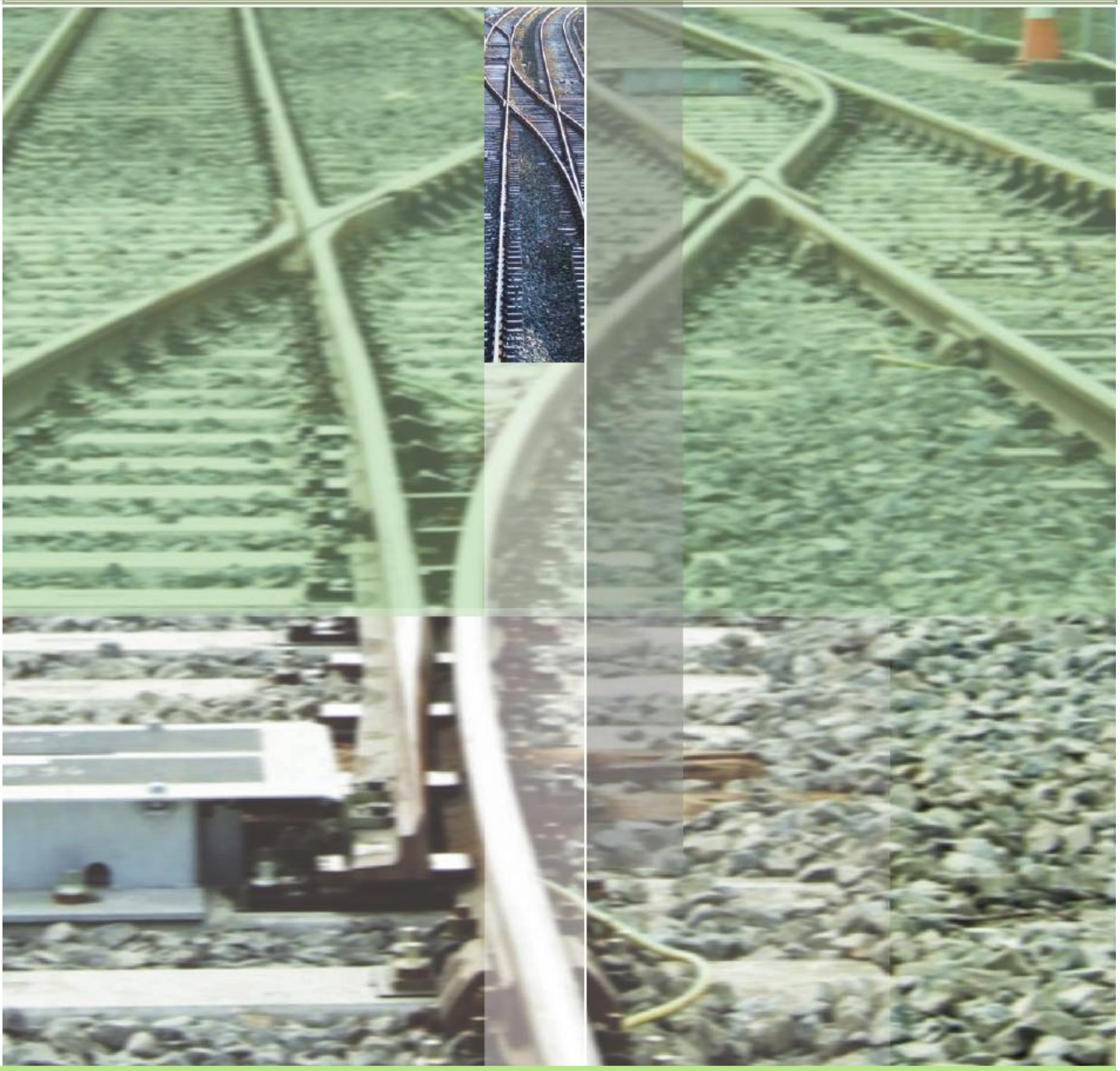
Railway Safety Commission

Annual Report to ERA for Year 2008



The Railway Safety Commission is the National Safety Authority for Railways in Ireland

Contents

A. SCOPE AND SUMMARY

A.1. Scope of the report

The Railway Safety Directive (EC) 49/2004, Art.18, states each year the safety authority shall publish an annual report concerning its activities in the preceding year and send it to the Agency by 30 September at the latest.

