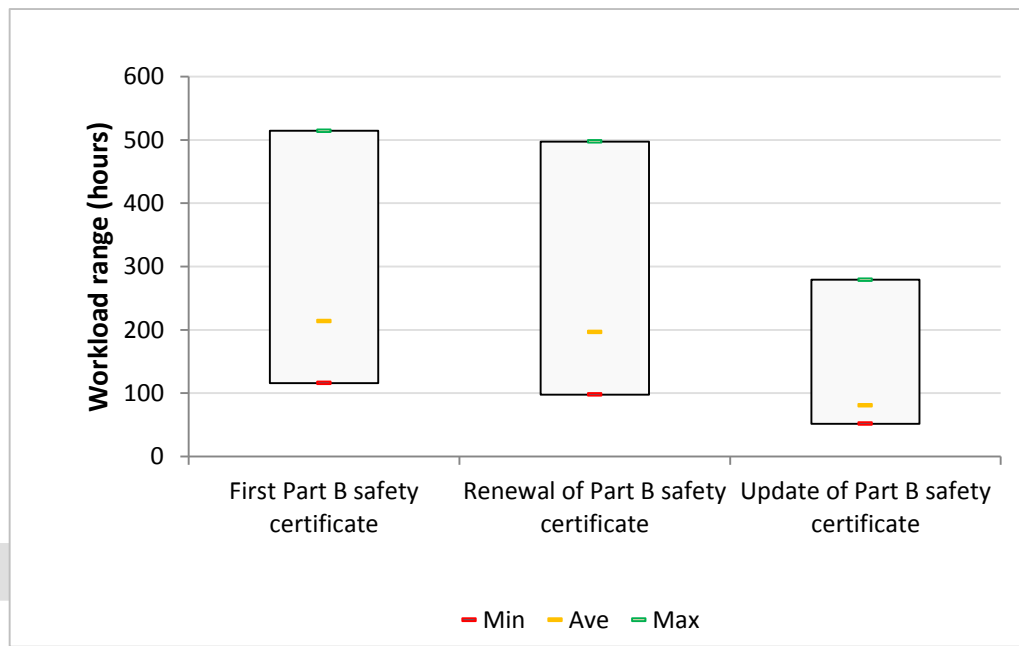


Part B Safety Certification

3.45 As with Part A Safety Certification, the workload is greater for a First Part B Safety Certification and Renewals than for Updates (Figure 3.11).

3.46 The variability of the workload for Part B however, is greater for all three products than Part A. The difference between the average maximum and minimum workload for First Part B safety certification is 400 hours compared to 200 hours for First Part A Safety Certification. The average minimum workload across the NSAs is between 100 and 150 hours for both Part A and Part B First Safety Certification. The average maximum workload for part B however, is 510 hours compared to 330 hours for First Part A safety certification. A similar level of disparity between variability levels exists for Renewals and Updates.

Figure 3.11: Mean workload involved in a Part B Safety Certification across NSAs



3.47 A similar pattern to the workload is reflected in the costs. Also, when compared to the Part A costs the same differences arise. We see increased ranges between the average maximum and minimum costs across the NSAs.

Figure 3.12: Mean costs of a Part B Safety Certification across NSAs



3.48 In the case of fees, the pattern of costs and workload, demonstrated above, is not reflected. Part A Safety Certification products and Part B Safety Certification products have very similar fee levels. This is indicative of the fact that many Member State NSAs do not have a different fee structure for Part A and Part B certification products.

3.49 Fees for Part A and Part B safety certification exceed costs on a minimum, maximum and average basis. This is notable given that the majority of NSAs responded that the basis for their fees was that they covered costs.

Figure 3.13: Mean fees for a Part B Safety Certification across NSAs



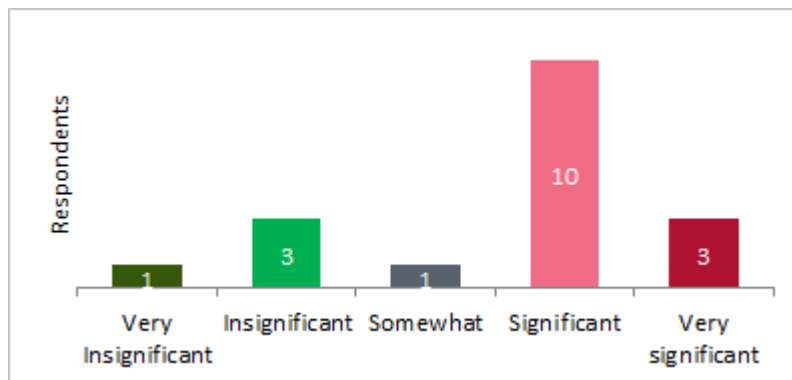
Stakeholder Questionnaire: Vehicle Authorisation

Workload Drivers

3.50 NSAs were asked to indicate how significant the characteristics of the infrastructure over which vehicles are to operate are to the workload required to process vehicle authorisations.

3.51 18 respondents provided answers to this question. Notably, there were very few NSAs responding that this was either Very Insignificant or Insignificant to workload (Figure 3.14). 72% of respondents answered either significant or very significant. This indicates that the driver should be an important consideration in the development of a fees and charges structure for vehicle authorisations.

Figure 3.14: Characteristics of the infrastructure over which vehicles are to operate



Other Workload Drivers

3.52 In order to identify other potential work load drivers, NSAs were also asked whether there are any other factors that affect the workload required to process an application for a vehicle authorisation. Their responses are summarised in Table 3.9 below. One of the two most cited drivers, (quality of application) indicates the significance of pre-engagement to the vehicle authorisation process. Small organisations or organisations with little experience in the

industry will benefit from support from the NSA to prevent the development of poor quality applications.

Table 3.8: Summary of NSA responses – vehicle authorisation workload drivers

Driver	Number of NSA responses	% of NSAs
Experience of company	2	11%
Authorisation Type	2	11%
Vehicle Type	3	17%
Overall NSA workload	1	5%
Quality of application	3	17%

3.53 Differences in workload due to the other most cited driver (Vehicle Type) are captured by our proposed vehicle authorisation products list.

Pre-engagement Workload

3.54 In order to collate information about what was involved in the pre-engagement phase the NSAs were asked to note pre-engagement workload drivers.

3.55 Their responses are summarised in Table 3.10 below. The most cited driver, (complexity of vehicle) is a factor which was considered in our development of the vehicle authorisation products list.

Table 3.9: Summary of NSA responses – vehicle authorisation pre-engagement workload drivers

Driver	Number of NSA responses	% of NSAs
Complexity of vehicle	9	50%
Completeness of submission	1	5%
Applicant's experience	3	17%
Size of application	4	22%

Costs and Fees Structure

3.56 Of the 21 NSAs who provided a response to this questionnaire, 18 charge a fee for vehicle authorisation:

- Croatia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Italy
- Lithuania
- Poland
- Romania
- Slovakia

- Slovenia
- Spain
- Sweden
- Switzerland

3.57 Two NSAs do not charge a fee for vehicle authorisation:

- Latvia
- UK

3.58 One NSA (Austria) did not provide information regarding vehicle authorisation.

3.59 NSAs who charged for vehicle authorisation were asked questions about the way that fees are structured. These, and the information provided, are set out below.

How are fees determined?

3.60 Of the 18 NSAs that charge a fee for vehicle authorisation, 44% state that the fee is designed to cover the costs of the workload involved.

3.61 The rest of the NSAs did not provide a response to this question. Only one NSA responded with another factor which was that they charged fees based on salary costs of the jobs, but also factoring in ability to pay.

What is the basis for revisions to fees?

3.62 The majority of respondents that charge a fee for vehicle authorisation state that the revision of fees is subject to national legislation.

Are there any special provisions for small and medium-sized enterprises?

3.63 One fee charging NSA has special provisions for small and medium-sized enterprises. The French NSA has a fee for vehicle authorisation which takes into account the financial capacity of the applicant.

3.64 The British NSA does not charge a fee for vehicle authorisation, but the safety levy paid by all railway service providers to cover the costs of vehicle authorisation is lower for small and medium-sized enterprises.

Reason for Not Charging a Fee

3.65 NSAs were also asked if they did not charge a fee for their role in the vehicle authorisation process, could they state the reason for not charging a fee.

3.66 The two NSAs who do not charge a fee for vehicle authorisation stated that there is a specific tax or levy which covers the costs of vehicle authorisation in the Member State.

Pre-engagement Fees

3.67 The NSAs were asked about their charges for the pre-engagement phase of vehicle authorisation. Specifically, they were asked on what basis are the fees charged.

3.68 More than one quarter of NSAs have a pre-engagement phase which is state funded. Given the apparent significance of the pre-engagement phase in terms of workload it is notable that only three NSAs have fees designed to cover the costs to the NSA of pre-engagement (Table 3.10).

Table 3.10: Summary of NSA responses – basis of pre-engagement charges for vehicle authorisation

Fees basis	Number of NSA responses	% of NSAs
No fees charged for pre-engagement	2	11%
Fixed fee for pre-engagement	1	5%
Fees to cover costs for pre-engagement	3	17%
State funded pre-engagement	5	28%
Initial pre-engagement is not charged for, extensive pre-engagement is charged for	2	11%
Pre-engagement is included in the overall vehicle authorisation fee	2	11%

Other Costs

3.69 To ensure that we were capturing all of the costs incurred in the vehicle authorisation process the NSAs were asked to note any non-staff costs.

Table 3.11: Summary of NSA responses – other costs of vehicle authorisation

Other Costs	Number of NSA responses	% of NSAs
Accommodation/travel costs	5	28%
Administration costs	3	17%
Consultancy costs	1	5%

Workload, Costs and Fees Data

3.70 We proposed the product list below for vehicle authorisation, based on the different services provided by Agency which was set out in the 2016 Agency Regulation.

Table 3.12: Vehicle Authorisation Product List

Authorisation type	Vehicle Category
New Basic Design Type	Complex
	Standard
	Simple
Existing Basic Design Type	Complex
	Standard
	Simple
Existing Basic Design Type with extended area of use	Complex
	Standard
	Simple
Changed Basic Design Type	Complex
	Standard
	Simple

Comments on the Product List and Vehicle Categorisation

3.71 In order to gauge the views of the NSAs on our proposal for a product list we invited comments on it.

3.72 There was general agreement with the proposed authorisation types with only a few comments provided by the Member State NSAs. These comments were aimed at small details of the proposal rather than the wider product list framework.

3.73 There was also broad agreement about the vehicle categorisation framework. There were several comments about which vehicle types should come under which vehicle categories and also there was a question about how necessary the splitting out of ‘complex’ and ‘standard’ vehicle category is. The suggestion was that two categories, simple and complex, would be sufficient.

Estimates of Vehicle Authorisation Workload, Cost and Fees

3.74 The NSAs were asked to indicate the maximum, average and minimum, workload, costs and fees involved in the authorisation of a vehicle. The charts shown in Figure 3.15 to Figure 3.23 below show this data by vehicle authorisation product.

Complex Vehicle Authorisation

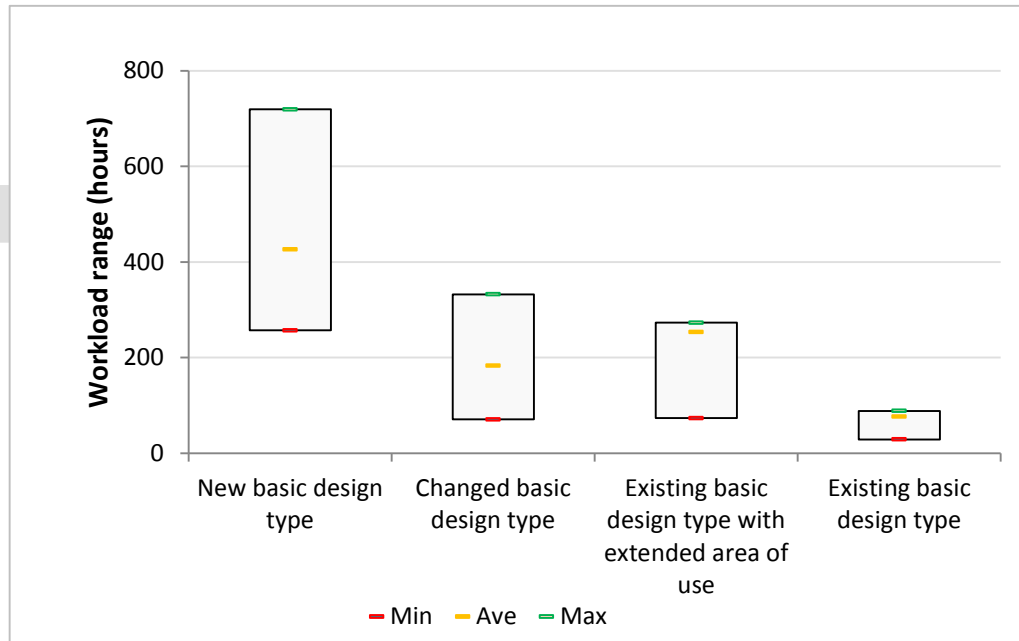
3.75 The chart below indicates that the authorisation of a complex, New Basic Design Type vehicle is considerably more labour intensive than a Changed Basic Design Type, an Existing Basic Design Type with Extended Area of Use or an Existing Basic Design Type. The data provided by the NSAs show that this pattern is reflected in the costs of that workload and the fees charged.

3.76 New Basic Design Type authorisation has a very wide range between the average minimum and average maximum workload, costs and fees. The average minimum workload, for

instance, is 257 hours, while the average maximum is 720 hours. This indicates that there is significant variance in the workload for this product.

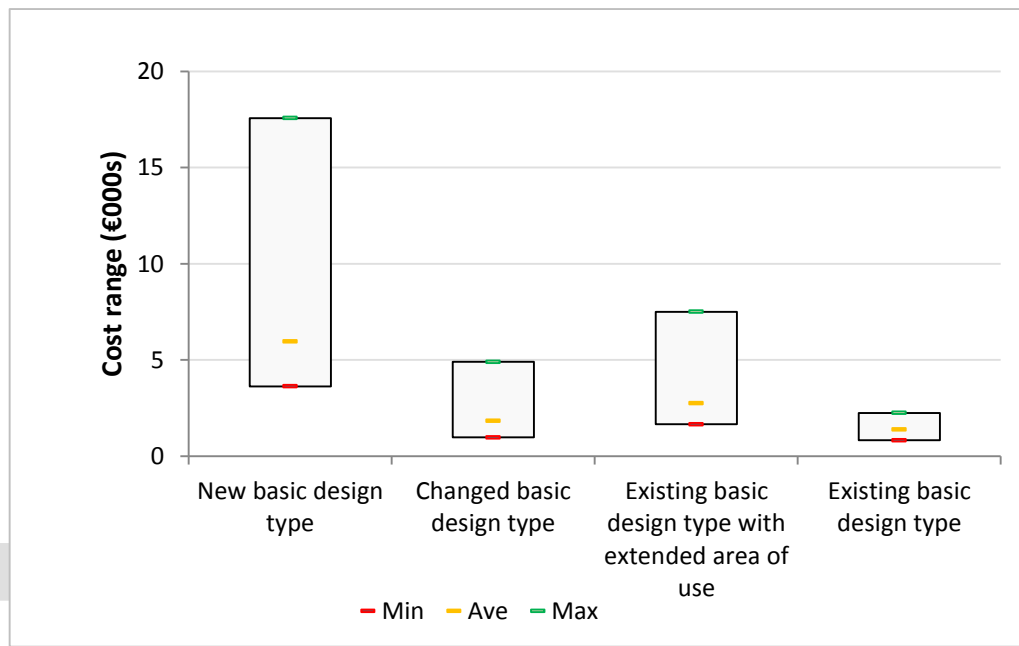
- 3.77 In terms of workload involved, the authorisation of a complex, Changed Basic Design Type and an Existing Basic Design Type with Extended Area of Use are quite similar with average workloads of 180 and 270 hours respectively.
- 3.78 The authorisation of a complex, Existing Basic Design Type has a less intensive workload requirement with an average workload of 77 hours and the average maximum workload across the NSAs of 89.

Figure 3.15: Mean workload for authorisation of a complex vehicle across NSAs



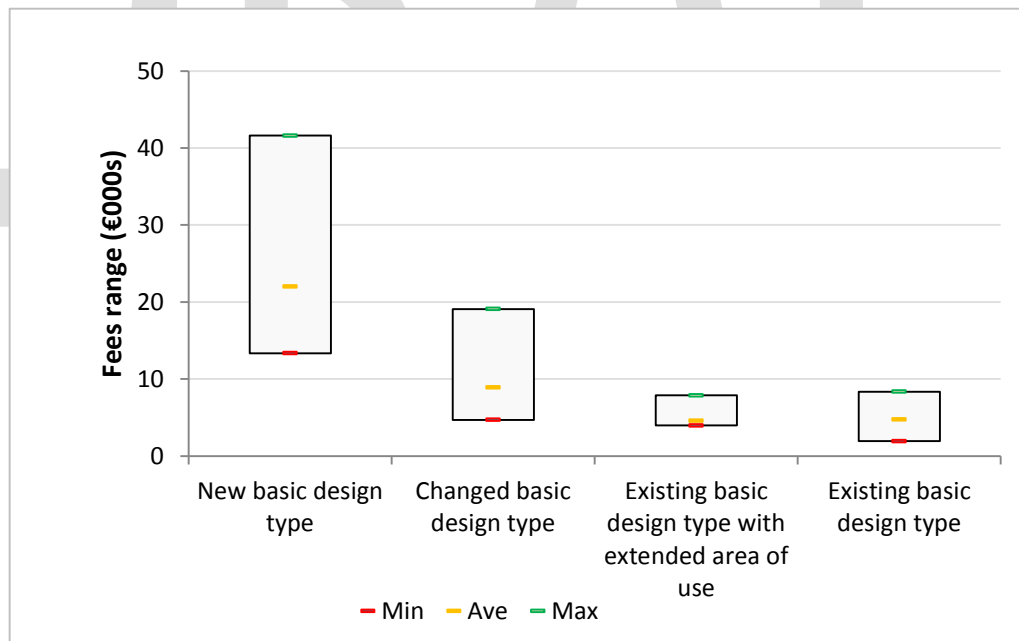
- 3.79 It can be observed from the costs for complex vehicle authorisation (Figure 3.16) that the average cost for Changed Basic Design Type, Existing Basic Design Type with Extended Area of Use and Existing Basic Design Type authorisation are relatively similar when compared to the far more costly New Basic Design Type authorisation. However, if the averages of the maximum ranges for these products are considered there is greater variation.
- 3.80 Authorisation of an Existing Basic Design Type with Extended Area of Use has an average maximum cost of €7,500 compared to €4,900 for a Changed Basic Design Type and €2,250 for an Existing Basic Design Type. Clearly, there is far greater variability in the cost of the authorisation of an Existing Basic Design Type with Extended Area of Use. This could be due to the fact that cost is dependent upon how large the extension of the area of use is and characteristics of the infrastructure within the area of extension.