The report shall contain information on:

- the development of railway safety, including an aggregation at Member State level of the common safety indicators (CSIs) laid down in Annex I;
- important changes in legislation and regulation concerning railway safety;
- the development of safety certification and safety authorisation;
- results of and experience relating to the supervision of infrastructure managers and railway undertakings.

The scope of this report is the 1600mm gauge national railway system.

A.2. A.2. Summary in English

This annual report for the year 2008 is the third annual report to the ERA, of the Railway Safety Commission which is the designated national safety authority (NSA) for Ireland. The report specifically covers the process of safety regulation of the interoperable Irish national railway network.

The national network is low density and is relatively lightly used. It has a track gauge of 1600mm and has an extent of 2110 track-km. The extent of network in service has not changed since 2007. It is interoperable with the railway system in Northern Ireland, which falls under the jurisdiction of the United Kingdom.

Safety performance compares well with that of European railways, with a relatively low level of significant incidents per train-km. Significant progress has been made in addressing key risks, including strikes of railway bridges by heavy goods vehicles, and the unauthorised passing of railway signals at danger. Three people died on the railway from accident or misadventure.

Formal investment in safety is continuing, with emphasis on safety management systems and human performance development.

There was considerable activity in the approval of infrastructure and rolling stock, with 45 projects at various stages of approval.

The European Communities (Railway Safety) Regulations were implemented in March 2008. These regulations modified the Railway Safety Act 2005 to harmonise it with to the Railway Safety Directive 2004/49/EC.

B. INTRODUCTORY SECTION

B.1. Introduction to the report

The Railway Safety Commission (RSC) is the National Safety Authority (NSA) for railway safety in Ireland. This is the third annual report from the RSC to the European Railway Agency (ERA). Previous annual reports to the ERA and the recently produced Statement of Strategy for 2009 to 2011 can be found on the website at www.rsc.ie

The report is produced for the benefit of the ERA and other NSA's who are interested in safety performance and making comparisons on regulatory issues. An annual report is also produced by the RSC for the Department of Transport, domestic railway industry stakeholders and the general public.

This report specifically covers the process of safety regulation of the interoperable Irish railway network. This network has a track gauge of 1600mm. It is interoperable with the railway system in Northern Ireland, which falls under the jurisdiction of the United Kingdom.

B.2. Railway Structure Information

- *Network map*

The national network is low density and relatively lightly used. The network extent is 2110 track-km, 27% of which is double track.There was no change in the operational network from 2007, although some expansion of the network was underway in 2008.

A copy of the national railway network map is shown in Annex A.1.

- *List of Railway Undertakings and Infrastructure Managers*

Details of the infrastructure manager and the principal railway undertaking are shown in Annex A.2. Iarnród Éireann is the infrastructure manager of the interoperable railway network in Ireland. Iarnród Éireann is also the principal operator on the railway network. It also jointly operates a regular passenger service, between Dublin and Belfast in Northern Ireland, in partnership with NIR-Translink.

B.3. Summary – General Trend Analysis

Development of Railway Safety

Serious incidents have remained at a relatively low level throughout 2008. Three persons died of injuries resulting from railway accidents, two of which were trespassers, and there was one serious injury reported. There was one significant derailment.

Safety Certification

Safety certification of operators and safety authorization of infrastructure managers is dependent on a demonstration of their safety management system through a safety case. This process of determining the adequacy of the safety management systems in place in Ireland is undergoing transition to conform to the European model. The existing railway undertaking and infrastructure manager has previously undergone a safety acceptance process that involved scrutiny of their safety management system. At the next renewal point, the safety management system will be reviewed using the appropriate Common Safety Methods.

C. ORGANISATION

C.1. Introduction to the organisation

The RSC mission statement, as presented in our initial Statement of Strategy 2006-2008, is that:
"The Commission will assure, through education, guidance and balanced regulation, the safety of railway services and affected persons."

The RSC was established in January 2006 as a national safety authority with a functionally separate accident investigation body, in accordance with the Railway Safety Directive. A Chief Investigator was appointed by the Minister in April 2007 as head of the investigation body, the Railway Accident Investigation Unit.

The RSC is a small, professional organisation with a flat reporting structure. This structure encourages and facilitates free-flow of information and ideas, which promotes consultation and creative thinking. This complements our purpose of promoting excellence in railway safety. It also provides us with the flexibility we need to respond effectively to immediate and unpredictable work demands, and to accomplish the structured tasks within our business plan.

The RSC budget for the year 2008 was €2.068.m (including the funding for the RAIU and its four dedicated staff). The organisation as a national safety authority had four technical staff (including the Commissioner) and two administrative staff in 2008, with three more technical staff recruited and due to commence work in 2009.

The organizational chart for the RSC (2008) is shown in Annex B.1.

C.2. Organisational flow – relationship between the NSAs and other national bodies

A diagram showing the flow and relationships between the NSA and other national bodies may be seen in Annex B.2 of this report.

D. THE DEVELOPMENT OF RAILWAY SAFETY

D.1. Initiatives to maintain/improve safety performances

The most significant safety measures decided in the MS during the reporting year should be reported in this paragraph; if these measures have had as a trigger accidents or precursors to these, they should be reported as in Table D.1.1:

The railway safety investment programme stems from the need to address the significant deficiencies in the Iarnród Éireann railway system first identified in an independent review conducted in 1998.

In 2008 preparation began for a submission for funding of a third railway safety investment programme by the principal Railway Undertaking / Infrastructure Manager. As a stakeholder in the programme, the RSC is a member of the steering committee. These include projects to develop staff competence and safety standards as well as further investment in equipment.

In safety risk terms, railways are particularly vulnerable where they interface with roadways. On the Iarnród Éireann network there are more than two hundred and fifty public road level crossings and twelve hundred bridges over or under public roads.

The road-rail safety working group, which is chaired by the RSC, is an advisory working group that focuses on safety at road rail interfaces. It seeks to establish a coherent strategy for the collective management of this risk, and to identify the scope for specific actions that will improve safety levels. Membership is made up of the railway undertakings, the road authorities, An Garda Siochána, the Irish Road Haulage Association and the Department of Transport. During 2008, the group continued to progress initiatives on signage and awareness campaigns for domestic hauliers.

A risk ranking system for Signals Passed at Danger was implemented in 2008 by Iarnród Éireann which is based on the UK model and should help to highlight key areas of risk.

In June 2008, the RAIU issued its report into a collision of a train with a tractor and trailer at a level crossing. There were seven recommendations, as indicated in table D.1.1.

Table D.1.1 - Safety measures triggered by accidents/precursors to these

Accidents/precursors which triggered the measure			**Safety measure decided**
Date	**Place**	**Description of the event**	
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	Develop standards and consolidate information on level crossings
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	Recorded delivery of information to landowners and contractors who use private level crossings
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	Prioritise vegetation management at private level crossings on a risk basis
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	Introduce system for effective implementation and revision of infrastructure standards
28/07/2007	Ballybrophy	Train collided with tractor and trailer at	Review standards relating to management of locomotive data

		level crossing	recorders
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	Review the 'Monitoring the Speed of Trains' standard
28/07/2007	Ballybrophy	Train collided with tractor and trailer at level crossing	NSA to issue its 'Guidelines for Design and Railway Infrastructure and Rolling Stock'

Table D.1.2 - Safety measures (or voluntary measures) with other triggers than accidents/precursors

Description of the area of concern	**Description of the trigger**	**Safety measure decided**
The road/rail interface	Strikes of railway bridges by large road vehicles. Risk issues at level crossings	Set up a new awareness campaign targeted at the road maintenance, rail maintenance and police force (an Garda Siochána)

D.2. Detailed data trend analysis

This paragraph should contain the analysis of trends related to all categories of CSIs. Moreover, the possible reasons of these trends should be reported.

The scope of the statistics, the definitions applied and the data on CSIs are to be reported in Annex C

It is not possible to ascertain meaningful trends over a short time scale of three years. However, with reference to previous years there was an increase in 2007 and 2008 in fatalities attributable to trespass rather than suicide. This may in part be due to increased reliance on the Coroners' Verdicts when making a distinction between trespass accidents and incidents of suspected suicide.

Total passenger journeys in 2008 showed a reduction of approximately 2% on the previous year, but this still represented an increase of over 40% from the year 2000. Freight traffic continued to reduce, falling by a further 13%. The introduction of a new fleet of railcars and push-pull stock has substantially reduced the average age of the fleet in regular use and increased capacity. The number of services operated has stabilised after a large increase in 2006 when service frequencies were increased.