Figure 3.16: Mean cost for authorisation of a complex vehicle across NSAs



3.81 The data received on fees tell a similar story, with applicants for New Basic Design Type authorisation being charged on average, significantly more than for the other three vehicle authorisation products.

Figure 3.17: Mean fees for authorisation of a complex vehicle across NSAs



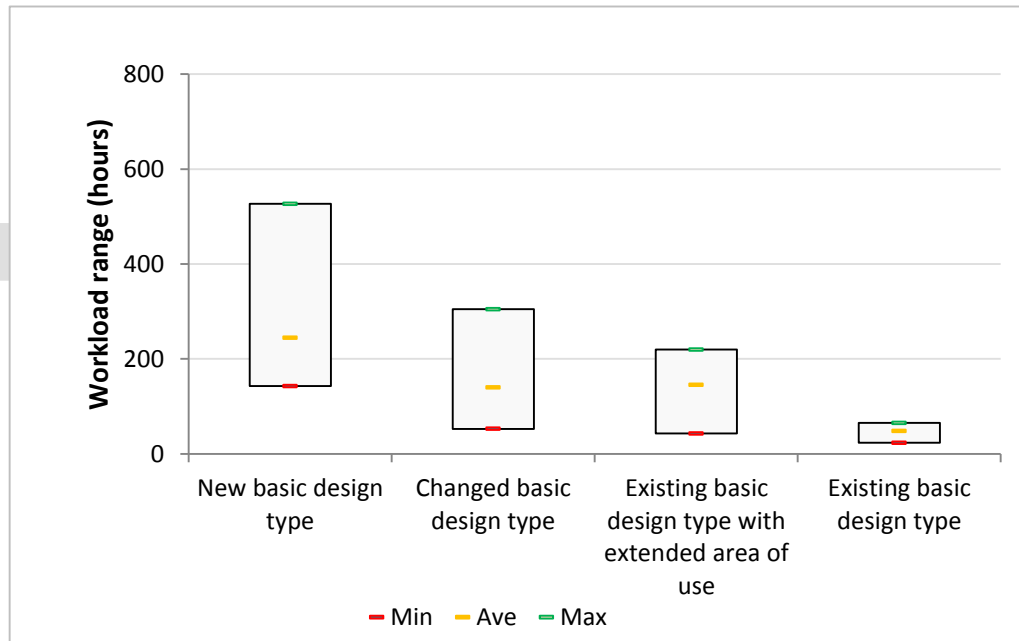
Standard Vehicle Authorisation

3.82 The authorisation of standard New Basic Design Type vehicles follows a similar pattern to complex vehicles, being more work, more costly and having a higher fee attached than the other authorisation products.

3.83 In comparison to complex vehicles of New Basic Design Type, authorisation of standard vehicles of New Basic Design Type is less labour intensive. However, for the other

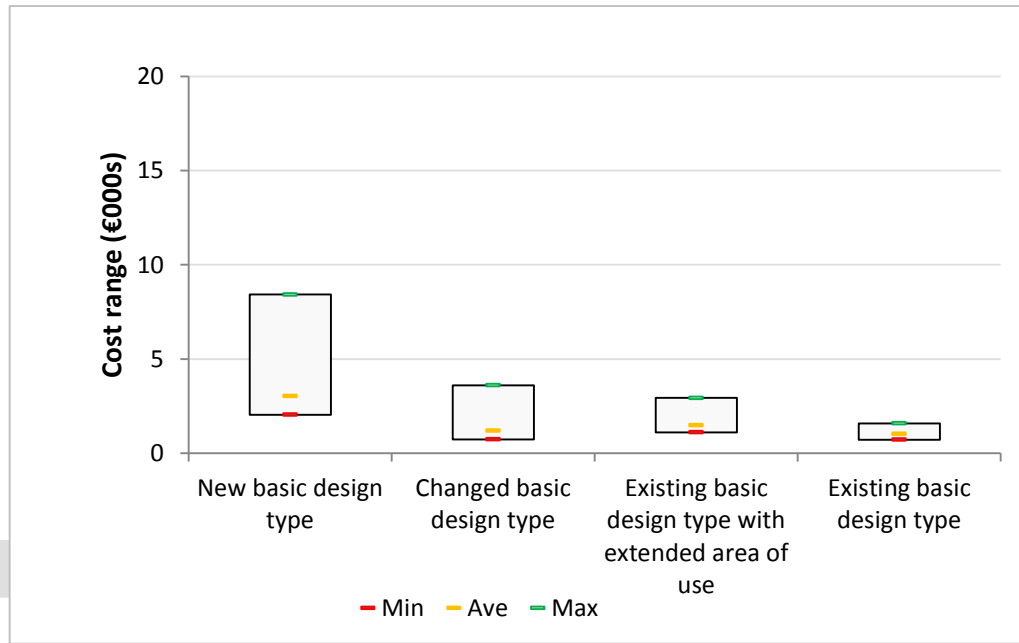
authorisation products, workload is similar between standard and complex. Average workload of authorisation of Changed Basic Design Type for a standard vehicle is 139 hours and for a complex vehicle it is 182. Comparing Figure 3.18 with Figure 3.15, it can be seen that the workload ranges for standard and complex vehicles are similar. Indicating that differentiation between complex and standard, may not be necessary. This is further backed up by a comment from a Member State NSA indicating that three vehicle categories are not necessary as there is little difference between the standard and complex categories in terms of workload involved in vehicle authorisation.

Figure 3.18: Mean workload for authorisation of a standard vehicle across NSAs



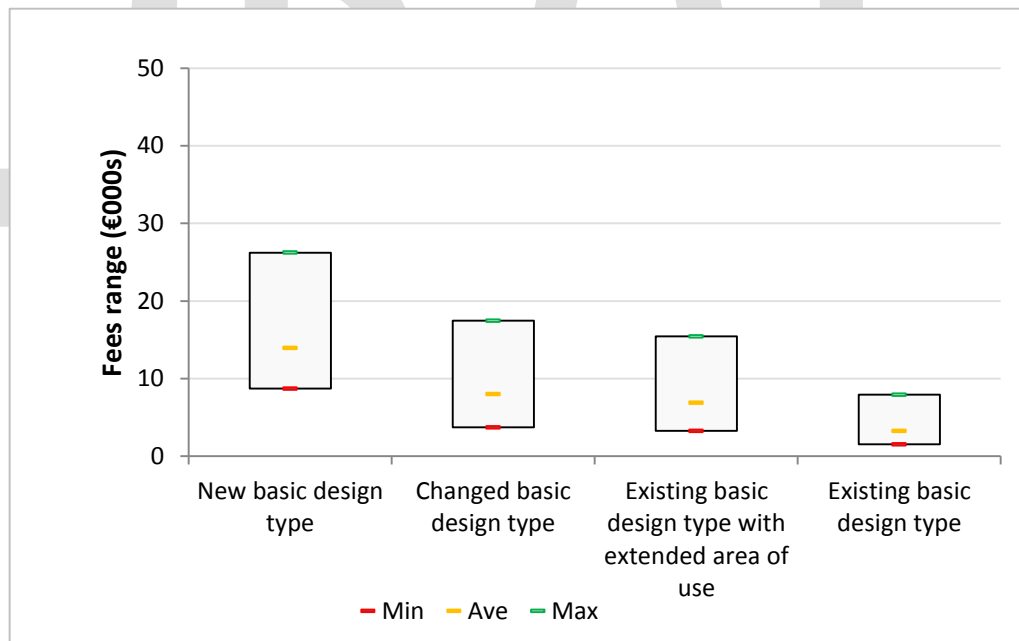
- 3.84 Costs follow a similar pattern to workload in terms of the difference between the costs of New Basic Design Type authorisation and the other three authorisation types (Figure 3.19).
- 3.85 Costs for all the standard vehicle authorisation products are lower than the costs for complex vehicle authorisation. This may be indicative of the type of labour required for the different vehicle categories. While workload is similar between complex and standard vehicle authorisation (except for New Basic Design Type) costs are different. Complex vehicle authorisation requires more input from technically skilled staff making it a more costly process, but not necessarily a process that takes more time.

Figure 3.19: Mean cost for authorisation of a standard vehicle across NSAs



3.86 3.83 The fees charged for vehicle authorisation of standard vehicles have broadly the same pattern as the costs. However, there is a far greater range in the level of fees charged than in the costs of the process.

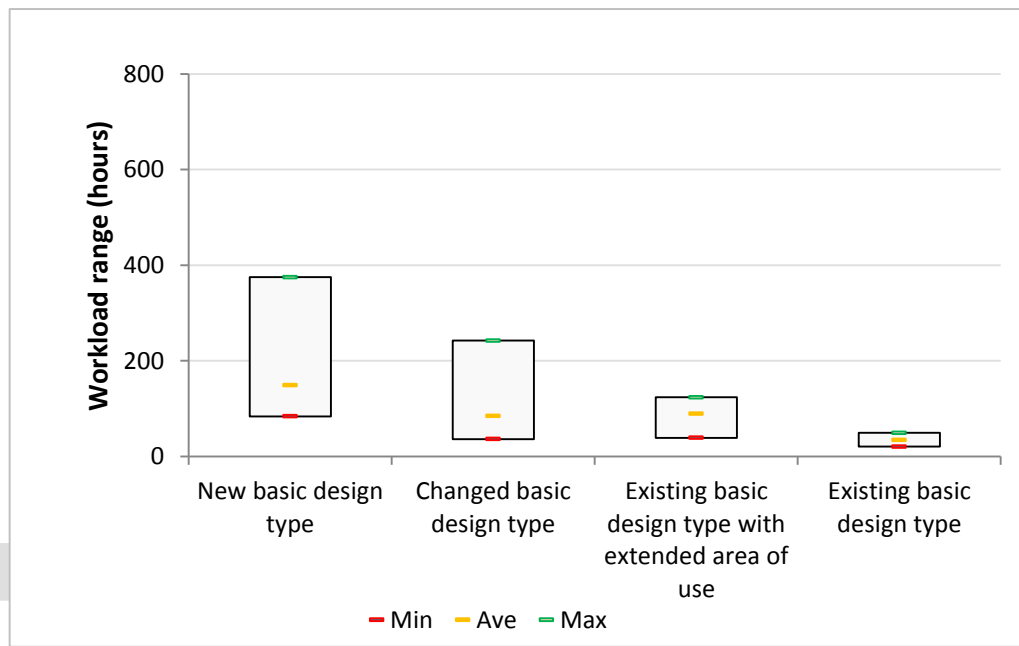
Figure 3.20: Mean fees for authorisation of a standard vehicle across NSAs



Simple Vehicle Authorisation

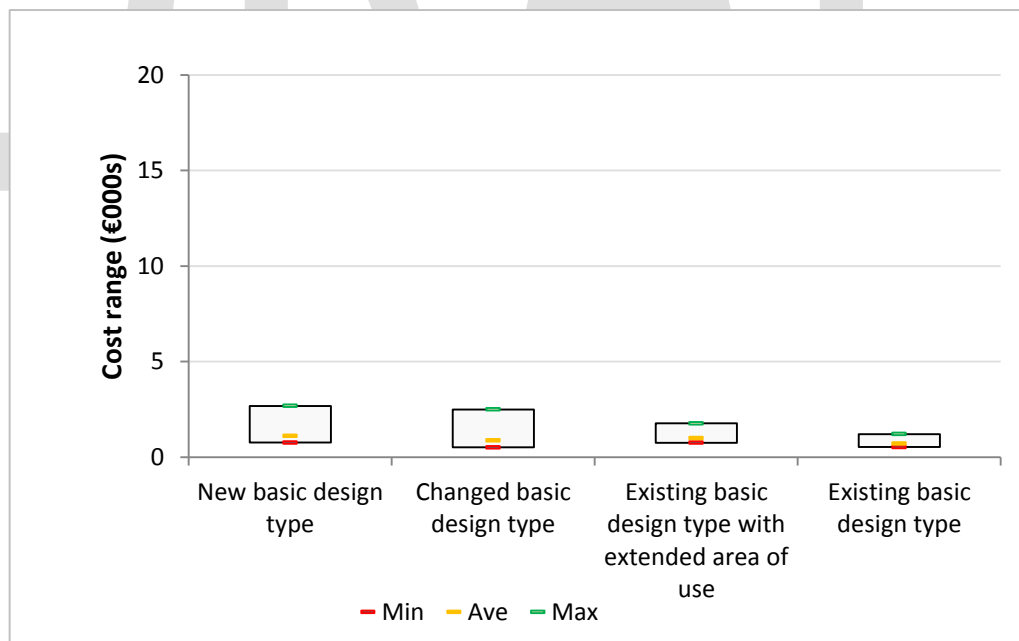
3.87 The authorisation of simple, New Basic Design Type vehicles is significantly less labour intensive than the authorisation of standard and complex vehicles. However, the other types of simple vehicle authorisations involve a similar level of workload to the complex and standard vehicle counterparts.

Figure 3.21: Mean workload for authorisation of a simple vehicle across NSAs



3.88 According to the data received from the Member State NSAs, the costs of simple vehicle authorisation are relatively similar across the authorisation types (Figure 3.22). This is indicative of the fact that the work involved in the authorisation is less onerous and more predictable due to the simplicity of the vehicle.

Figure 3.22: Mean cost for authorisation of a simple vehicle across NSAs

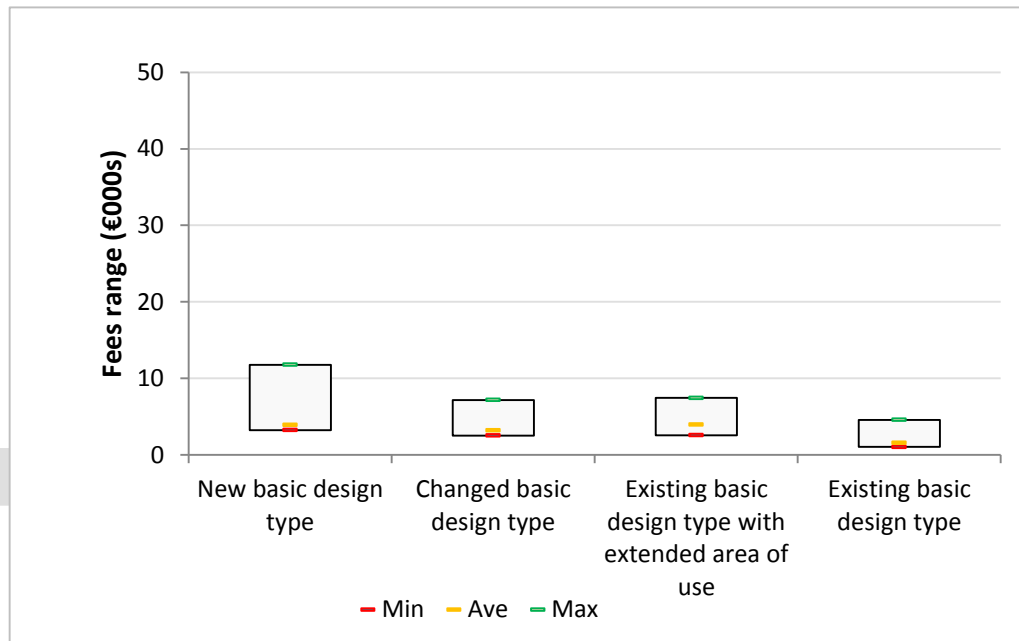


3.89 The fees charged for vehicle authorisation of simple vehicles broadly have the same pattern as the costs of the process. However, there is a far greater range in the level of fees charged than in the costs of the process.

3.90 As with safety certification the fees for complex, standard and simple vehicle authorisation exceed costs on a minimum, maximum and average basis. The range is also greater between minimum and maximum costs and fees for vehicle authorisation products. This is notable

given that the majority of Member State NSAs responded that the basis for their fees was that they covered costs.

Figure 3.23: Mean fees for authorisation of a simple vehicle across NSAs



Case Studies

3.91 Case study interviews have been conducted with the NSAs of Norway, UK, France, Belgium and Poland. Key points arising are summarised below. Detailed notes of these interviews have been documented separately and copied to the Agency.

Norway

Vehicle authorisation

3.92 Pre-engagement is viewed as a very important part of the process. The NSA gave the example of the authorisation of the Class 74 and 75 EMUs which had a pre-engagement phase between 2008 and 2010.