There are very few significant accidents on the Irish network, both in terms of the numbers of accidents and the rate of accidents per train-km. Accident rates are significantly lower than prevalent rates on the European network, and are similar to rates in Great Britain.

In 2008, 86 bridges under the railway were struck, a decrease of 38% over the previous year. The number of bridges over the railway struck dropped by 32.5 %, from 40 in 2007 to 27 in 2008.

Iarnród Éireann has also made progress in reducing the number of main running signals passed at danger. The number fell from 23 in 2007 to 12 in 2008.

Number of accidents;

In 2008, five significant accidents were reported, and seven suspected suicides occurred.

A train collided with a third party road vehicle at a user worked level crossing, resulting in the fatal injury of the lone car occupant. There were no other casualties, and damage to rolling stock and infrastructure was relatively minor.

A laden mineral ore aggregate train derailed after an axle roller-bearing failure on a wagon and the stub-axle sheared. The line was effectively closed to for three days. There was considerable damage to infrastructure as a consequence. Costs were estimated to be in the region of €700 000.

The locomotive of a passenger train collided with a landslip at a junction and derailed, with costs estimated at €100 000. However, as this accident may not be classified as 'significant' it is not included in the data report in Annex C.

Number of fatalities;

One vehicle driver was killed at a level crossing, as described in D.2.1 above. Two trespassers were killed in separate accidents. One was classified as accidental and one as misadventure. The accident occurred when a man looking for his dog was struck by a train.

Seven people died in circumstances indicating possible suicide. In 2007, five [1] people died in circumstances indicating possible suicide.

Number of injuries;

An intending passenger apparently fainted at a platform as a train arrived and fell between the train and platform, suffering serious hand injuries.

Number of precursors to accidents;

Precursors are reported for 2008 in Table D.2.4:

Broken rails	3
Track buckles	0
Wrong-side signal failures	2
Signals Passed at Danger (including shunting signals)	22
Broken wheels	0
Broken axles*	1

*Note that the broken axle was due to a catastrophic roller bearing failure in an ore wagon.

Cost of all accidents, hours worked on safety

These data are not available.

Technical safety of infrastructure and its implementation, management of safety

Line-km (track-km) = 1657 route km; 2110 [2] track km;
Percentage of track with ATP: 5%
Percentage of train-km using operational ATP systems: 13.3%

Total level crossings: 1095
LCs per track-km: 0.519 (0.534 [3] in 2007)

[1,2,3] Corrigenda to 2007 Annual Report to ERA

LCs with automatic or manual protection:	20% of total
Internal audits planned by IMs and RUs:	20
Internal audits accomplished by IMs and RUs:	21

D.3. Results of safety recommendations

We continue to track duty-holder implementation of recommendations deriving from investigation reports and from the ongoing process of industry safety review that commenced in 1998.

The benefits of implementation of these recommendations are assessed by an industry-owned predictive model. The model was established in the year 2003, and indicates a steady reduction in network safety risk since then.

E. IMPORTANT CHANGES IN LEGISLATION AND REGULATION

E.1. The Safety Directive - Stage of implementation

In the Safety Directive it is stated that important changes in legislation and regulation concerning railway safety should be reported. As important changes could be implementation of EU requirements in national legislation and other important changes of the national railway legislation and regulation.

In the annex D a list of possible legislation and regulation is described which should be reported if these are changed essentially.

A number of key principles of the safety directive were implemented in 2006 through the Railway Safety Act, 2005.

The European Communities (Railway Safety) Regulations 2008 came into force on 7th March 2008. These modified the Railway Safety Act 2005 to give full effect to the Railway Safety Directive 2004/49/EC. The scope of implementation is intended to be the 1600mm gauge national railway system.

These Regulations:

- Establish the Commission as the National Safety Authority and outline its duties;
- Distinguish the duties of infrastructure managers from duties of operators providing traction or transport of goods and passengers, in accordance with Directive 2004/49/EC;
- Establish the duties of infrastructure managers and operators regarding their safety management systems;
- Establish the harmonised process of safety certification of operators and safety authorisation of infrastructure managers;
- Require infrastructure managers to provide fair and non-discriminatory access to training facilities;
- Establish the harmonised process of authorisation of placing in service of in-use rolling stock;
- Establish the harmonised duties, powers and terms of reference of the independent Investigation Unit;
- Set down annual reporting requirements on railway undertakings, the Commission and the Investigation Unit;
- Update references within Regulations transposing Directives on 'Licensing of Railway Undertakings' and 'Allocation of Railway Infrastructure Capacity and Levying of Charges for the use of Railway Infrastructure and Safety Certification'.