3.93 The NSA has two additional levels of authorisation:

- transport authorisation: transport of vehicles by rail (train is dead hauled by authorised locomotive); and
- testing authorisation: permitting testing to be undertaken on a conditional basis.

3.94 Because of the climatic conditions of Norway’s extreme winter weather, extra requirements related to the area of use are sometimes required.

3.95 The formal submission for an authorisation application is usually late in the process. The NSA is under a legal obligation to make an authorisation decision within one month of receiving an application.

3.96 The NSA had some concerns regarding Freedom of Information legislation and how requests for documents might be handled by EUAR.

UK

Vehicle authorisation

- 3.97 There were significant differences between the NSAs involved in the Velaro E320 project, both in terms of culture and the processes they employ in vehicle authorisation. These factors had a significant bearing on the complexity and duration of the Velaro E320. In starting out, the NSA believes Siemens did not have a good appreciation of the different NSA approaches.
- 3.98 An authorisation involving the complexity of the Velaro E320 case could not be practical without the resources and engagement of multiple NSAs.
- 3.99 The NSA sees the value in assessment bodies. By placing faith in the accredited bodies, they are able to undertake authorisations more efficiently and have experienced few problems with their process for rolling stock projects.

France

Safety certification

- 3.100 The NSA assumes that EUAR would not undertake supervision, but believed that the link between supervision and granting a safety certificate is very important. What the applicant may include in their SMS may not be applied in practice.
- 3.101 The TI-Factory safety certificate was an unusual project as the application for a Part A certificate was to both the French and Belgium NSAs. This is not normally the case, with an applicant usually choosing a Member State Part A application and then a subsequent Part B application for other Member State(s).

Vehicle authorisation

- 3.102 The most significant cost to the applicant for vehicle authorisations is not the charges of the NSA but the testing and work preparing the documentation.
- 3.103 The NSA has defined categories of vehicle authorisation: 'simple' and 'standard'. The complexity of the authorisation is used as a measurement as to which category the vehicle falls into. A high speed trainset which is TSI compliant would be a relatively 'simple' and straightforward authorisation, while a diesel locomotive intending to operate in different Member States with different signalling systems would be more complex and defined as 'standard'.
- 3.104 The French NSA was the lead NSA in the Velaro E320 vehicle authorisation.

General comments

- 3.105 The maturity of the applicant is an important factor in determining the work required to process both safety certificate and vehicle authorisation applications. Applicants familiar with the relevant processes will typically require less support from the NSA than first time applicants that will not have had the experience of previous applications. However, the NSA doesn't consider pre-engagement as a formal part of the authorisation process and the applicant should not be charged. Charging should only start when the NSA starts to review draft technical files.

Belgium

Safety certification

- 3.106 The process doesn't officially start until an administrative check has been completed by the NSA to make sure the application contains all the necessary documents. If some documents are missing or incomplete, the NSA will inform the applicant who has time to make the corrections without being charged.
- 3.107 Pre-engagement is not mandated for safety certificate applicants and it is rare for applicants to take advantage of this. The first time the NSA usually views the application is when the administrative check takes place.
- 3.108 Safety certificate applications are charged a fixed fee whether or not the certificate is granted. The amount charged is fixed by a Royal Decree.

Vehicle authorisation

- 3.109 The NSA sees value in being involved through every stage of the vehicle authorisation process and actively encourages meetings and the sharing of test results and draft documents with the NSA in advance of a formal application.
- 3.110 The NSA noted that an application for authorisation can take several years with no communication to the NSA for long periods of time. The Velaro E320 project is an example where the applicant first contacted the NSA in 2011 but didn't come back to the NSA until 2015.
- 3.111 Pre-engagement is a legal requirement for vehicle authorisations with the applicant submitting a 'concept file' to the NSA. The 'concept file' sets out details of the project and defines which versions of TSIs and standards the project will be complying with.
- 3.112 The NSA noted that it did not question components for an application declared to be in conformity with standards by the NoBo involved in an application. However, where a request for a derogation for a non-conformity is made, a more detailed evaluation of the application is required.
- 3.113 Applicants for vehicle authorisations are only charged if and when the authorisation is granted. The amount charged is dependent on how many days the NSA has worked on the project but is fixed by a Royal Decree.

Poland

Safety Certification

- 3.114 There is no formal pre-engagement process and the applicant is not charged for any help or assistance prior to the submission of the application. It is rare that any applicants pre-engage.
- 3.115 Charging is a two-step process mandated by Polish law for both safety certification and vehicle authorisation. The first payment is a fixed amount that the applicant has to pay in advance of the certificate being received (which is an amount set down in law and known to the applicant). The rest is paid after the certificate is issued and is dependent on how much time was spent on the application. The amount charged is based on the amount of time spent reviewing the application, but Polish law caps this at a maximum of €5,500.

- 3.116 The NSA estimated that the usual timescale for Part A is three months and for Part B one month. However, they gave an example of a particularly problematic application from a freight company that made four applications over the course of six months for a Part A certificate.

Vehicle authorisation

- 3.117 Polish law stipulates the timescales for reviewing an application. Four months after a submission, a decision must be made. On average, this isn't an issue as applications take between one to two months to review based on their complexity.
- 3.118 Again there is no formal pre-engagement but the applicant will sometimes ask for help and clarification from the NSA.
- 3.119 Only staff costs are incurred when processing a vehicle authorisation. Occasionally the NSA will hire an expert to help assess an application, but the cost is not passed onto the applicant and it is very rare that this happens.

Common themes and conclusions

- 3.120 The Velaro E320 authorisation seems to be the exception rather than the rule. The problems and delays encountered by the NSAs are perhaps to be expected with a large project involving multiple NSAs, but not common to the authorisation projects they usually deal with.
- 3.121 The charging regime differentiates depending on whether a safety certificate or a vehicle authorisation is the end product. Safety certification tends to be a fixed fee charge³² and not dependent on whether or not the certificate is granted. Vehicle authorisations are linked to the amount of hours / days the NSA has worked on the project. Where a fee is charged (in Norway this wasn't the case), the amount is set by domestic legislation. Only Poland appear to cap charges for both products.
- 3.122 Belgium's vehicle authorisation charging is linked to a successful application for authorisation; if the authorisation is not granted, no fee is charged. This could be seen to be a conflict of interest and putting undue pressure on the NSA to grant an authorisation.
- 3.123 Pre-engagement is an important step in the process, with the amount of work varying dependent on the maturity of the applicant. Although the French NSA doesn't recognise it as a formal part of the vehicle authorisation process, all the NSAs interviewed acknowledged its value. There doesn't appear to be much demand for pre-engagement from applicants of safety certificates, although all NSAs offer the possibility if needed.
- 3.124 The NSAs interviewed stated that they do not re-check Part A safety certificates or contact the issuing NSA when processing a Part B application. Although NSAs may read Part A safety certificates to become familiar with the applicant, there generally appears to be trust among NSAs.
- 3.125 Safety certification and supervision is closely linked. This offers many benefits to NSAs for renewals of safety certificates as they can monitor whether the SMS has taken into account any problems raised during the previous certification. Belgium and France in particular mentioned that they look for continuous improvement when reviewing a renewed application for a safety certificate.

³² However, there are exceptions (e.g. Sweden)

- 3.126 The NSAs all commented on the length of the vehicle authorisation process. Vehicle authorisations can take up to five years to be granted, depending on the complexity of the project. During this time, NSAs have varying degrees of involvement which they see as valuable for spotting any potential issues early on and gaining knowledge of the project that informs their authorisation decision at the end.
- 3.127 All NSAs have workloads that come in peaks and troughs and used planning and knowledge sharing to manage this. The number of staff working on both the authorisation of vehicles or granting of safety certificates varied across NSAs. However, no member of staff appeared to be working on applications full time. NSAs also worked on, for example, supervision, attending EUAR meetings, national rules and international projects.
- 3.128 The UK, Polish and Norwegian NSAs will usually make an authorisation decision within a month of the application being received. This timescale is a legal requirement in Norway.
- 3.129 When an authorisation has been granted, NSAs still have a role to play. In Norway, the NSA identified that new vehicle types may need modifications, in France the NSA will take the authorisation into account in its supervision activity, and in Poland a 'control' check (similar to an audit) is performed.

DRAFT

4 Certification practices and charges in the aviation industry

Introduction

4.1 As part of this study, we have examined the framework in use by EASA in issuing airworthiness certificates and air operator certificates (AOCs) with the aim of exploring where there are established practices that might be relevant and applicable in the European rail industry.

4.2 Whilst there are fundamental differences in technical terms between the aviation and rail industries, it is noteworthy that Air Operator Certification in the aviation industry bears many similarities with Safety Certification in the European rail industry. Similarly, Type Certification and Airworthiness Certification in the aviation industry collectively bear similarities with Vehicle Authorisation.

The Role of EASA in certifying aeronautical products and air operators

4.3 Certification of aeronautical products in the European aviation industry includes but is not limited to:

- Type certification to approve an aircraft design for production - there are various types of type certification including supplementary type certification for designs with major modifications and repair design approvals following repairs to an aircraft; and
- Airworthiness certification to approve the airworthiness of a specific aircraft (i.e. that it operates as specified in the approved design).

4.4 EASA shares responsibility for the certification of aeronautical products, organisations and personnel with national competent authorities, or national aviation authorities (NAAs). Under Commission Regulation (EU) No 748/2012, EASA is entirely responsible for Type certification of EASA aircraft and competent authorities are responsible for the issue of airworthiness certificates.

4.5 Additionally, Commission Regulation (EU) No 965/2012 on air operations comprises seven Annexes which contain detailed rules on the award of Air Operator Certificates (AOCs), the organisational requirements for air operators. EASA's role in this is largely that of a regulator, setting Europe-wide rules and standards, evaluating third-country certificates and verifying Acceptable Means of Compliance (AMCs) of Member States that differ from EASA's AMCs. The award of AOCs is the task of national authorities, which also carry out continuing oversight of AOC holders, including annual audits and ad-hoc inspections. However, EASA is involved in the approval of production organisations and maintenance organisations, particularly where

facilities are located in multiple member states or outside of the EU. For example, Airbus, which has facilities in a number of Member States, is granted production approval by EASA.

- 4.6 In summary, EASA approves Type certification applications originating from applicants directly and produces a scheme of charges for this work. It also sets Europe-wide standards in a number of areas including design, production, airworthiness and operator certification but is otherwise not involved in approving certification applications analogous to those considered as part of the current study. National authorities are responsible for the approval of applications for airworthiness certification and air operator certification.
- 4.7 It should also be noted that, similar to EC regulations concerning the rail industry, Member States were permitted to opt-out, or exempt themselves, from new rules regarding technical requirements for air operators on a temporary basis under EC Regulation 965/2012. However, these exemptions were permitted for a period of only two years unlike exemptions in the rail industry, some of which are permitted for up to 15 years and others in perpetuity³³.

Fees and Charges for certification of aeronautical products and air operators

Type Certification

- 4.8 Fees and charges levied by EASA for aeronautical product Type certification are specified in Regulation 319/2014 and are both set out and payable in Euros. EASA may delegate certification tasks to NAAs and must reimburse NAAs for undertaking these tasks. NAAs are not permitted to levy their own fees for Type certification and are reimbursed on the basis of the fees and charges set out in the regulation.
- 4.9 Paragraph 6 of the introductory section of the regulation notes that there should not be any geographic discrimination of applicants and, therefore, that the charges should be aggregated and averaged across Member States. Paragraph 11 notes that the level of fees and charges should be sufficient to ensure EASA should avoid both a deficit and a large surplus and that, to this end, the level of fees and charges should be reviewed if either of these occurs.
- 4.10 Applicants may request a financial estimate for the amounts to be paid and EASA is required to provide this estimate, suspending all work in relation to the application until this estimate is prepared. EASA may amend this estimate if it appears the task is simpler or more complex than they could reasonably have foreseen.
- 4.11 If an application is terminated for the reasons set out in Paragraph 2 of Article 9 of Chapter 2 of the Regulation, the applicant may restart the application, however, EASA will levy a new fee irrespective of any fees already paid.
- 4.12 The fee to be paid for a given certification task may consist of a flat fee (per application, per 12 month period and per application per 12 month period) as set out in Part 1 of the Annex of the 2016 Regulation and a variable fee based on actual number of working hours and a set hourly rate as set out in Part 2 of the Annex. Generally, Type certification fees for major products are levied at fixed rates by product while variable fees are levied for supplementary tasks or less

³³ For example, Paragraph 5 of Article 2 of Chapter 1 of Regulation 1371/2007 concerning Rail Passengers' Rights and Obligations permits renewable 5-year exemptions from the regulation to be granted to Member States. Some of these exemptions have a renewal limit (i.e. Member States may be granted exemption from the regulation up to 15 years from the date when the regulation came into force) while others may be exempted in perpetuity.

common products (e.g. transfer of certificate, administrative reissuance of documentation, etc.).

4.13 Charges for appeals are calculated as a fixed rate multiplied by a coefficient determined by the appellant's annual turnover in Euros. All fees and charges are to be inflated annually as specified in Part 4 of the Annex.

4.14 It should be noted that NAAs are permitted to process applications for Type certification for non-EASA aircraft³⁴.

Airworthiness Certification

4.15 NAAs are responsible for awarding airworthiness certificates and levy fees and charges to undertake tasks in relation to this. A brief review of how NAAs levy fees and charges for this purpose has been undertaken in order to gain an understanding of practices that may be applied to the award of Vehicle Type Authorisation in the European rail industry.

UK: Civil Aviation Authority

4.16 The UK Civil Aviation Authority (CAA) levies fees for the certification of airworthiness for individual aircraft. The scheme of charges is included in CAA publication reference ORS5 No. 298 and fees are levied as fixed amounts by aircraft type and weight and certificate type (e.g. prototype aircraft, operational aircraft, etc.) and the principles underpinning these fees are included in the Civil Aviation Act 1982 Part 1 Section 11. The Civil Aviation Act sets out that the fees should be levied "having regard to the expense incurred by the CAA in performing the function in question and to such other factors (if any) as may be so specified".

4.17 The CAA levies fees to both issue certification for aircraft recommended for certification by an approved CAA organisation and to carry out investigations and approve an aircraft directly. Additionally, the CAA levies fees to approve the issue/extension of certification to a further period on a similar basis.

4.18 A fixed fee by aircraft weight is levied for all applications. For applications where the CAA directly investigates, rather than receives a recommendation from an approved organisation, a variable hourly fee is also levied by aircraft weight. For those applications where an approved organisation is responsible for the investigations, the organisation effectively issues the approval on behalf of the CAA and the CAA has minimal input to the approval process³⁵.

France: Directorate General of Civil Aviation

4.19 The French Directorate General of Civil Aviation (DGAC) levies fees for the work involved in issuing certifications of airworthiness for aircraft based on the time taken for investigation. The scheme of charges is included in the publication rp7110314.

4.20 The DGAC levies fees based on a combination of a fixed rate for the administration based on aircraft power rating and a variable fee for investigations based on the number of hours spent and the type of aircraft.

³⁴ EASA aircraft are defined in Article 4 of Regulation (EC) No 216/2008

³⁵ The right of approved organisations to carry out investigations is subject to audit by the CAA

Germany: Federal Aviation Office

- 4.21 The German Federal Aviation Office (LBA) levies fees to issue certificates of airworthiness for aircraft based on the maximum take-off weight. The fees are shown in the publication GEBÜHREN der Verkehrszulassung (available in German only). The fees are levied on a fixed fee basis only.

Air Operator Certification

- 4.22 NAAs are similarly responsible for awarding air operating certificates and levy fees and charges to undertake tasks in relation to this. A brief review of how NAAs levy fees and charges for AOCs has been undertaken in order to gain an understanding of practices that may be applied to the award of Safety Certification in the European rail industry.

UK: Civil Aviation Authority

- 4.23 The UK Civil Aviation Authority (CAA) levies fees to pay for the investigations required to judge an application for an AOC. These fees are determined based on the aircraft included in the air operator's application as specified in CAA publication reference ORS5 No. 297. As noted previously, the fees are designed to reflect the costs incurred in carrying out the certification process as well as any other relevant factors.

- 4.24 The basic fees are calculated as a flat fee for the heaviest aircraft included in the application and a fee for each additional aircraft included in the application. The level of fees charged for both of these parts is related to aircraft type.

- 4.25 The CAA levies an additional fee for applications that take more time than is standard for a given application as determined by the calculation and standard hours for an application given in the publication³⁶. The additional charge is a variable charge determined as the number of additional hours expended in judging the application above the standard hours multiplied by an hourly rate (£170/hr).

- 4.26 The CAA also specifies basic fees for applications for variation to the AOC, including the operation of different aircraft, operation in a new region and operation in a new region on a temporary basis. In the same way as additional fees are levied for new applications based on time required to judge applications that taking longer than the standard hours, additional fees are levied on applications for variation to the AOC.

- 4.27 The CAA also levies an annual charge calculated on the basis of the heaviest aircraft operated by an air operator and the total number of aircraft operated. This charge is restricted to increase by a maximum of £1,000 per aircraft operated over the charge levied in the previous year. There are also provisions in the scheme of charges to ensure significant changes in the number of aircraft operated early in a given charging year are reflected in the charge levied (which is normally determined based on the average number of aircraft operated in the previous year).

³⁶ The CAA publication includes a table of standard hours required for the heaviest aircraft by aircraft type and for any additional aircraft by aircraft type. The standard hours for an application are calculated in the same way as the basic application fees.

France: Directorate General of Civil Aviation

4.28 DGAC do not appear to levy an application fee for air operators, however, an annual fee is payable which is determined by several factors including:

- the total tonnes of cargo and number of passengers carried per year (1 tonne of cargo is considered equivalent to 12 passengers);
- the total maximum take-off weight of all aircraft registered under the operator's certificate; and
- the individual aircraft types/weights registered under the certificate.