A summary against definitive categories of National Legislation/National Safety Rules is given in Annex D.

In 2008, the other item of relevant legislation taking effect was the Railway Safety Act 2005 (Section 26) Levy Order 2008 SI No 568/2008. This obliges railway undertakings other than heritage railways to pay the RSC a fixed levy for its services.

F. THE DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

F.1. National legislation – starting dates – availability

Starting date for issuing Safety Certificates (Article 10 of Directive 2004/49/EC)

The principal railway undertaking (Iarnród Éireann) has a safety management system, which is explained and formalised through their safety case. This was submitted to the RSC for approval on 31st October 2006 and safety certification was awarded at the end of January 2007. At the next renewal date, the harmonised criteria shall be followed to enable a full Safety Authorisation Parts A and B in line with European requirements including the CSM for risk evaluation and conformity assessment.

Starting date for issuing Safety Authorisations (Article 11 of Directive 2004/49/EC)

The railway infrastructure manager (Iarnród Éireann) already has an established safety management system, which is explained and formalised through the common RU/IM railway safety case. At the next renewal date, the harmonised criteria shall be followed to enable a full Safety Authorisation Parts A and B in line with European requirements.

Availability of national safety rules and legislation to Railway Undertakings and Infrastructure Managers

Work on identifying National Safety Rules continued during 2008. The safety rules are primarily derived from national legislation. The legislation dating from 1922 onwards is published by the Government Publications Office and may be downloaded from the website http://www.irishstatutebook.ie. Older legislation is not currently in publication, but copies of Public Acts may be obtained from the Department of Transport on request.

F.2. Numerical data (Annex E)

The progress of the safety certification and safety authorisation process is indicated in Annex E.

F.3. Procedural aspects

Safety Certificates Part A

F.3.1.1. Reasons for updating/amending Part A Certificates (e.g. variation in type of service, extent of traffic, size of company)

Under the Railway Safety Act 2005, safety acceptance was issued in early 2007 for the combined Railway Undertaking and Infrastructure Manager.

No Part A certificates were issued in 2008.

F.3.1.2. Main reasons if the mean issuing time for Part A Certificates (restricted to these mentioned in Annex E and after having received all necessary information), was more than 4 months

No safety certificate was issued in the year 2008. Subject to receipt of sufficient information and clarification as outlined in s.46 of the Railway Safety Act, the RSC must process each application within 3 months.

F.3.1.3. Requests for information from other National Safety Authorities for information on a Railway Undertaking certified in your country and applying to them for a Part B certificate

No requests of this nature were received in the year 2008.

F.3.1.4. Summary of problems with the mutual acceptance of the Community wide valid Part A Certificate.

As their safety acceptance under the Railway Safety Act 2005 is still valid, no Part A or Part B safety certificates have been issued to Iarnród Éireann. However, it is understood that the Northern Ireland operator, Translink, obtained a Part A safety certificate prior to the year end. Mutual acceptance for cross border operations is currently covered by a mutual agreement contained in the safety management systems of the two companies, Iarnród Éireann and Translink.

F.3.1.5. NSA Charging fee for issuing a Part A Certificate (Yes/No – Cost).

No charges were made for safety certification in 2008.

F.3.1.6. Summary of the problems with using the harmonised formats for Part A Certificates, specifically in relation to the categories for type and extent of service

No Part A certificates in accordance with the harmonised format have been issued to date.

F.3.1.7. Summary of the common problems/difficulties for the NSA in application procedures for Part A Certificates.

None.

F.3.1.8. Summary of the problems mentioned by Railway Undertakings when applying for a Part A Certificate

None.

F.3.1.9. Feedback procedure (e.g. questionnaire) that allows Railway Undertakings to express their opinion on issuing procedures/practices or to file complaints

Railway Undertakings are facilitated through published guidance on safety cases, and through direct meetings with the RSC. The practice of the RSC is to facilitate applications as much as possible. The Railway Undertaking may appeal first to the RSC and further to the High Court should they be refused safety certification.

Safety Certificates Part B

F.3.1.10. Reasons for updating/amending Part B Certificates (e.g. variation in type of service, extent of traffic, lines to be operated, type of rolling stock, category of staff, etc.)

No Part B certificates have been issued as defined by the Directives and Community Decisions. Mutual acceptance for cross border operations is currently covered by an agreement contained in the safety management systems of the two companies, Iarnród Éireann and Translink.

However, Translink received its Part A certificate and the requirements for Part B certification were established in Irish law in 2008. This has triggered a procedural change and they will have to apply for a Part B certificate.

F.3.1.11. Main reasons if the mean issuing time for Part B Certificates (restricted to these mentioned in Annex E and after having received all necessary information), was more than 4 months

No Part B certificates have been issued as defined by the Directives and Community Decisions.

F.3.1.12. NSA Charging fee for issuing a Part B Certificate (Yes/No – Cost)

No.

F.3.1.13. Summary of the problems with using the harmonised formats for Part B Certificates, specifically in relation to the categories for type and extent of service

None.

F.3.1.14. Summary of the common difficulties for the NSA in application procedures for Part B Certificates.

None.

F.3.1.15. Summary of the problems mentioned by Railway Undertakings when applying for a Part B Certificate

No applications made to date.

F.3.1.16. Feedback procedure (e.g. questionnaire) that allows Railway Undertakings to express their opinion on issuing procedures/practices or to file complaints

Scheduled meetings with Railway Undertakings provide the opportunity to express opinions on issuing practices and procedures. Any complaints are directed to the Commissioner for initial consideration of the adequacy of process and delivery. The Railway Undertaking can then appeal to the Minister.

Safety Authorisations

F.3.1.17. Reasons for updating/amending Safety Authorisations

The Infrastructure Manager and the Railway Undertaking are the same entity and thus a separate Authorisation as an Infrastructure Manager is an upcoming task. Safety and risk is currently managed through the existing safety case 'acceptance' arrangements which have many parallels to the European structure. Substantial modernisation and material change of the infrastructure is another driver for updating of the Safety Authorisation although the current acceptance process does capture risks generated from this.

The process of updating the existing letters of acceptance in regard to new works is described in section F.4 below.

F.3.1.18. Main reasons if the mean issuing time for Safety Authorisations (restricted to these mentioned in Annex E and after having received all necessary information), was more than 4 months

A full Authorisation as per the Safety Directive has yet to be undertaken. However, under the current system, the safety management system of the combined Railway Undertaking and Infrastructure Manager was accepted within three months from the mandatory submission date as required by domestic legislation.

An acceptance of substantial new works serves as an amendment to the Safety Case acceptance and will serve as an amendment to the safety authorisation once issued.

F.3.1.19. Summary of the regular difficulties in application procedures for Safety Authorisations

None.

F.3.1.20. Summary of the problems mentioned by Infrastructure Managers when applying for a Safety Authorisation

None.

F.3.1.21. Feedback procedure (e.g. questionnaire) that allows Infrastructure Managers to express their opinion on issuing procedures/practices or to file complaints

Infrastructure managers are facilitated through published guidance on safety cases, and through direct meetings with the RSC. The practice of the RSC is to facilitate applications as much as possible. The infrastructure manager may appeal first to the RSC and further to the High Court should they be refused safety authorisation.

F.3.1.22. NSA Charging fee for issuing a Safety Authorisation (Yes/No – Cost)

No.

Safety Approval of Rolling Stock and Infrastructure

The process of updating safety certificates in regard to new rolling stock and new works is described below:

An infrastructure manager may not commence construction, installation or assembly of new works, and a railway undertaking may not bring into operation new rolling stock, until it has submitted a safety assessment and the RSC has approved this by way of a formal communication.

To ensure that the process of approval of new works (infrastructure and rolling stock) is as smooth and effective as possible, we operate on a phased basis, granting approvals at various key project milestones. For infrastructure works there are three stages of approval, i.e., preliminary design, detailed design and prior to service or operation. In relation to rolling stock there are five stages of approval. i.e., concept, preliminary design, detailed design, testing and commissioning and passenger service/operations.

The RSC is expected to issue a communication within 28 days, either accepting the safety assessment or setting out its reasons for not doing so, e.g., a request for further information. This deadline is almost always met. The onus is therefore on the infrastructure manager or railway undertaking to submit sufficient and appropriate information to allow safety approval of new works and new rolling stock by the RSC.