Germany: Federal Aviation Office

4.29 The German Federal Aviation Office (LBA) levies fees to pay for the investigations required to judge an application for an AOC. The fees levied by the LBA are shown in the publication *Kostenverordnung der Luftfahrtverwaltung (LuftkostV)* with the fee levied for Airport Operator Certification shown in table VI of that publication.

4.30 The levied fee is given as a range and there is no ready explanation of how the fee for an application is determined within the range. However, it is noted in Article 9 Paragraph 1 of the legislation *Bundesgebührengesetz (BGebG)* that the fees should be levied in order to recover the costs for each individual application.

Conclusions

4.31 EASA levies fees for Type Certification of aircraft, analogous to Vehicle Type Authorisation in the rail industry, on a fixed fee basis by aircraft type except for supplementary tasks such as transfer of certificates or reissuance of certificates.

4.32 EASA's role outside of Type Certification is not involved in carrying out Airworthiness Certification or Air Operator Certification and may be considered to act as a regulator in these areas.

4.33 National Aviation Authorities are responsible for Airworthiness Certification and Air Operator Certification and the framework used to determine the fees levied varies:

- The UK CAA levies fees determined by a combination of a fixed fee by aircraft type and a variable fee for the number of hours spent on on-site investigation for airworthiness. The fees levied for air operator certification reflect a 'standard' fee determined by the aircraft weight operated and variable fee related to any time spent on the application above a 'standard' time for the application.
- The French DGAC levies fees in a similar manner to the CAA for airworthiness certification. An application fee is not charged for air operator certification, but a fixed annual fee exists for air operators that is determined based on a number of variables connected with the operator's operations.
- The German LBA levies fees for airworthiness certification on a fixed fee basis only. It also levies fees for air operator certification based on a specified range although it is not clear how the exact fee within the range is determined.

4.34 There may be benefit in adopting a variable approach to EUAR's fees for Single Safety Certification as is applied in the schemes of charges published by the CAA, DGAC and LBA. This would be of particular benefit in the initial period of implementation pending review to allow EUAR to mitigate the risk of applications taking longer and costing more than anticipated.

- 4.35 Two of the NAAs also levy fees on a fixed basis for the administrative part of the application and on a variable basis for on-site investigations under applications for airworthiness certification. A similar approach may be suitable for Vehicle Authorisations undertaken by EUAR to ensure that EUAR covers its costs³⁷. However, this does introduce a risk of not giving RUs a clear picture on how much authorisations will cost.
- 4.36 It is clear from the review of the regulation and practice that the EASA does not compete with NAAs for applications. There is clear demarcation of the responsibility for applications with EASA being wholly responsible for Type Certification of aircraft as defined in the regulation and national authorities responsible for Air Operator and Airworthiness certification.
- 4.37 Finally, it is worth noting that the pieces of legislation underpinning the fees levied by EASA, the CAA and the LBA include the principle that the fees should reflect the costs incurred. Recovery of costs is at least a factor in and sometimes the sole factor used to determine the level of fees to be levied on applicants and the method used to determine fees varies by authority and application type.
- 4.38 It may be useful for EUAR, should it decide to adopt some of the charging principles used in the aviation industry, to support its case by citing these as established workable practices in another European transport sector. In this respect, it is notable that as there is little overlap between the activities of EASA and NAAs, there does not appear to be any specific provisions for arbitration in case of disagreement and EUAR may need to look elsewhere for established working practices with regards to arbitration between national bodies and the Agency.

³⁷ This is dependent on the administrative cost being similar for the majority of applications

5 Development of a fee mechanism

Introduction

5.1 In order to develop a mechanism through which the Agency may determine application fees, we have considered the underlying costs, the Agency Regulation and other key considerations and these are summarised in the following sections.

5.2 A fee mechanism has been developed taking these considerations into account and has been proposed in the latter part of this chapter.

Parameters influencing application costs

5.3 The data received from NSAs in response to our questionnaire suggests there are a number of factors influencing the workload and cost of processing applications. These factors differ for Single Safety Certificate applications and Vehicle Authorisation applications.

Single Safety Certificate Applications

5.4 The type of operation is considered the most significant factor affecting the cost of processing applications by the NSAs who responded to our questionnaire. However, geographic extent of operations, the volume of train services operated, the number of staff employed by the applicant and the number of vehicles operated are all quite significant factors and are only slightly less significant than the type of operation.

5.5 This gives rise to a particular difficulty in determining the cost of an application as the proposed products, and hence the data acquired from NSAs, are not disaggregated in a way that it is straightforward to separate charges based on these factors. Attempts were made to take advantage of variation in the type of operations in different Member States, however, it was not possible to isolate the influence of a single factor on the cost of processing an application and costs have to be considered in aggregate.

5.6 It is our understanding that variation in these factors primarily impacts the length of pre-engagement but may also have impacts on the workload involved in assessing the submitted application and the fee mechanism will need to reflect this. It is not necessary that the fee structure specifically address these cost drivers (i.e. as variables in any formulae used to define the fee structure), but may be accounted for through the impacts they are likely to have on the pre-engagement and application processing phases of an application.

5.7 For example, two applications for the same product with different numbers of staff employed will likely vary in the level of pre-engagement required and the time taken to process the application. The fee structure is considered sufficiently robust as long as it is set up to account for such differences (i.e. a higher fee is levied for an application that requires a longer pre-engagement phase).

Vehicle Authorisation Applications

- 5.8 Of the options presented to NSAs, the characteristics of the infrastructure over which the vehicles are to operate was noted to have the most bearing on the cost of processing vehicle authorisation applications. However, from the case studies and some of the comments on the returned questionnaires, it is apparent that the maturity of applicants is also a significant factor for the NSA.
- 5.9 Regarding the characteristics of the infrastructure over which the vehicles are to be operated, the data received from NSAs is disaggregated by the complexity of vehicle type and this may be considered to include the variation in characteristics of the infrastructure as, for example, High Speed vehicles operate over more complex infrastructure designed for High Speed vehicles. Therefore a scheme of charges that is disaggregated by complexity of vehicle type will account for variation in infrastructure over which the vehicle is to operate.
- 5.10 Regarding the maturity of applicants and the NoBos involved in the application, it appears that the bulk of costs related to processing applications from less mature applicants are included in the pre-engagement phase rather than in processing the completed application³⁸ (i.e. to meet and discuss the requirements of the application with the applicant). This may not be as significant an issue as it first appears as the market is tending towards concentration of NoBos at present resulting in a lower likelihood of less mature NoBos being involved in applications. However, to mitigate the identified risk, the fee mechanism will need to reflect the possibility of variation within the pre-engagement phase as a result of variation in the maturity of applicants and NoBos.
- 5.11 As with single safety certification, the fee structure is considered sufficiently robust as long as it is set up to deal with the impact these drivers have on the length of time required in pre-engagement and to process the application.

Principles for determining and allocating costs for the purposes of calculating charges

The 2016 Agency Regulation³⁹

- 5.12 There are a number of statements within the 2016 Agency Regulation which guide the principles under which the Agency is to levy fees for the services it is to provide. Some of these statements appear to be contradictory given the way the industry currently operates.
- 5.13 It is noted in 'Whereas' 16 of the 2016 Agency Regulation that:

“Competent national authorities have, thus far, been charging for issuing vehicle authorisations and single safety certificates. With the transfer of competences to the Union, the Agency should be entitled to charge applicants for issuing the certificates and authorisations mentioned in the preceding recitals. It is important to establish certain principles applicable to fees and charges payable to the Agency. The level of those fees and charges should be estimated in such a way as to cover the full cost of the service delivered,

³⁸ Assessment of Vehicle Authorisation applications is largely a check to ensure the involved NoBo has approved the vehicle against the requirements in its intended area of operation. This may involve scrutiny of the requirements for the vehicle.

³⁹ Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004

including as appropriate the relevant costs resulting from the tasks assigned to the national safety authorities. Those fees and charges should be equal to or lower than the current average for the relevant services and should be set in a transparent, fair and uniform manner in cooperation with Member States. They should not jeopardise the competitiveness of the European railway sector and should be established on a basis which takes due account of the ability of undertakings to pay and should not result in the imposition of an unnecessary financial burden on companies. They should also take into account, as appropriate, the specific needs of small and medium sized enterprises.”

5.14 This suggests that:

- Fees levied should reflect the full cost of the services delivered;
- NSAs may be tasked with carrying out some of the work to deliver the services and should be reimbursed for this; and
- EUAR’s fees should be equal to or lower than the EU average for the same services.

5.15 It should also be noted that as described in paragraph 2.79, it is possible that an NSA seeks arbitration through the Board of Appeal in the case of a disagreement with the Agency and it is unclear whether any costs borne by the Agency and/or the NSA in relation to this process are required to be funded through application fees. The Agency has clarified that the activities of the Board of Appeal are not to be funded through application fees.

5.16 Where NSAs currently charge on the basis of costs incurred in providing these services, establishing a fee structure that conforms to the above points should be possible. As was discussed in paragraph 3.22, several NSAs do not charge for these services and several of those that currently charge do so in a manner that is inconsistent and often has no relation to the costs incurred⁴⁰. As a result, it would seem likely that the Agency would not be able to cover the full costs of providing safety certification and vehicle authorisation services if it were to levy fees that are equal to or lower than the EU average for the same services.

5.17 It is also notable that the fees should be set at a level that covers all costs but does not lead to a significant surplus. It is stated in Article 80 Section 3 of the 2016 Agency Regulation that:

“Should a significant imbalance resulting from the provision of the services covered by fees and charges become recurrent, the revision of the level of the fees and charges shall become mandatory.”

5.18 This gives to the Agency the opportunity to set a flexible fee structure which may be reviewed and revised if it is found that a significant imbalance develops. It is our intention that any such imbalance may be accounted for by adjustment of the specific amounts used in determining the fees rather than adjustment of the underlying structure (i.e. by varying the assumed average application fee rather than the way the fee is arrived at).⁴¹ Due to the significant amount of variation in the responses with regards to workload as reported in Chapter 3, we would recommend that the Agency monitors the workload required to process applications and use the model detailed in Chapter 6 to update the fee structure within the first year of implementation.

⁴⁰ Several NSAs appear to set a nominal fee per application

⁴¹ Note that this would need to be managed through an accounting mechanism where the cost of services and the revenue are both monitored – such as in a P&L account. This would then support a review and wash up.

Key Considerations

- 5.19 There are three main considerations in addition to those mentioned in the previous section that may guide our proposed specification of the Agency’s fees:
- **Predictability of Agency revenue and applicant costs** – it is desirable that the Agency’s revenue should be reasonably predictable and it is possible to project the number of applications that the Agency is likely to receive in the near future. Similarly, it is desirable that costs to applicants are also reasonably predictable.
 - **Administrative simplicity** – a fee structure that is easily legible and allows applicants and the Agency to quickly and clearly determine the fees for a given application is preferable.
 - **Economic incentive** – a fee structure that may act as a disincentive to unnecessary delays and / or stalling would also be desirable. It is notable that the time taken to complete the application process is a materially significant concern for applicants and this is particularly important given the overarching objective of the Fourth Railway Package to increase competition in the railway sector.
- 5.20 These considerations, in addition to those included in the 2016 Agency Regulation, influence the type of fee structure that is most appropriate. There are a number of options available for the fee structure as can be seen from the review of current NSA practices and those practices applied in the aviation industry. Broadly speaking, these options include:
- a fixed-fee structure,
 - a rate-based fee structure; and
 - some combination of the two.
- 5.21 The first of these considerations, predictability of revenue, lends weight to a fee structure based on fixed fees by application. Fees may be set according to a number of application parameters (such as product category or the number of Member States within which operations are to occur). The combination of a fixed-fee structure and projections of future applications should allow EUAR to reasonably predict its revenue.
- 5.22 The second consideration, administrative simplicity, lends weight to a fee structure that does not have many variables. At face-value, this would suggest a fixed-fee structure would be preferable. However, a rate-based fee structure may be simpler to navigate than a fixed-fee structure with many parameters.
- 5.23 The third consideration, economic incentive, lends weight to a fee structure that includes some combination of both a fixed-fee and a rate-based fee. A fixed-fee acts as an incentive for the Agency / NSAs to progress applications as efficiently as possible as the cost of applications that take longer are more likely to go beyond the levied fixed-fee resulting in a loss for the Agency / NSAs⁴². Similarly, a rate-based fee acts as an incentive for the applicant to progress the application as the fee will increase if the application progresses less efficiently.

⁴² Negotiations as to how the Agency will work with and reimburse NSAs for work undertaken to support processing applications are ongoing and it is not yet clear whether the work undertaken by NSAs in support of an application to the Agency will be reimbursed via a pre-determined amount, which may act as an economic incentive for the NSA to progress the work efficiently, or via a rate-based amount.

Other Considerations

- 5.24 The pre-engagement phase of an application has been discussed in some detail in paragraph 2.19 onwards. It is the Agency’s intention to charge applicants for work undertaken in this phase, particularly as it may often represent the major part of the work in processing applications. Additionally, the Agency intends to discourage speculative applications that may not have been properly prepared and charging applicants for work undertaken in the pre-engagement phase is considered a suitable mechanism to do so. It is the Agency’s working position⁴³ that the pre-engagement phase should be charged to applicants according to a rate-based fee
- 5.25 The pre-engagement phase is not made mandatory by the Agency Regulation, however, it is preferred that applicants engage with the Agency prior to submitting their application to reduce the need for audits and streamline the application process. For this reason, mechanisms to encourage applicants to engage with the Agency prior to submitting an application should also be considered. Adding a direct financial incentive to encourage pre-engagement presents some specific difficulties as there is no clearly defined ‘end-point’ for the pre-engagement phase. Further clarification from NSAs suggests the level of pre-engagement varies by Member State. The UK’s NSA noted that practically all applicants pre-engage, Belgium’s NSA noted that very few applicants pre-engage and both the Polish and Romanian NSAs noted that there is no formal pre-engagement phase.
- 5.26 Additionally, one of the Agency’s objectives is to reduce the overall workload and cost of processing applications. To do so, the Agency will need to ensure that applications are handled as efficiently as possible and best practice is implemented within the application process including within the fee structure itself.
- 5.27 There are also a number of other considerations that we do not propose to reflect in the charging structure, including the possible reaction of NSAs to the Agency’s fee structure and the impact on SMEs.
- 5.28 It is likely that NSAs may react to the Agency’s fee structure, particularly in those Member States where services are currently provided free-of-charge. As noted, many NSAs do not currently levy fees on applicants that reflect the cost of services provided. In response to our questionnaire, one NSA directly noted that they are likely to begin charging for these services in response to any scheme of charges produced by the Agency. However, it is unclear what the exact response from NSAs will be in aggregate and it is considered more reasonable to develop and model a scheme of charges assuming no change in how NSAs currently charge in the short-term.
- 5.29 Ensuring the growth of SMEs is one of the European Commission’s major policy objectives and needs to be considered when specifying the scheme of charges. However, the application fees are marginal when the relative cost of applications for either an operator applying for safety certification or manufacturer applying for vehicle authorisation in light of their other costs are considered. For example, the total cost of a vehicle authorisation for a manufacturer is likely to be in the range of millions of euros and the application for vehicle authorisation itself may make up under 1% of that cost. Similarly, the annual operating costs of a small railway

⁴³ As noted by Sorin Hanci (EUAR) in the working document “Products or services to be delivered by EUAR.docx”.

undertaking can typically be in the order of €100m and the cost of a safety certificate would represent around 0.01% of their annual costs.

Agency charging mechanism

Proposed charging structure

5.30 In order to account for the considerations mentioned in the sections above, a charging structure that includes both a fixed fee element and a rate-based element will be needed. The charging structure has been broken down to reflect pre-engagement, application assessment and audits separately. The various incentives built in to the proposed fee structure are also discussed in later paragraphs.

Pre-engagement phase fee structure

5.31 The pre-engagement phase⁴⁴ needs to be treated as a distinct part of the application process and we propose that a rate-based fee is levied for the majority of the costs related to the pre-engagement phase.

5.32 The following formula will be used to determine the variable fee levied for pre-engagement:

$$\text{Pre – engagement phase fee} = (1 - l) \times \text{days spent on pre – engagement} \times \text{daily rate}$$

5.33 Where “l” is a variable used to flex the weighting of the fixed and variable elements of the pre-engagement fee and the daily rate includes the staff costs and also accounts for Agency overheads. It should be noted that while this means the costs of pre-engagement are not completely recovered from the fee, the fraction not recovered is included as a fixed element in the application fee.

5.34 We propose that this fee is payable over the course of the application (e.g. quarterly) and that any direct costs associated with staff travel, subsistence or other expenses incurred by the Agency during the pre-engagement phase are added to this fee.

Application fee structure

5.35 As the majority of the considerations discussed in the sections above lend weight to the fixed-fee element of the fees for an application, we propose that this will make up the major part of the application fee. We propose that the application fee include:

- A fixed-fee element to cover the majority of the cost of an average⁴⁵ application with similar characteristics⁴⁶;
- A small percentage of the pre-engagement costs; and

⁴⁴ There is some lack of clarity on the distinction between the application and pre-engagement. For the purpose of our modelling, the application is considered to include the processing of the final documents as submitted by the applicant and pre-engagement is considered to include any work prior to that.

⁴⁵ An average application will be defined based on the average workload data provided by NSAs in response to our questionnaire and adjusted to remove the impact of outliers. A distinct average application workload will be estimated for each product and/or service provided by the Agency in relation to Safety Certification and Vehicle Authorisation.