In 2008, 34 heavy rail infrastructure projects were under way, divided between signalling projects, structures and buildings, track projects, new lines, and refurbishment of existing lines. In addition, 11 rolling stock projects were under way.

62 infrastructure approvals were issued at the preliminary design, detailed design or completion stages in 2008, and 13 rolling stock approvals were issued at the preliminary design, detailed design or completion stage in 2008.

All of these were undertaken for Iarnród Éireann in its capacity as a combined Infrastructure Manager and Railway Undertaking. The deadlines for approval of new works and new rolling stock have been met.

G. DESCRIPTION OF THE SUPERVISION OF RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS

Audits/Inspections/Checklists

G.1.1.1. Use

G.1.1.2. Audits/inspections carried out by the NSA staff/third parties/both

The RSC auditing and monitoring activities derive from four principal sources:

- Complaints and representations by, or on behalf of, passengers;
- Industry safety concerns, typically arising from accidents and incidents;
- The need to ensure that railway undertakings are implementing their approved safety cases;
- The need for ongoing assessment of the performance of all industry safety duty holders.

The RSC generally conducts inspections in response to representations or reports of incidents. Unannounced inspections are also performed.

The RSC also endeavours to perform planned coordinated audits of features of the railway system giving rise to concern or that are perceived to be areas of potential risk. However, due to a heavy workload of infrastructure and rolling stock approvals, the level of audit and inspection has been lower than expected. In 2008, we sought to recruit more staff to increase the resources available to undertake this activity.

During the year a number of inspections of Iarnród Éireann were carried out focussing on;

- Stations and station conditions
- Level crossings
- Trespass and vandalism
- Rail over road bridge asset condition.

Where the occasion permitted, inspectors took the opportunity to travel in locomotive cabs to assess operations and the condition of the permanent way. Over 2008, a substantial proportion of the network was seen in this way.

The scenes of a number of railway incidents were inspected, including two major landslips, a collapse of equipment onto the line, five level crossings following collisions or pedestrian strikes, and a diesel multiple unit damaged by fire.

G.1.1.3. NSA manpower available (Number, % of NSA staff involved)

The RSC has a flexible workforce, with all technical staff participating to some degree in safety auditing, monitoring and inspection of the existing Railway Undertaking and Infrastructure Manager operations in the 2008 calendar year. The equivalent of one member of staff was dedicated to audit, monitoring and inspection activity in 2008, with audits being the lesser part of this.

In July 2008 a member of staff was appointed to lead audit and monitoring activity and, in the remaining months of the year, a structured plan was developed. One audit was completed of operation and driver competence of On-Track-Machines.

G.1.1.4. Economical aspects (Costs,…)

The RSC currently bears the cost of its own audits.

Vigilance aspects/Sensitive points to follow-up by the NSA

G.2. Legal aspects within annual reports of Infrastructure Managers and Railway Undertakings

The European Communities (Railway Safety) Regulations 2008 transposed the requirements of Article 9 of the Safety Directive (EC) 2004/49/EC. This places a legal obligation on the RU and IM to submit an annual safety report by 30th June concerning the previous calendar year. This report was due in June but received in August.

Safety Targets and Safety Plans – Iarnród Éireann

G.2.1.1. Organisation's Corporate Safety Targets 2008

The organisation's corporate safety targets are met through a number of programmes, particularly the Railway Safety Programme 2004 – 2008; the implementation of recommendations arising from the 'Review of Railway Safety'; the Network Wide Risk Model and the Enterprise Wide Risk Management register as updated by the register.

In summary, there are in over 200 safety initiatives in play leading to more than of 500 actions. These are focussed on improving the implementation of the Safety Management System, i.e., improving structures, standards, systems, training, equipment and special initiatives for improving competency and, in particular, reduction of Signals Passed at Danger (SPADs), incidents involving possession management, level crossings and other areas of operational risk.

G.2.1.2. Railway Safety Programme 2004 – 2008

Principal aspects of the programme focus on improvements of the company's Safety Management System and Human Performance Development over a range of 51 projects. Special attention and detailed updating on key or slow moving projects and reporting to the DoT has led to good progress being on these programmes during 2008. A 'Value for Money Review', commissioned by the Department of Transport (DoT), concluded that the second Railway Safety Programme had achieved substantial improvements to Iarnród Éireann's SMS.