⁴⁶ The average application cost for vehicle authorisation applications will vary depending on the vehicle type, the number of Member States in which the vehicle is to be operated and the application type. Similarly, the single safety certificate applications will vary depending on the number of Member States the applicant intends to operate in and the application type.

- A variable rate-based element to account for the cost of an average application not included in the fixed fee element.

5.36 The following formulae will be used to determine the fixed and variable fees levied for an application:

$$\text{Fixed Fee} = (k \times \text{average application cost}) + (l \times \text{average pre - engagement costs})$$

$$\text{Variable Fee} = (1 - k) \times \text{days spent on application} \times \text{daily rate}$$

5.37 Where k is a second variable used to flex the weighting of the fixed and variable elements of the application fee. The variable “l” used in the fixed fee element formula is equal to that given in the formula for the pre-engagement phase.

5.38 We propose that the fixed fee is payable on submission of an application and the variable fee payable on completion of the application process. Any direct costs associated with staff travel, subsistence or other expenses incurred by the Agency during the application phase should be added to the variable fee.

5.39 It is notable that the application fees may be determined by applying the proposed fee structure to calculate the Agency cost and the cost per MS separately and summing the resultant costs. The formula below is intended to illustrate this.

$$\text{Application cost} = \text{Agency cost} + (\text{number of MSs} \times \text{NSA cost})$$

In relation to Safety Certification, the Agency cost may be considered to be equal to the average costs of the workload related to Part A of the Safety Certificate currently incurred by a single NSA and NSA cost may be considered to be equal to the same for Part B.

Audits and Inspections

5.40 Audits and/or inspections can have significant implications on the overall costs and shall be treated as separate elements of the cost in both the pre-engagement and application phases as required. Any audits and/or inspections undertaken as part of the assessment of the application shall be charged to applicants at a daily rate and shall need to include any travel and subsistence costs incurred by the Agency or NSA(s) involved in conducting the audit/inspection.

5.41 It should also be noted in the scheme of charges that not undertaking pre-engagement may result in an increased need for audits or inspections during the application phase and it is therefore strongly advised that applicants undertake pre-engagement.

Appeals

5.42 Appeals are considered a separate product and attempts were initially made to include an appeals contingency cost in the fixed fee element of the application fee. However, there is little basis upon which to make assumptions about the number of appeals that will need to be assessed by the Agency per year, nor is there any robust basis upon which workload or cost assumptions may be made. It is therefore proposed that fees for appeals be levied at a daily rate similar to that used in the formulae above and that any related travel, subsistence and other direct costs also be charged to the appellant.

Fee Structure Incentives

5.43 The incentive mechanisms within the proposed fee structure apply through the use of a mixture of fixed and variable elements and necessarily results in increased risks related to

over- or under-payment by applicants in relation to the costs incurred by the Agency. For example, if an application is quicker to process than the estimated average, the applicant will pay more than the costs incurred by the Agency. Similarly, if an application is slower to process than the estimated average, the application will pay less than the costs incurred.

5.44 However, as long as the assumed average application is approximately equivalent to the average of applications received for a particular product, the over- and under-payments should balance out and the net result is that, in aggregate, the fee payments to the Agency will be equal to the costs incurred by the Agency.

5.45 There are a number of incentives built in to the proposed fee structure:

- Speculative applications are discouraged through the fixed element of the application fee payable on submission of an application⁴⁷.
- The applicant is incentivised to proceed with the application as efficiently as possible to avoid rising fees due to the variable elements.
- The Agency is incentivised to ensure applicants undertaking pre-engagement submit an application to ensure the fraction of the cost not recovered through the pre-engagement phase fee is recovered as part of the application fee.
- The Agency is incentivised to ensure the application is processed as efficiently as possible to ensure the fixed fee adequately covers the portion of costs not recovered through the variable fee.

5.46 As an example, some of the incentives that apply to the Agency have been illustrated in the tables below assuming “k” and “l” are set 0.6 and 0.2 respectively.

Table 5.1: Illustration of the incentive mechanism included in the pre-engagement fee structure for the Agency

Time spent on pre-engagement	Costs recovered from pre-engagement fee	Costs recovered from application fee	Outcome
Less than the defined average	80% of costs	>20% of costs	Agency recovers more than costs incurred
Equal to the defined average	80% of costs	20% of costs	Agency recovers its costs
More than the defined average	80% of costs	<20% of costs	Agency recovers less than costs incurred

Table 5.2: Illustration of the incentive mechanism included in the application fee structure for the Agency

Time spent on processing application	Costs recovered from variable fee	Costs recovered from fixed fee	Outcome
Less than the defined average	40% of costs	>60% of costs	Agency recovers more than costs incurred
Equal to the defined average	40% of costs	60% of costs	Agency recovers its costs
More than the defined average	40% of costs	<60% of costs	Agency recovers less than costs incurred

⁴⁷ We also recommend that EUAR develop a clear set of guidance for applicants to help mitigate the risk of ill-prepared applications.

Incentives to pre-engage

- 5.47 It should be noted that there is very little room for the Agency to incentivise pre-engagement within the proposed fee structure, noting that the Agency regulation does not mandate applicants to undertake pre-engagement prior to the submission of an application. The only option that may be suitable is the addition of a further fixed fee for applicants who submit an application without having undertaken pre-engagement. However, as it is not possible to define an end-point for pre-engagement, this opens the Agency up to the risk of applicants “pre-engaging” purely for the sake of avoiding this fee.
- 5.48 It is also not clear to how many applicants will submit applications without having undertaken pre-engagement. It is our understanding that, given the types of application the Agency is likely to receive (pre-dominantly those applying for operations in multiple Member States), applicants are more likely to undertake pre-engagement prior to submission of an application as compared to those submitted to NSAs and therefore the risk of the Agency receiving applications where applicants have not undertaken pre-engagement may be low.
- 5.49 Additionally, it should be noted that applying a charge for pre-engagement will always disincentivise applicants from undertaking pre-engagement. This is somewhat offset by the variable element in the application fee that means an applicant that does not undertake pre-engagement is likely to incur a greater overall application fee, however, the risk remains that applicants may see the pre-engagement phase as unattractive.
- 5.50 It is therefore our recommendation that the Agency seek to incentivise pre-engagement through other means, including:
- Requiring pre-engagement for all First Single Safety Certificates⁴⁸; Inclusion of the pre-engagement phase of the application in all documentation/guidance related to the application process as standard;
 - Inclusion of a guidance note to the scheme of charges stating that, where an applicant chooses not to undertake pre-engagement, there may be an increased risk of the need for audits and/or inspections; and
 - Provision of a 1 hour pre-engagement meeting free of charge for all applicants; and
 - Communication with potential applicants prior to an application to invite them to undertake pre-engagement.

Differences between Single Safety Certification and Vehicle Authorisation applications

- 5.51 There are a number of differences between applications for Single Safety Certification and Vehicle Authorisation including the proportion of applicants who undertake pre-engagement, the length of the application process and the variability in the length of processing the application. These differences are detailed in Table 5.3 below along with their implications on the proposed fee structure. The implications are addressed through variation in the factors “k” and “l” in the proposed fee structure and further discussion related to the suggested factors is included in chapter **Error! Reference source not found.**

⁴⁸ It would be impractical to process completed First Single Safety applications within the required timescales set out in the Agency Regulation without having had the chance to see and comment on the Safety Management System prior to submission.

Table 5.3: Implications of differences between SSC and VA applications on the proposed fee structure

Difference	Implication on proposed fee structure
<p>Single Safety Certificate applicants are less likely to undertake pre-engagement than Vehicle Authorisation applicants.</p> <p>The duration of the Single Safety Certification process is typically markedly shorter (a few months) than the Vehicle Authorisation process which can extend to one or more years (noting that this is not necessarily reflected in the workload required according to the data provided by NSAs in response to our consultation⁴⁹).</p>	<p>The weighting of the variable element in the application phase fee needs to be increased (by reducing factor “k”) to ensure the Agency is not significantly under remunerated for Single Safety Certificate applications.</p> <p>Pre-engagement for Vehicle Authorisation is likely to be significantly longer and the weighting applied to the amount of the pre-engagement phase fee recovered through a fixed amount (factor “l”) should be reduced.</p>
<p>Due to the nature of the work, variation in the workload required to process Single Safety Certificate applications following submission of the application is expected to be greater than for Vehicle Authorisation applications.</p>	<p>This gives further reason to increasing the weighting of the variable element in the application phase fee (by reducing factor “k”) to reduce the risks of a significant discrepancy between the fees taken and costs incurred by the Agency.</p>

Agreements with NSAs

5.52 We propose that the Agency develop a scheme of charges based on the proposed fee structure. However, Member State-specific assessment(s) will be carried out by the relevant NSA(s) as part of the Agency’s assessment of an application and the Agency is in the process of forming agreements with NSAs to determine the mechanics of the relationship including how NSAs will be reimbursed for the work carried out.

5.53 There are a number of options the Agency may want to consider in relation to the way NSAs are reimbursed and these are set out in the table below:

Table 5.4: Options for the Agency’s approach to NSA reimbursement

Basis	Description	Details
Time and materials	A daily rate is agreed between each NSA and the Agency and NSAs are reimbursed according to the time (person-hours) spent assessing an application and for any related direct costs	<p><u>Pros:</u> NSAs can be certain they will be reimbursed for all time spent on an application; assessors will not feel restricted by any budget limits.</p> <p><u>Cons:</u> NSAs are essentially given a ‘blank cheque’; does not incentivise efficiency; the Agency is most likely to incur costs greater than the application fees.</p>

⁴⁹ The implications of this will be discussed further in chapter **Error! Reference source not found.**

Time and materials with a cap

As above with the addition of a cap to the budget, possibly set in relation to the average workload (e.g. cap set to the equivalent of twice the average workload for a given application). This should be complimented by a process through which NSAs can apply to have the cap extended in exceptional circumstances.

Pros:

NSAs are clear on how long they can take assessing an application; efficiency and best practice is more likely to be implemented; the Agency has greater certainty in relation to its spending.

Cons:

NSAs may feel restricted by the budget cap and any process to apply for exceptional circumstances and not assess an application to the level of detail required; there is still some possibility that the Agency's costs are greater than the application fees.

<p>Applying the proposed fee structure to determine the level of reimbursement</p>	<p>The proposed fee structure may be used directly with the estimated average NSA workload by application and an agreed daily rate to determine the level of reimbursement.</p>	<p><u>Pros:</u> The Agency's fees and costs may be more directly balanced, efficiency is incentivised, NSAs will benefit from the Agency's review processes.</p> <p><u>Cons:</u> NSAs may be concerned by the risk of not being fully reimbursed for all of the time spent on an application; NSAs may feel restricted by the incentives related to efficiency: logistically and administratively more complicated; a significant amount of time may be required to inform/get buy in from NSAs.</p>
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5.54 Given the Agency's concerns regarding ensuring that its costs are recovered through the fees, it may be prudent to adopt the last of these options. However, the Agency's primary means of ensuring costs are recovered is through monitoring and review of the level of fees levied to applicants. Any differentials that exist between the daily rate applied in the proposed fee structure and the rates agreed with each of the NSAs also means the balance between the Agency's costs and fee will be dependent on the areas of operation applied for as part of each application⁵⁰.

5.55 It is therefore our recommendation that the second of these approaches, reimbursement on a time and materials basis with a cap, is most appropriate. This approach is logistically simpler for the Agency to implement, more reassuring for NSAs and therefore less likely to be opposed. It restricts NSAs to a reasonable budget and thereby encourages efficiency and also encourages them to communicate clearly with the Agency in relation to exceptional circumstances.

⁵⁰ For example, if the agreed daily rate for NSA 1 is higher than the Agency's rate used in the fee structure and the agreed daily rate for NSA 2 is lower than the Agency's rate, if the Agency received proportionally more applications related to NSA 1, the fees are likely to be less than the costs incurred and if the Agency received proportionally more applications related to NSA 2, the fees are likely to be more than the costs incurred.

6 Fees & charges model specification

6.1 The EUAR Fees & Charges Model has been developed as an aid in determining the structure and level of charges appropriate given the requirements set out in the 2016 Agency Regulation and other considerations set out in Chapter 5.

6.2 The purpose of the model is to provide a tool for development of a scheme of charges for the issue of the Single Safety Certificate and Vehicle Authorisations. This will in turn be used to model:

- The proposed fee structure;
- The projected volume of applications; and
- Some sensitivities around variation in NSA charges.

Data requirements

6.3 The data required to develop and model the Agency’s scheme of charges is shown in Table 6.1. Much of the data is available either through documents provided by the Agency and through the responses we have received from the NSA questionnaire.

Table 6.1: Data required for modelling

Data	Required for	Source(s)
NSA workload by application type and stage	Vehicle Authorisation Costs	SDG questionnaire responses, “20160311 Draft Report of NSA Questionnaire regarding resources used for authorisation b.docx”
NSA hourly/total costs by application type and stage	Vehicle Authorisation Costs	SDG questionnaire responses, “20160311 Draft Report of NSA Questionnaire regarding resources used for authorisation b.docx”
NSA workload by application type and stage	Single Safety Certificate Costs	SDG questionnaire responses
NSA hourly/total costs by application type and stage	Single Safety Certificate Costs	SDG questionnaire responses, 4RWP Technical Pillar Impact Assessment
Vehicle authorisation application projections by type and MS	Number of applications	“Estimation of numbers of vehicles types 2015.xlsx” provided by the Agency includes projections up to and including 2019.
Single safety certificate application projections by type and MS	Number of applications	SDG questionnaire responses and ERADIS data for the period 2006 – 2015 to be used to develop short-term projections

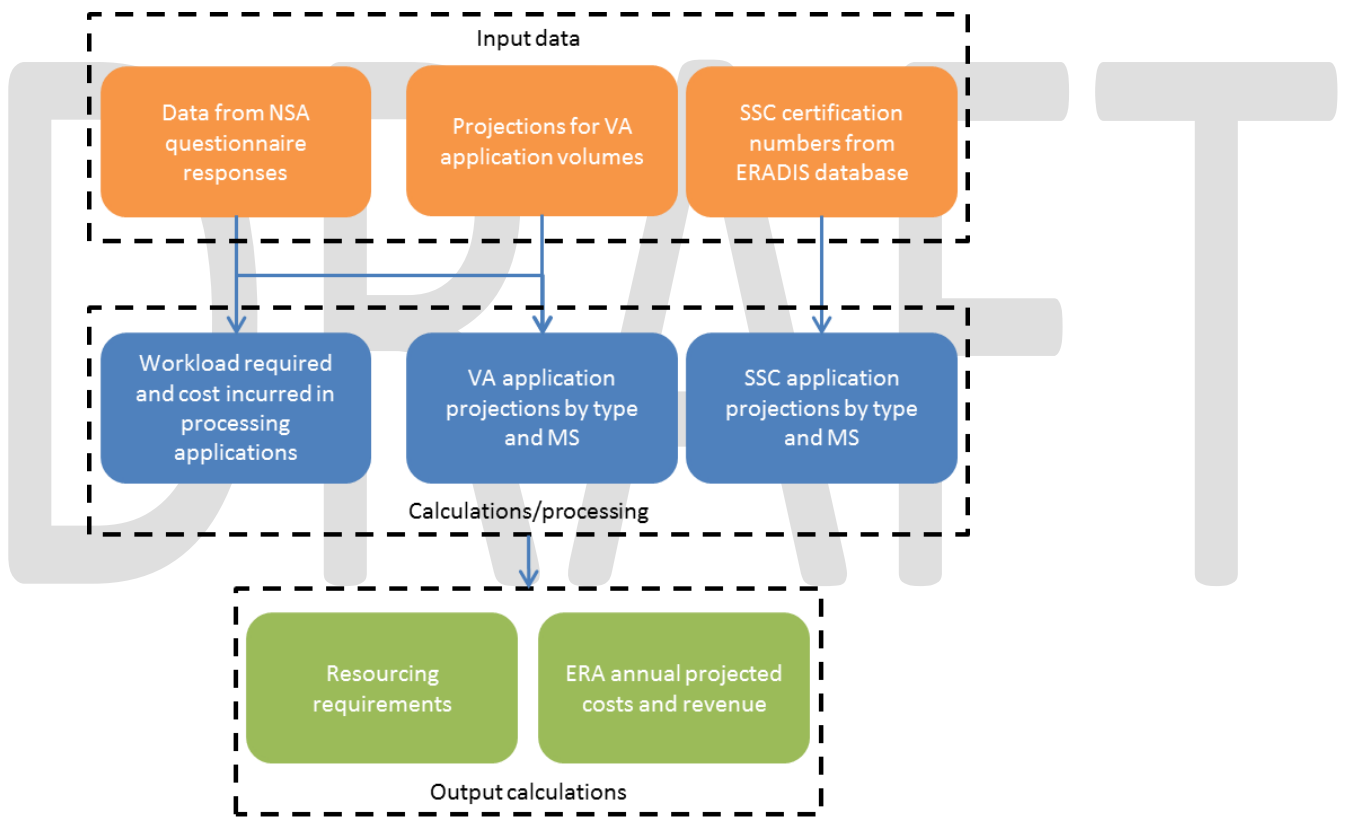
Methodology

6.4 There are three major steps required in the development and modelling of the scheme of charges:

- evaluate costs incurred by NSAs in processing Single Safety Certification and Vehicle Authorisation applications and determine the likely costs incurred by EUAR to provide the same services;
- develop a projection of total application volumes and the expected application volumes to EUAR; and
- feed the projection of application volumes back in to the scheme of charges to evaluate projected resourcing requirements, costs and revenues.

6.5 These steps are illustrated in Figure 6.1.

Figure 6.1: Model schematic



Evaluation of costs incurred by NSAs and likely costs to the Agency

6.6 Several NSAs have provided data on the costs incurred in processing applications for Single Safety Certification and Vehicle Authorisation in response to our questionnaire as discussed in Chapter 3 and this will be used as the basis for determining the Agency’s likely costs. NSAs have provided both their estimates of the cost per application as well as the workload involved in processing each application.

6.7 Analysis of the average costs per hour indicates only the direct costs of processing an application have been reported by NSAs and the data does not include the indirect costs and/or overheads. Additionally, several NSAs either do not charge or charge a small nominal fee, reducing the robustness of the reported costs as a basis for the Agency’s costs. Therefore, the reported average workload per application has instead been used along with the Agency’s

assumed daily costs (including gross staff costs and overheads) to estimate the Agency's cost per application. Workloads have been considered in aggregate across the EU based on averages of the responses received. The cost of an average application, to the Agency, based on average workload has been compared against the average fees levied by NSAs.

- 6.8 Average fees charged by NSAs to applicants are not directly relevant to the implementation of the Agency's fee structure as the Agency will be required to set fees based on the costs it incurs. However, the fees for products and / or services provided by the Agency has been compared to average fees for the same products and / or services across EU NSAs. It should also be noted that there is lack of information in the data provided by NSAs on the level of indirect fees, such as those applied via safety levies or access charges, that are used to fund the costs incurred in processing applications.

Segmentation

- 6.9 For Single Safety Certification, costs have initially be considered separately for Single Safety Certification Parts A and B to disaggregate those costs which are only incurred once in each application and those which may be multiplied if an application is for operation in multiple Member States. This has allowed us to develop an element of the fixed fee that may be multiplied by the number of Member States in which a RU is applying to operate in. Additionally, costs have be segmented by application type as specified in the questionnaire. Application of the fee structure across multiple Member States is also illustrated using a formula as set out in paragraph 5.39.

- 6.10 For Vehicle Authorisation, costs have been segmented by vehicle category and application type as specified in the stakeholder questionnaire.

NSA Costs

- 6.11 The cost of the work carried out by NSAs in support of processing an application will need to be accounted for separately if the agreement between the Agency and NSAs does not involve NSAs being reimbursed according to the Agency's assumed daily costs. We have calculated an estimate of the amount of work carried out by NSAs per application and assumed individual rates for each NSA according to which they will be reimbursed in our modelling.

Pre-engagement

- 6.12 We understand that the data provided by NSAs includes the cost and workload involved in processing Vehicle Authorisations for both the pre-engagement and application phases of the application. Costs of the pre-engagement have been differentiated from those related to the application itself to facilitate testing of various assumptions around application costs.

Projection of application volumes

- 6.13 The years 2016 to 2019 have been modelled using these projections with the understanding that there is little benefit in modelling a longer timeline when the Agency can and should review the scheme of charges within this period and preferably after the first year of operation.
- 6.14 It is likely that there will be some variation between Member States in the proportion of applications processed by the Agency. This variation has been captured to some extent through the projections which have been disaggregated by Member State.

Single Safety Certificate

- 6.15 Projections for Single Safety Certification applications have been developed using data published by ERADIS for the last 5 years. 5-year averages have been used for each application type. It has also been assumed that RUs that made applications in multiple states over the last 5 years would apply through the Agency in future. Additionally, it has been assumed that a proportion of those RUs with operations in a single Member State only will also apply through the Agency.
- 6.16 The Fourth Railway Package Impact Assessment included the assumption that the number of RUs applying through the Agency will remain static in the short-term and we have preserved this assumption in our modelling.

Vehicle Authorisation

- 6.17 Projections for Vehicle Authorisation application volumes have been developed and provided by the Agency up to and including 2019. These projections are aggregated up to cover Eastern and Western Europe. It is anticipated that vehicle designs will become more standardised over time, reducing the number of vehicle types and, subsequently, Vehicle Type Authorisation applications. For this reason, the projections, which are not disaggregated by year, have been assumed to be greater in earlier years and fewer in later years
- 6.18 It is also assumed that these projections relate to new and subsequent authorisations only. Data provided by NSAs in response to our questionnaire for the number of Vehicle Authorisation applications by application type has been used to develop ratios between the four application types and used in conjunction with the Agency's projections to develop projections for use in the model. The questionnaire data has also be used to disaggregate the projections by Member State

Evaluation of Resourcing Requirements, Costs and Revenues

- 6.19 The segmented workload per application has been multiplied by the number of applications to determine the number of employee days required to process applications. To determine the number of personnel required to meet the workload requirements, the number of employee days has been divided by an assumed number of days worked per employee per year. This calculation has been carried out for those parts of an application that are to be undertaken by Agency staff directly (including any seconded staff) and it is assumed that NSAs will be able to resource those parts of an application that they are responsible for (e.g. the former Part B of the Single Safety Certificate).
- 6.20 Agency costs have been estimated by simply multiplying the segmented cost per application by the projected number of applications. This will need to be disaggregated by Member State to allow possible variations in the cost to the Agency from reimbursement of NSAs for any work undertaken in processing applications.
- 6.21 If NSAs are reimbursed on a basis other than that used to estimate the daily rates applied in the proposed fee structure or if, on average, application workload differs significantly from the average reported by NSAs in response to our questionnaire, an imbalance will occur between costs and revenues. The model includes a calculation of the magnitude of this imbalance and a number of sensitivities have been run related to this.

Model Outputs

Workload, Staff Requirements & Agency Fees

- 6.22 The model has been developed to output the estimated average workload required by product and the projected Agency staff requirements by product. The outputs also include a chart based on the analysis of data provided by NSAs comparing the range of reported average fees against the average Agency fee estimated using the proposed fee structure.

Workload

- 6.23 The estimated average workload (days) required by product has been further disaggregated by the estimated workload required during pre-engagement and the application phase for both the Agency and per NSA involved.

Staff Requirements

- 6.24 Estimated annual Agency staff requirements (full-time equivalents) are output by product and for the projection period 2017-2020. The output includes an average estimate and a second estimate of the requirements to meet the assumed peak workload. The assumed peak workload for Single Safety Certification is based on the profile extracted from ERADIS data, noting that the average workload in December is approximately 40% higher than the average workload. The peak workload for Vehicle Authorisations is assumed to be 50% higher than the average workload.

Comparison of fees

- 6.25 The comparison of the Agency's fees estimated using the proposed fee structure against the range of average fees reported by NSAs has been developed outside of the model. However, the chart showing this comparison by product is included in the model and will be discussed further in chapter 7.

NSA Costs

- 6.26 The average costs per hour as reported by NSAs by Member State and product has been included as an output at the Agency's request. As discussed with the Agency⁵¹, this includes all costs reported by the NSAs in response to our survey, but may not include indirect costs not reported by NSAs.
- 6.27 A number representing the estimated surplus or loss the Agency is projected to incur given the fees levied and the NSA costs the Agency will be required to reimburse. This output is based at present on assumed dummy numbers and will need to be updated as agreements are formed with NSAs regarding reimbursement for their work.

Key Assumptions

- 6.28 The following table lists the working assumptions used in the model. All of these assumptions are included on the assumptions and parameters sheets of the model and can be edited directly on these sheets.

⁵¹ Discussed with Martin Schroeder at the Agency's offices in Lille on 21 July 2016

Table 6.2: List of key assumptions

Description	Assumption	Source
Days worked per Agency employee per year	200	Agency assumption: 261 weekdays per year – 17 (consolidated) public holidays – 30 days annual leave – 10 days of training – 4 days sick leave
Length of working day	7 hours	Based on 35-hour week in several MS
Gross staff costs	€125k per Agency employee per annum	Assumption provided by EUAR
Agency other costs ⁵²	€5k per Agency employee per annum	Assumption agreed with EUAR
Split of workload for SSC application process	First: 50% pre-engagement Renewal: 10% pre-engagement Update: 30% pre-engagement	Discussions with stakeholders combined with expert judgement
Split of workload for VA application process	First: 80% pre-engagement New: 50% pre-engagement Additional: 60% pre-engagement Renewed: 30% pre-engagement Subsequent: 30% pre-engagement	Discussions with stakeholders combined with expert judgement
Split of workload between NSAs and EUAR for VA applications	First: 20% Agency New: 40% Agency Additional: 20% Agency Renewed: 20% Agency Subsequent: 230% Agency	Discussions with stakeholders combined with expert judgement
SSC peak workload	41% greater than average workload	Profile of applications extracted from ERADIS data
VA peak workload	50% greater than average workload	Standing assumption in lieu of data, based loosely around SSC peak workload
VA application projections over 2016 - 2019	EUAR projections spread according to a 10% decrease per year	Assumption agreed with EUAR
SSC application projections over 2016 - 2019	Application numbers remain static over projection period	Assumption used in 4RWP Impact Assessment
Allocation of VA applications to MS	Applications not accounted for by data provided by NSAs split evenly across MS according to whether it is an Eastern or Western Europe	Best estimate based on a mixture of sources including survey responses and projections provided by the Agency
SSC applications submitted to the Agency where applicants can choose to apply through NSAs or the Agency	10%	Standing assumption to be approved by EUAR
Factors “k” and “l” used in fee structure to determine weightings for fixed elements of application and pre-engagement fees respectively	SSC: k = 40%, l = 10% VA: k = 60%, l = 20%	Assumptions based on rationale given in chapter 5.

⁵² Including training and conferences

Description	Assumption	Source
NSA costs per day	3 categories: €325, €600 and €775 depending on MS	Dummy numbers used for now, to be updated based on agreements with NSAs

Sensitivities

- 6.29 A number of sensitivities have been run using the model to evaluate the sensitivity of the model to a number of possible scenarios and ensure the proposed fee structure is robust. The results of these sensitivities are detailed in the next chapter.

Projected volume of applications

Safety Certification

- 6.30 The number of safety certification applications processed in the last 5 years will be used to develop a projection to be used in the modelling as detailed in paragraph 6.15. Time series data is available for more than 10 years, however, a significant number of outliers have been detected in the data prior to the 5 year period such that using a 10-year average would result in a misrepresentation of the current situation and likely near-future situation, therefore the 5-year average has been used to project the annual application numbers over the projection period. This projection includes a factor to determine the number of applications the Agency receives from applicants who have the option to apply through either the NSA or the Agency. We have tested the impact of varying this factor.

Vehicle Authorisations

- 6.31 The Agency has provided us with projections for Vehicle Authorisation applications that are likely to go through the Agency which reflect the assumption that applications for all electric vehicles, high speed vehicles and 30% of wagons will go through the Agency, roughly equivalent to more than a third of all expected applications. This projection does not include any indication of how the application numbers will vary over the year and a peak application level will be calculated based on an assumed multiplier. We have tested the impact of varying this multiplier.

NSA Costs

- 6.32 The model has been set up to test the impact of variation between the rates the Agency reimburses NSAs for any work completed in assessing applications. We have tested two scenarios, the first where NSAs are reimbursed according to their GDP per capita and the second according to 3 bands with an assumed rate for each band.

7 Modelling results

Data Analysis

7.1 The data provided by NSAs was analysed as part of the modelling and outputs from the analysis include average workload by product and the average costs per hour. These are detailed in the sections below.

Average workload by product

7.2 As noted in paragraph 6.23, average workload by product has been disaggregated by application phase and Agency/NSA. It should be noted that the assumptions (listed in Table 6.2) used to disaggregate the workload by application phase is based on discussions with stakeholders and does not have any quantitative data underpinning it. The disaggregated numbers should therefore be treated with further caution. The average workload by product is shown in Table 7.1 and Table 7.2 below and is replicated in the Appendix C.

Table 7.1: Average estimated workload (days) by vehicle authorisation product

Vehicle Authorisation		Agency Workload (days)		NSA Workload (days)	
Category	Product	Pre-engagement	Application	Pre-engagement	Application
Complex	First VA	5	2	19	5
	New VA	4	4	5	5
	Additional VA	5	3	17	11
	Renewed VA	1	2	3	6
	Subsequent VA	1	1	2	4
Standard	First VA	4	1	15	4
	New VA	3	3	4	4
	Additional VA	3	2	11	8
	Renewed VA	1	1	2	3
	Subsequent VA	1	1	2	3
Simple	First VA	2	1	7	2
	New VA	2	2	3	3
	Additional VA	2	1	5	3
	Renewed VA	1	1	1	3
	Subsequent VA	1	1	1	2

Table 7.2: Average estimated workload (days) by Single Safety Certification product

Single Safety Certification	Agency Workload (days)		NSA Workload (days)	
	Pre-engagement	Application	Pre-engagement	Application
First	15	15	13	13
Renewal	3	21	3	21
Update	2	5	4	8

Average costs per hour

7.3 NSAs provided data on average application costs and workload in response to our consultation and these have been used to estimate average costs per hour by product. The phrasing of the relevant survey questions means that the cost of pre-engagement should have been included in the data provided by NSAs.

7.4 In many cases either the cost or workload was not provided and we have not been able to compute the average costs per hour in these cases. Additionally, there was very little difference between passenger, freight and mixed applications in terms of reported costs per hour and there was similarly very little difference between complex, standard and simple vehicle types so only an average of both groups has been estimated. The average costs per hour, where provided by the NSA, are shown in Table 7.3 and Table 7.4 and replicated in Appendix C.

Table 7.3: Vehicle authorisation average costs per hour

Costs/hr (€)	Vehicle Authorisation				
	First	New	Additional	Renewal	Subsequent
Croatia	13	13	13	13	13
Latvia	13	13	13	13	13
Lithuania	14	15			
Romania	0.2				
Slovenia	6	9			7
Slovakia	10	10			10
Finland	3	3	8	15	15
Sweden	150	150	150	150	150
Switzerland	133				
UK					

Table 7.4: Safety certificate average costs per hour

Costs/hr (€)	Single Safety Certificate		
	First	Renewal	Update
Denmark	120	120	
Germany	120	120	120
Estonia	6	4	8
Croatia	13	13	13
Italy			
Latvia			
Lithuania			

Poland	78	57	67
Romania	15	15	15
Finland	200	200	200
Switzerland	191	206	208
UK	54	54	53

- 7.5 Generally, there are three groups of Member States in terms of estimated costs, those where costs are estimated to be between €100 and €200 per hour including Denmark, German, Finland, Sweden and Switzerland, those where costs are around €60 per hour including Poland and the UK and those where costs are less than €20 per hour as was reported by all Eastern European Member States who provided data.
- 7.6 There are a few values that are presented in the above tables that we recognise as outliers including the value estimated for first vehicle authorisations provided by Romania and the values Finland have provided for safety certification.
- 7.7 It was noted in earlier work that the costs per hour at the EU level varied significantly between vehicle authorisation and safety certification. However, on closer inspection, it was revealed that outliers had partially skewed the results (which had a greater impact at that stage as there were fewer data points). In addition to the outliers, it was also found that the comparison was not exactly like with like (as some Member States provided data for safety certification but not for vehicle authorisation and vice versa). Carrying out the comparison at the Member State level reveals that there is little difference between the costs per hour for Safety Certification and vehicle authorisation.
- 7.8 Given the level of variation and the number of data gaps, caution should be employed if this is to form the basis of agreements with NSAs. Use of this data to inform the estimated daily rate used in the proposed fee structure has also been avoided for these reasons and the estimated gross staff costs provided by the Agency have instead been used as a basis for the daily rate as detailed in Table 6.2.
- 7.9 The large variation in both workload and cost reported at Member State level as detailed in Chapter 3 gives rise to concerns with regards to the underlying reliability of the data. It is suspected that this is due to a combination of the inconsistency in the ways NSAs process applications (i.e. the way applications are processed and the level of scrutiny applied varies significantly between NSAs) and a lack of accurate records of the time and cost spent by NSAs on processing applications. While efforts have been made in the modelling to reduce the risks posed by unreliable data, it is highly recommended that the Agency keep records of the workload involved in processing applications and revise the fees based on the proposed fee structure periodically.

Other Model Outputs

Agency Resourcing Requirements

- 7.10 An estimate has been made for the number of staff (full-time equivalents) the Agency will require to process the applications it is projected to receive on an annual basis. The projections used in the analysis of resourcing requirements are shown in Table 7.5 and Table 7.6.

Table 7.5: Agency single safety certificate application projections

SSC Applications	2017	2018	2019	2020
First	18	18	18	18
Renewal	17	17	17	17
Update	23	23	23	23
Total	58	58	58	58

Table 7.6: Agency vehicle authorisation application projections

VA Applications		2017	2018	2019	2020
Complex	First VA	3	3	2	2
	New VA	11	10	9	9
	Additional VA	2	2	1	1
	Renewed VA	2	1	1	1
	Subsequent VA	2	2	2	2
Standard	First VA	15	14	12	11
	New VA	67	61	55	50
	Additional VA	8	7	6	6
	Renewed VA	7	6	6	6
	Subsequent VA	9	8	7	7
Simple	First VA	7	6	6	6
	New VA	30	27	25	23
	Additional VA	4	3	3	3
	Renewed VA	3	3	3	3
	Subsequent VA	4	4	4	4
Total	174	157	142	134	

7.11 Given the estimated average workload per application and the assumed number of working days by employee (full-time equivalent), the Agency's average annual staff requirements have been estimated and are shown in Table 7.7. We have further estimated the staff requirements to meet the estimated peak workload and this is shown in Table 7.8. It should be noted that if the Agency were to employ the number of personnel required to process the peak workload, there would be a risk of some staff with low utilisation outside of the peak period.

Table 7.7: Agency staff requirements (full-time equivalents) to meet estimated average workload

FTEs	2017	2018	2019	2020
Single Safety Certification	6	6	6	6
Vehicle Authorisation	5	4	4	4
Total	11	10	10	10

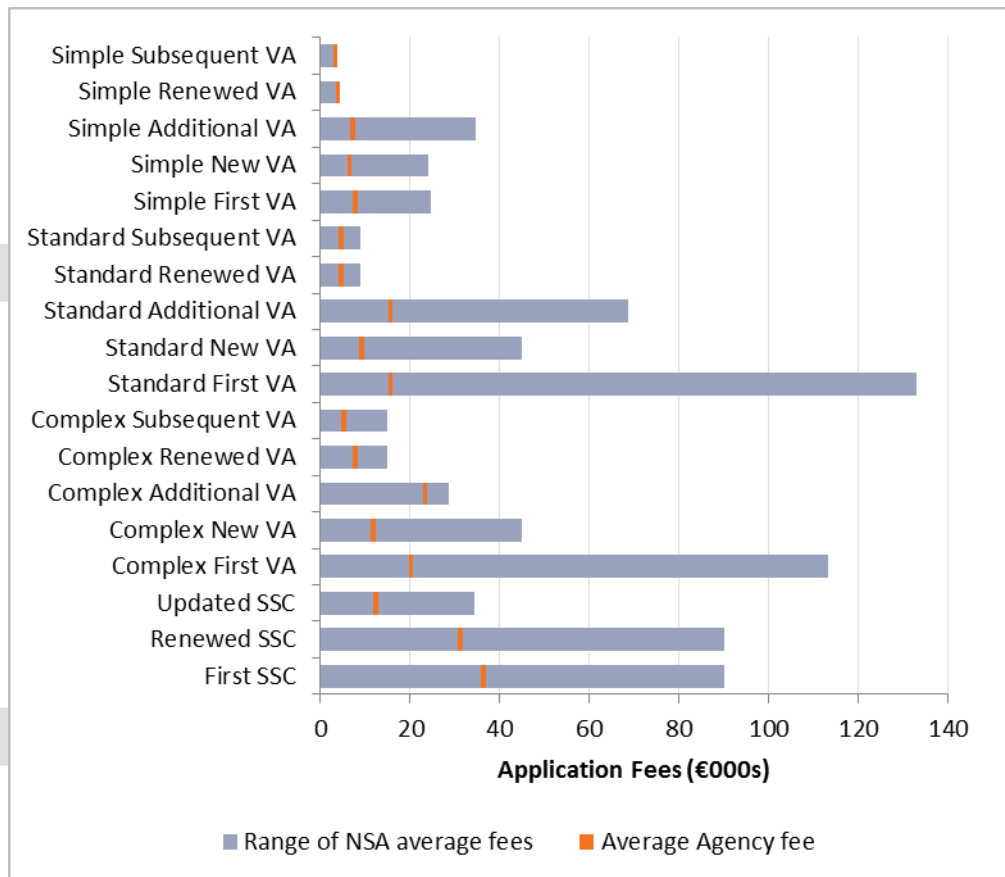
Table 7.8: Agency staff requirements (full-time equivalents) to meet estimated peak workload

FTEs	2017	2018	2019	2020
Single Safety Certification	8	8	8	8
Vehicle Authorisation	7	6	6	5
Total	15	14	14	13

Comparison with average fees across the EU

7.12 The Agency regulation includes the requirement that the Agency’s fees should be equal to or less than the average fees levied by NSAs. The estimated average Agency fees by product has been compared against the average fees levied by NSAs for an application to a single NSA and this is shown in Figure 7.1. The range of average fees includes any indirect fees that have been reported in response to our consultation, but there may be instances where indirect fees have gone unreported.

Figure 7.1: Comparison of Agency fees against the range of average NSA fees



7.13 In almost every case the proposed Agency fee is well within the range of average fees levied by those NSAs as reported in response to our consultation. The only exception to this is a subsequent vehicle authorisation for a simple vehicle type for which the proposed Agency fee is very slightly higher than the range of average fees levied by NSAs.

7.14 The majority of applications to the Agency will likely be those for which applicants are applying for operations in multiple Member States and in such cases, applicants should make savings due to some parts of the application being processed a single time by the Agency rather than multiple times by the different NSAs applied to. For example, if an applicant wishes to bring a new vehicle to the market in three Member States, under the current arrangements an applicant would apply to the three NSAs and pay for all parts of the application to be assessed three times, whereas through the Agency, the parts of the application related to TSIs will only need to be assessed, and therefore paid for, once.

Sensitivities

7.15 A number of sensitivities have been carried out including:

- Sensitivities related to a differential between the assumed daily rate used in the fee structure and that agreed with NSAs for the tasks they complete in assessing Agency applications;
- Sensitivities to test the impact of varying the proportion of safety certificate applications received by the Agency from applicants who have the choice of applying either through the Agency or an NSA; and
- A sensitivity looking at the impact of the number of vehicle authorisation applications received in a peak being twice as much as the average (as opposed to 50% greater which has been assumed in the modelling).

Differential between the Agency daily rate used in the fee structure and that agreed with NSAs

7.16 The model has been set up to calculate the estimated differential between the fees levied by the Agency and the charges from NSAs based on the average application workload and the projections described in chapter 6. As the average application workload is used as the basis of the estimates made, the sensitivities described here are equally relevant to the three options presented in Table 5.4. Any differential between fees and costs tested under these sensitivities is related to the proportion of applications going to NSAs who are reimbursed according to a daily rate greater and/or less than the daily rate used in the fee structure.

7.17 The first sensitivity that was tested, included as the default assumption in the model, includes the Member States grouped into three daily rate bands loosely tied to the reported costs per hour where possible and this is shown in Table 7.9 below. Based on these bands, it is estimated that the Agency would collect €17k in fees more than its costs in relation to the tasks undertaken by NSAs.

Table 7.9: Assumed daily rate bands in the first sensitivity

Band	Member States
1 - €325 per hour	Bulgaria, Estonia, Croatia, Latvia, Lithuania, Romania, Slovenia and Slovakia
2 - €600 per hour	Belgium, Czech Republic, Ireland, Greece, Spain, Hungary, Netherlands, Norway, Austria, Poland, Portugal and Sweden
3 - €875 per hour	Denmark, Germany, France, Italy, Luxembourg, Finland, Switzerland and UK

7.18 A second sensitivity was also run assuming the daily rate is related to a Member States GDP per capita (purchasing power parity) and that the daily rate for the EU-average GDP per capita is set to €650 and each individual Member States rate is calibrated in relation to this (i.e. if a MS has a GDP per capita double the EU average, the daily rate upon which reimbursement is based is assumed to be €1,300, double €650). Under this assumption, the Agency is estimated to incur €1.1m more in costs than it will recover from fees.

7.19 Although these two sensitivities have so far been tested, the model may be easily adapted to test other scenarios. The tested scenarios illustrate how sensitive the Agency’s costs are to the agreements to be set up with NSAs and it is highly recommended that a consistent approach is taken and modelled to ensure it is reasonable for the costs to be fully covered through the fee mechanism.

Variation in the proportion of single MS applications submitted to the Agency

- 7.20 A number of sensitivities were tested on the proportion of applications submitted to the Agency for which the applicant will have the choice to submit it to either the Agency or the relevant NSA (i.e. for applications related to a single MS only). The assumption used in the core modelling is that 10% of such applications will be submitted to the Agency. For every increase in this by ten percentage points (i.e. to 20%), the number of staff required to meet the estimated average workload increases by two full-time equivalents. As it is considered unlikely that applicants will apply through the Agency instead of the NSA where there is a choice and a small increase in the assumed proportion does not have a significant impact on staff requirements, the Agency should not have any significant difficulties if the number of such applicants varies from the assumed value.

Peak workload for Vehicle Authorisation applications

- 7.21 Unlike safety certification, there is little basis to determine the profile of Vehicle Authorisation applications over the year and it was assumed as part of the core modelling that the peak workload is 50% greater than the average workload. The impact of increasing the peak workload to double the average workload was tested and it is estimated that a further two staff (full-time equivalents) would be required during the peak period to meet the peak workload. As there is no available profile for vehicle authorisation applications, it is not known when this peak period would occur, however, even if the peak workload is significantly different from the assumed value, the Agency's staff requirements are still reasonable.

8 Scheme of charges

- 8.1 A number of tables for use in the scheme of charges have been developed based on the proposed fee structure and the assumptions detailed in chapter 6. These tables are presented below.
- 8.2 To determine the fixed fee payable, the fee per Member State should be multiplied by the number of Member States for which the applicant is applying for and added to the Agency fee. The resulting fixed fee is payable on submission of the application.
- 8.3 A variable fee is also payable by applicants and a daily rate for the pre-engagement and application processing is given for safety certification and vehicle authorisation applications separately. Any costs incurred by the Agency or NSAs in relation to travel and/or subsistence are also to be borne by the applicant and will be invoiced along with the variable fee.

Table 8.1: Fixed fees payable for safety certification products

Product		Fixed Fee (€)	
		Agency	Additional fees per MS
Safety Certificate	First	4,875	4,225
	Renewal	5,655	5,655
	Update	1,430	2,340

Table 8.2: Variable rates for safety certification applications

Phase	Daily Rate (€)
Pre-engagement	585
Application	390

Table 8.3: Fixed fees payable for vehicle authorisation products

Product		Fixed Fee (€)		
		Agency	Additional fees per MS	
Vehicle Authorisation	Complex	First	1,430	4,420
		New	2,080	2,600
		Additional	1,820	6,500
	Standard	Renewed	910	2,730
		Subsequent	520	1,820
		First	910	3,510
	Standard	New	1,560	2,080
		Additional	1,170	4,550

Simple	Renewed	520	1,430
	Subsequent	520	1,430
	First	650	1,690
	New	1,040	1,560
	Additional	650	1,820
	Renewed	520	1300
	Subsequent	520	910

Table 8.4: Variable rates for vehicle authorisation applications

Phase	Daily Rate (€)
Pre-engagement	520
Application	260

- 8.4 Fees are also payable for audits and appeals according to a daily rate. It is expected that if an applicant does not undertake a reasonable amount of pre-engagement, the number of audits required to assess an application may be greater than otherwise. Any costs incurred by the Agency or NSAs in relation to travel and/or subsistence are also to be borne by the applicant on top of the daily rates shown.

Table 8.5: Variable rates for audits and appeals

Product	Daily Rate (€)
Audits	650
Appeals	650

- 8.5 It is recommended that the Agency reproduce or reference their standard rates for reimbursement of subsistence costs by Member State in the scheme of charges in order to provide as much clarity on this as possible.

9 European Traffic Management System (ERTMS)

Authorisation of ERTMS trackside installation

Introduction to the new process

- 9.1 Whilst the arrangements for Safety Certification and Vehicle Authorisation have been significantly modified by the new Directives, they are processes that exist already and it is possible to make workable assumptions about what the Agency will need to do under the 4RWP arrangements. By contrast, the role that the Agency is to undertake for ERTMS, as the System Authority, is new.
- 9.2 In advance of any call for tenders (by an IM) relating to an ERTMS trackside installation, the Agency must assess the technical solutions envisaged to ensure that they are fully compliant with the relevant TSIs and are therefore fully interoperable. If it finds that the solution is compliant with the TSIs relating to control command and signalling and are therefore fully interoperable then it will issue a positive decision accordingly.
- 9.3 We noted that there is an existing process, undertaken by the NSA, namely 'verification of sub-system', which is undertaken at the time of commissioning of installations rather than of tendering and it was anticipated that the experience of those NSAs might give an indication of the workload that might be encountered by the Agency in doing its work.
- 9.4 We considered it likely that it might be possible to identify what the effect of any one parameter might be on the relative size of projects. By way of example (albeit an unlikely scenario), if the use of axle counters caused projects to fall into the large category and 75% of projects use axle counters then most projects will be categorised as large.
- 9.5 In addition, it had been considered possible that it might be possible to draw upon the professional judgement and experience of infrastructure managers to gain their opinions about the fees that might be incurred by applicants in the new process

Pre-engagement

- 9.6 Pre-engagement will not be mandatory but it is expected that it will contribute positively to the overall process. The ERTMS Unit envisages that there will be little variation in the length of the pre-engagement process between applications and it will be a limited workload, unlike for safety certification and vehicle acceptance, where it is often long compared with the time taken to assess the application.
- 9.7 The pre-application process will be used for:

- engaging the applicant to understand the details of the project so as to better estimate the effort and the checks that will be needed during the approval; and
- defining the approval process together with the applicant.

9.8 The details of the project will include such factors as:

- ERTMS Level;
- ETCS Baseline;
- use of GSM-R for voice / data;
- type of train detection technology;
- use of infill devices;
- international boundaries; and
- use of specific functions, such as:
 - shunting mode
 - packet 44
 - on-line KMS

9.9 In addition to the facts obtained from the responses that are given by the applicant, any gaps in the information provided may reveal issues concerning the knowledge and maturity of the applicant about the final design. In some cases, this will create a requirement for audits and / or inspections, depending on maturity, quality or specific findings during the approval.

Consulting NSAs

9.10 When conducting stakeholder consultation, we included questions related to ERTMS within the questionnaire sent to NSAs (see Appendix B). We acknowledged that the future authorisation task to be undertaken by the Agency differs from the verification task undertaken by NSAs. We also explained that it would be helpful to understand the workload associated with verification as a benchmark for estimating the workload for the authorisation task.

9.11 We requested a list of any installations planned for after July 2019 and , and requested associated details about each. In addition, we asked:

- whether they currently authorise ERTMS trackside subsystems; and
- if so, what fees they charge for this and how these are calculated.

9.12 The responses of the NSAs to the ERTMS questions is shown in Table 9.1. Whilst all NSAs that responded, with the exception of Austria, did answer the questions about ERTMS, only just over half of them were able to provide information about future projects.

Table 9.1: NSA responses concerning ERTMS

NSA	Completed questionnaire response	ERTMS questions answered	ERTMS projects listed
Croatia	Yes	Yes	Yes
Denmark	Yes	Yes	Yes
Estonia	Yes	Yes	Yes
Finland	Yes	Yes	Yes
France	Yes	Yes	No
Greece	Yes	Yes	No
Hungary	Yes	Yes	Yes

NSA	Completed questionnaire response	ERTMS questions answered	ERTMS projects listed
Italy	Yes	No	No
Latvia	Yes	No	No
Lithuania	Yes	Yes	Yes
Poland	Yes	Yes	No
Portugal	Yes	Yes	No
Romania	Yes	Yes	No
Slovakia	Yes	Yes	Yes
Slovenia	Yes	Yes	Yes
Spain	Yes	Yes	Yes
Sweden	Yes	Yes	Yes
Switzerland	Yes	Yes	Yes
UK	Yes	Yes	No
Austria	Partially	No	Yes
Germany	Partially	Yes	No

9.13 Of the 19 NSAs that responded on this subject, nine advised us that they currently authorise ERTMS trackside subsystems. All nine of these NSAs provided an indication of fees, but on a variety of bases including, median fees per annum, fee per kilometre and a nominal flat fee for the service.

Consulting Infrastructure Managers

9.14 We also sent a questionnaire solely related to ERTMS to Infrastructure Managers (IMs). This was distributed with the help of the EIM and CER. As with the NSA survey, we requested information about any installations planned after July 2019 and their associated details.

9.15 We also asked IMs to provide, based upon their experience, an indication (as a range) of the costs charged by a NoBo associated with ERTMS trackside subsystem verification. We requested the following details:

- overall cost of subsystem verification;
- subsystem verification cost per km of double track (reflecting range from plain line to complex stations or junctions); and
- percentage of total trackside project cost accounted for by subsystem verification.

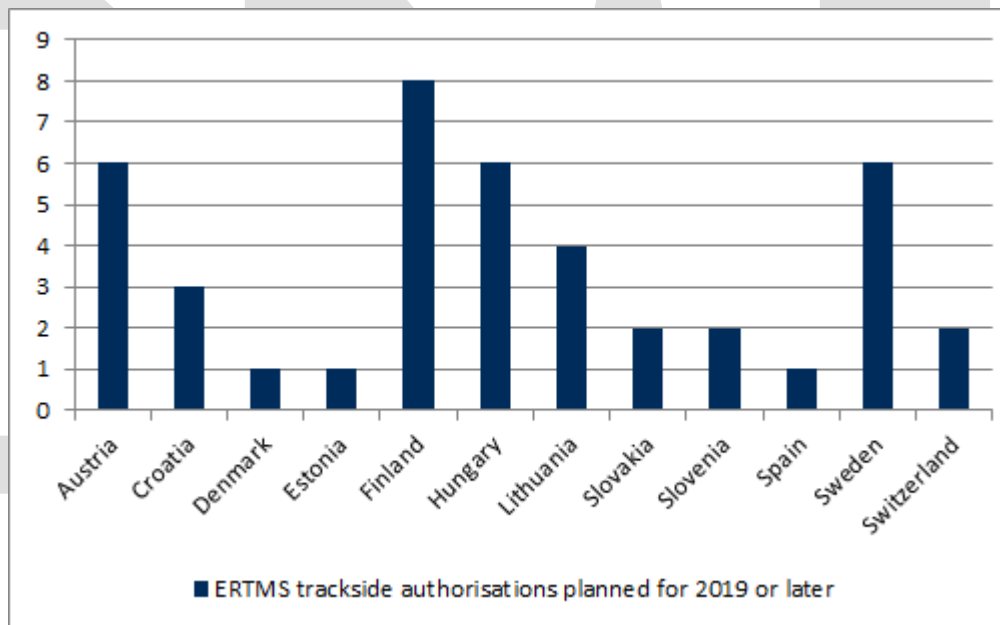
9.16 The response rate for IMs was low, as can be seen in Table 9.2. Information about future projects was only provided by four IMs

Table 9.2: IM responses concerning ERTMS

Infrastructure manager	ERTMS questions answered	ERTMS projects listed
Denmark	No	No
Lithuania	Yes	Yes
Romania	Yes	Yes
Czech Rep	Yes	Yes
Switzerland	Yes	No
Austria	Yes	Yes
Germany	No	No

9.17 Twelve Member States identified 42 projects that were expected post July 2019, as illustrated in Figure 9.1.

Figure 9.1: Future ERTMS trackside installation projects reported by IMs



9.18 Only four of these IMs provided the requested characteristic information about these projects.

Recommendations regarding charging for ERTMS applications

9.19 Given the responses received to the questionnaires, there is insufficient data on which to base a reasonable estimate of the expected costs to EUAR of ERTMS trackside installation authorisation.

9.20 We recommend that, for the initial period of undertaking authorisations of ERTMS trackside installation, the Agency should levy rate-based fees. This might be based upon the following formula:

$$\text{ERTMS Fees} = \text{days spent processing application} \times \text{daily rate}$$

9.21 When the process becomes clearer and more evidence and data is available to draw upon, it may be appropriate to develop a more sophisticated charging mechanism to provide

incentives for pre-engagement with applicants while still ensuring incurred costs are broadly recovered.

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10 Key conclusions and recommendations

10.1 This section is to be further developed and finalised following receipt of the Agency's comments to our Draft Final Report. Our draft recommendations are set out below.

Recommendations related to the fee mechanism

- We recommend that the Agency develop a scheme of charges based on the mechanism set out in chapter 5. We recommend that the values of “k” and “l” used in the mechanism should initially be set to those shown in Table 6.2 and the average workloads shown in Table 7.1 and Table 7.2 be used to determine the average costs of an application. We further recommend that the Agency develop an approach to documenting and monitoring average workloads for each application (in coordination with NSAs) and periodically update both the factors “k” and “l” and the average workloads used to calculate the average costs of an application in the mechanism.
- We recommend that the Agency seeks to incentivise pre-engagement through non-financial means as set out in paragraph 5.50.
- We also recommend that the Agency produce guidance for applicants to accompany the scheme of charges setting out the application process and key issues for consideration, including the importance of pre-engagement.
- Finally, we recommend that for the initial period of undertaking authorisations of ERTMS trackside installation, the Agency should levy rate-based fees. When the process becomes clearer and more evidence and data is available to draw upon, it may be appropriate to develop a more sophisticated charging mechanism to provide incentives for pre-engagement similar to those included in the fee mechanism for single safety certification and vehicle authorisation.

Recommendations related to agreements with NSAs

- We recommend that, in relation to agreements with NSAs, the Agency reimburse NSAs on a time and materials basis with a budget cap linked to the estimated average workload for a given product (e.g. the cap may be based on the cost of an application where the workload is twice the estimated average).
- We further recommend that the Agency takes a consistent approach to the daily rates for reimbursement of NSAs and model the costs related to the approach prior to the development of any agreements to ensure that the Agency's costs are controlled.

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A Glossary of acronyms and abbreviations

Glossary of acronyms and abbreviations	
4RWP	Fourth Railway Package
AMCs	Acceptable Means of Compliance, non-binding standards adopted by EASA for illustration purposes
AOC	Air Operator's Certificate, approval granted to an air operator to operate aircraft for commercial purposes
CAA	Civil Aviation Authority, the UK's national aviation authority
CER	Community of European Railway and Infrastructure Companies, represents the interests of railway undertakings and infrastructure managers
DGAC	Directorate General of Civil Aviation, France's national aviation authority
EASA	European Agency for Space and Aviation
EC	European Commission
EIM	European Rail Infrastructure Managers, represents the interests of European rail infrastructure managers
EPSP	Etablissement Public de Sécurité Ferroviaire, the French national safety authority
ERADIS	European Railway Agency Database of Interoperability and Safety
ERTMS	European Rail Traffic Management System
ETCS	European Train Control System, a signalling, control and train protection system
EU	European Union
EUAR	European Union Agency for Railways
GDP	Gross Domestic Product, a monetary measure used to determine the economic performance of a country
GSM-R	Global System for Mobile Communications - Railway, an international wireless communications standard for railway communication
IM	Infrastructure Manager
IT	Information Technology
KMS	Key Management System
LBA	Federal Aviation Office, Germany's national aviation authority
MS	Member States of the European Union
NSA	National Safety Authority, the organisation responsible for overseeing rail transport in a given country
ORR	Office for Rail and Road, the UK national safety authority
OSS	One Stop Shop

RU	Railway Undertaking
SDG	Steer Davies Gleave
SERA	Single European Railway Area
SJT	Statens jernbanetilsyn, the Norwegian national safety authority
SMS	Safety Management System
SSC	Single Safety Certificate
TSI	Technical specifications for interoperability
UK	United Kingdom
UTK	Urząd Transportu Kolejowego, the Polish national safety authority
VA	Vehicle Authorisation

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B NSA Questionnaire

Introduction

- B.1 This questionnaire seeks to solicit information to assist the European Union Agency for Railways (the Agency) in determining the basis on which it should administer fees and charges in respect of the products (i.e. the services to be undertaken) associated with the issue of Single Safety Certificates for Railway Undertakings and the authorisation of vehicles. The specific responsibilities of the Agency in this regard have been set out in new legislation that will replace Regulation (EC) No 881/2004. This questionnaire has been based on the responsibilities of the Agency as envisaged in the draft Directives issued in November 2015.

Safety certificates

Safety Certification Product Categories

S1 It is anticipated that the ‘products’ shown in the table below would be provided by the Agency under the new legislation. Do you agree that pricing of the Agency’s charges for Safety Certification applications should be differentiated based on the categories set out in this table?

S2 If not, please explain your reasons?

Application types	Operations types
First Single safety certificate	Passenger
	Freight
	Passenger and freight
Renewal of Single safety certificate	Passenger
	Freight
	Passenger and freight
Update of Single safety certificate	Passenger
	Freight
	Passenger and freight

Certification workload, costs and fees under existing arrangements

S3 In the following tables, please provide an indication of the resources required and costs incurred to undertake the certification activities for each category under the existing arrangements for Part A and Part B certification, together with the fees charged (if any).

Part A safety certificate

Product/Service	Sub Type	Workload (technical staff hours)			Costs of this workload (Euros)			Any other costs needing to be recovered (e.g. Administration costs)	Fees charged to applicant (Euros)		
		Min	Ave	Max	Min	Ave	Max		Min	Ave	Max
First Part A safety certificate	Passenger										
	Freight										
	Passenger & Freight										
Renewal of Part A safety certificate	Passenger										
	Freight										
	Passenger & Freight										
Update of Part A safety certificate	Passenger										
	Freight										
	Passenger & Freight										

Part B safety certificate

Product/Service	Sub Type	Workload (technical staff hours)			Costs of this workload (Euros)			Any other costs needing to be recovered (e.g. Administration costs)	Fees charged to applicant (Euros)		
		Min	Ave	Max	Min	Ave	Max		Min	Ave	Max
First Part B safety certificate	Passenger										
	Freight										
	Passenger & Freight										
Renewal of Part B safety certificate	Passenger										
	Freight										
	Passenger & Freight										
Modification of Part B safety certificate	Passenger										
	Freight										
	Passenger & Freight										

S4 In the table below, please indicate how significant the following characteristics of the applicant’s operations are to the workload required to process the application for a safety certificate.

Operational Characteristic	Very Insignificant	Insignificant	Somewhat	Significant	Very significant
Geographic extent of operations (route km)					
Volume of train services operated (train km)					
Number of staff employed by the applicant					
Type of operation (e.g. high speed /regional for passenger or intermodal/ dangerous goods for freight)					
Number of vehicles operated by the applicant					
Risk characteristics of the operations (please specify)					

S5 Are there other factors that affect the workload required to process an application for a safety certificate? If so, please specify.

S6 What proportion of the workload relates to ‘desktop’ review of the SMS, and what proportion to audits and inspections undertaken during the assessment period, if applicable?

Fees

S7 Does a part of the fees charged for issuing a Safety Certificate include the cost of continuous supervision (after the issuing of the certificate)?
If so, what proportion of the fees is for this purpose?

S8 If you do not charge a fee for your role in the safety certification process, or the fees do not completely cover the costs, how are the activities funded?

S9 If you do charge a fee, please explain:

- how the fees are determined;
- the frequency and basis of revisions to these fees;
- any special provisions for small and medium-sized enterprises.

Applicants per year

S10 Under the new Directive all applications for Single Safety Certificates for cross-border operations will need to be made to the Agency and applications in respect of operations contained within a member state may be made to either the Agency or the NSA. Based on your previous experience of applications for Part A and Part B Safety Certificates, in future, under the new Directive, how many applications for Single Safety Certificates per year in respect of operations within your member state would you expect to be made to the Agency? Please indicate in the table below:

Applications for Single Safety Certificate	Number of applications per year made to the Agency
Mandatory (cross-border operations)	
Optional (operations within Member State)	

Vehicle authorisations

Vehicle Authorisation Products

Article 21 of the new Interoperability Directive sets out provisions for authorisation for the placing on the market of vehicles. Under this Directive the Agency shall be responsible for the issue of vehicle authorisations for placing on the market in respect of vehicles having an area of use in one or more Member States. Where the area of use is limited to a network or networks within one Member State only, the applicable NSA may issue such vehicle authorisations as an alternative to the Agency.

V1 It is anticipated that the ‘products’ shown in the table below would be provided by the Agency under the new interoperability Directive. Do you agree that pricing of the Agency’s charges for vehicle authorisations should be differentiated based on the categories set out in this table?

V2 If not, please explain your reasons.

Products	Reference in draft new Interoperability Directive	Correlated Authorisation case under the Interoperability Directive 2008/57/EC
New basic design type	Article 21, paragraphs 5 to 11	First authorisation
Changed basic design type	Article 21, paragraph 12	New authorisation (upgrade/renewal)
Existing basic design type with extended area of use	Article 21, paragraph 13	Additional authorisation
Existing basic design type	Article 25, paragraph 1	Renewed authorisation
		Subsequent authorisation

V3 We have proposed three further sub-categories (simple, standard, complex) as a potential basis for differentiating vehicles according to the workload for authorisation (see table below). Do you agree that this is a sensible and workable categorisation in terms of the activity associated with vehicle authorisations?

V4 If not, what changes to the categorisation would you suggest (please indicate what significant differences there are between current types within a proposed grouping)?

Vehicle category	Includes
Complex	Very High Speed trains
	High Speed trains
	EMUs (161-219 Km/h)
	EMUs (≤ 160 Km/h)
Standard	Electric locomotives
	Diesel locomotives
	DMUs (161-219 Km/h)
	DMUs (≤ 160 Km/h)
	Coaches equipped with driving controls for 'push-pull' operation
Simple	Wagons.
	Non-driving coaches – Single-deck
	Non-driving coaches – Double-deck
	Shunting locomotives

Pre engagement

V5 Do you charge a fee to applicants for pre engagement before the formal initiation of the vehicle authorisation process?

If yes, please explain:

- On what basis the fees are charged
- How the fees are determined

[Empty text box for response to V5]

V6 If you do not charge a fee for your role in the pre engagement process, or the fees do not completely cover the costs, how are the activities funded?

[Empty text box for response to V6]

V7 Does the workload for the pre-engagement phase vary depending upon the product being applied for? If so, please give further details.

[Empty text box for response to V7]

Authorisation costs and fees

Costs and drivers

V8 In the tables below for each category of vehicle (see V4 for definitions) please indicate the level of costs to you and the fees charged for vehicle authorisation.

Table B.1: Complex Vehicles

Product	Workload range (technical staff hours)			Costs of this workload (Euros)			Any other costs needing to be recovered (e.g. administration costs)	Fees charged to applicant (Euros)		
	Min	Ave	Max	Min	Ave	Max		Min	Ave	Max
New basic design type										
Changed basic design type										
Existing basic design type with extended area of use										
Existing basic design type										

Table B.2: Standard Vehicles

Product	Workload range (technical staff hours)			Costs of this workload (Euros)			Any other costs needing to be recovered (e.g. administration costs)	Fees charged to applicant (Euros)		
	Min	Ave	Max	Min	Ave	Max		Min	Ave	Max
New basic design type										
Changed basic design type										
Existing basic design type with extended area of use										
Existing basic design type										

Table B.3: Simple Vehicles

Product	Workload range (technical staff hours)			Costs of this workload (Euros)			Any other costs needing to be recovered (e.g. administration costs)	Fees charged to applicant (Euros)		
	Min	Ave	Max	Min	Ave	Max		Min	Ave	Max
New basic design type										
Changed basic design type										
Existing basic design type with extended area of use										
Existing basic design type										

V9 To what degree is the workload to process an application for a vehicle authorisation affected by the characteristics of the of the infrastructure over which vehicles are to operate:

Very Insignificant	Insignificant	Significant	Very significant

Please explain your response to V8.

V10 Are there other factors that affect the workload to process an application for a vehicle authorisation? If so, please specify indicating their significance (not significant/significant/very significant).

V11 What costs, other than staff costs, are incurred in processing vehicle authorisations?

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Fees

V12 If you do not charge a fee for your role in the vehicle authorisation process, or the fees do not completely cover the costs, please state how the associated costs are recovered.

V13 If you do charge a fee, please explain:

- how the fees are determined
- the frequency and basis of revisions to these fees
- any special provisions for small and medium-sized enterprises?

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Applicants per year

V14 Based on your previous experience, how many applications per year for vehicle authorisations involving an area of operation that includes your member state would you expect to be made to the Agency under the terms of Article 21 of new Directive? Please indicate in the table below:

Category of application ⁵³	Product to be provided by the Agency	Reference in draft new Interoperability Directive	Number of applications made to the Agency per year
First authorisation	New basic design type	Article 21, paragraphs 5 to 11	
New authorisation (upgrade/renewal)	Changed basic design type	Article 21, paragraph 12	
Additional authorisation	Existing basic design type with extended area of use	Article 21, paragraph 13	
Renewed authorisation	Existing basic design type	Article 25, paragraph 1	
Subsequent authorisation for placing into service			

⁵³ Categories based on definitions within current Interoperability Directive 2008/57/EC (see also table under question V2)

ERTMS

Introduction

The follow questions do not relate to determination of fees and charges for the Agency’s role in Safety Certification and Vehicle Authorisations. They are included here to help the Agency improve its knowledge base and determine the future workload in relation to ERTMS trackside subsystem authorisations. It is recognised that, unlike Safety Certification and Vehicle Authorisations, the task to be undertaken by the Agency differs from the verification task undertaken by the NoBo and the authorisation task undertaken by the NSA, but it would be helpful to understand the workload associated with verification as a benchmark for estimating the workload for the approval task.

E1 As far as you can, please provide information about authorisation costs charged to the applicant (either in terms of average/range of costs per project or as an indicator based on EUR/km of line).

--

E2 If you maintain a projection of future verification workload, what new ERTMS trackside installations are planned for 2019 or later? This would help the Agency to estimate the future workload for ERTMS approvals. Please use the template in the annex to describe the technical details. Please add duplicate tables as required.

--

C Model output tables

Estimated Average Workload

Table C.1: Average estimated workload (days) by vehicle authorisation product

Vehicle Authorisation		Agency Workload (days)		NSA Workload (days)	
Category	Product	Pre-engagement	Application	Pre-engagement	Application
Complex	First VA	5	2	19	5
	New VA	4	4	5	5
	Additional VA	5	3	17	11
	Renewed VA	1	2	3	6
	Subsequent VA	1	1	2	4
Standard	First VA	4	1	15	4
	New VA	3	3	4	4
	Additional VA	3	2	11	8
	Renewed VA	1	1	2	3
	Subsequent VA	1	1	2	3
Simple	First VA	2	1	7	2
	New VA	2	2	3	3
	Additional VA	2	1	5	3
	Renewed VA	1	1	1	3
	Subsequent VA	1	1	1	2

Table C.2: Average estimated workload (days) by safety certification product

Single Safety Certification	Agency Workload (days)		NSA Workload (days)	
	Pre-engagement	Application	Pre-engagement	Application
First	15	15	13	13
Renewal	3	21	3	21
Update	2	5	4	8

Estimated Average Costs per Hour

Table C.3: Vehicle authorisation average costs per hour as reported by NSAs

Costs/hr (€)	Vehicle Authorisation				
	First	New	Additional	Renewal	Subsequent
Belgium					
Bulgaria					
Czech Republic					
Denmark					
Germany					
Estonia					
Ireland					
Greece					
Spain					
France					
Croatia	13	13	13	13	13
Italy					
Latvia	13	13	13	13	13
Lithuania	14	15			
Luxembourg					
Hungary					
Netherlands					
Norway					
Austria					
Poland					
Portugal					
Romania	0.2				
Slovenia	6	9			7
Slovakia	10	10			10
Finland	3	3	8	15	15
Sweden	150	150	150	150	150
Switzerland	133				
UK					

Table C.4: Safety Certification average costs per hour as reported by NSAs

Costs/hr (€)	Single Safety Certificate		
	First	Renewal	Update
Belgium			
Bulgaria			
Czech Republic			
Denmark	120	120	
Germany	120	120	120
Estonia	6	4	8
Ireland			
Greece			
Spain			
France			
Croatia	13	13	13
Italy			
Latvia			
Lithuania			
Luxembourg			
Hungary			
Netherlands			
Norway			
Austria			
Poland	78	57	67
Portugal			
Romania	15	15	15
Slovenia			
Slovakia			
Finland	200	200	200
Sweden			
Switzerland	191	206	208
UK	54	54	53

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