Safety Indicators – Iarnród Éireann

G.2.1.3. Network Wide Risk Model

The 2007 re-run of the model had indicated a reduction in risk level from a Risk Factor of 11.3 to 9.0. This reduction is was attributable to a number of factors; e.g. improvements in the model (issues log), improved asset ratings, rolling stock changes, and improved safety performance output data. The results of the model were validated and used as a basis for training IÉ staff in the workings and use of the model through a series of Risk Communication Workshops run in 2008. In addition, the Network Wide Risk Model (NWRM) was used to assist the Department of Transport's Value for Money Review during 2008.

The new General Level Crossing Risk Model was further developed and validated by the users.

G.2.1.4. Enterprise Wide Risk Management Register

The Enterprise Wide Risk Management register (EWRM) was reviewed and updated at the end of 2008. The number of safety related risks has been increased by three and progress on the twenty-three safety related risks is progressed on a regular basis with in excess of 76% of actions implemented by the end of 2008.

Safety Management System and Safety Audit – Iarnród Éireann

G.2.1.5. Safety Case progress report end of 2008

Iarnród Éireann submitted their first safety case to the Railway Safety Commission in October 2006, as required by the 2005 Railway Safety Act, and an acceptance certificate was issued on January 30, 2007.

G.2.1.6. Safety Audit

In 2008 the audit unit had a target to conduct 20 audits. The unit carried out a total of 21 audits. These covered the following areas

- Stations & Port Terminals (4)
- Platform Safety
- Level Crossings (3)
- Shunting, Shunters Radio (2)
- Signalling & Traffic control (2)
- Outdoor advertising
- Personal Track Safety
- Trip Report & Speeds of Trains (2)
- Trespasser/Vandalism
- New Works
- HR Management
- Emergency Plans & Crowd Control (2)

The audit results were communicated to the line management responsible for carrying out improvement.

Particular Risks – Iarnród Éireann

No report was received on observations on deficiencies and malfunctions of railway operations and infrastructure management that might be relevant for the safety authority.

G.3. Number of inspections of RUs/IMs for 2008

Note that a planned inspection programme was set up in the latter half of 2008. Furthermore as the Railway Undertaking and Infrastructure manager are a combined entity with a unified safety case, monitoring has not been split between the RU and IM. The following is the number of inspections carried out in 2008:

INSPECTIONS	Issued Safety Certificates Part A	Issued Safety Certificates Part B	Issued Safety Authorisations	Other Activities (To specify)
planned	0	10	0	0
unplanned	0	34	0	3
carried out	0	44	0	3 (Incident follow up Site Inspections)

G.4. Number of audits of RUs/IMs for 2008

One unplanned audit was carried out on operation of On-Track Machines in 2008, to ascertain driver competence. A formal audit programme was set up for 2009.

AUDITS		Issued Safety Certificates Part A	Issued Safety Certificates Part B	Issued Safety Authorisations	Other Activities (To specify)
4. Number of audits of RUs/IMs for 20xx	planned	0	0	0	0
	carried out	0	0	0	1

G.5. Summary of the corrective safety measures/actions following these audits/inspections

During 2008, the RSC raised and followed up on a number of issues with the Railway Undertaking and Infrastructure Manager, but none of these were deemed to require formal enforcement action.

There were ongoing discussions with regard to Drugs and Alcohol compliance testing.

G.6. Complaints from IM('s) about RU('s) related to their Safety Certificate conditions

No complaints were received by the RSC.

G.7. Complaints from RU('s) about IM('s) related to their Safety Authorisation conditions

No complaints were received by the RSC.

H. REPORTING ON THE APPLICATION OF THE CSM ON RISK EVALUATION AND ASSESSMENT

The application of the CSM on risk evaluation and assessment remain voluntary with respect to:

- *Significant technical changes affecting vehicles or significant changes concerning structural subsystems where required by Article 15(1) of Directive 2008/57/EC or by a TSI until 19 July 2010.*
- *Operational or organisational significant changes until 1 July 2012.*

*The reporting on the application of the CSM in the NSA annual report is **voluntary until those dates**. (Commission Regulation No 352/2009, Article 10(2))*

H.1. NSA experiences on:

- *the decisions taken by the proposers on the level of significance of a change (e.g., too lax)*
- *the applications of the risk management process by the proposers*
- *the involvement of assessment bodies*
- *the interface management*

This CSM comes into force on 19th May 2009. We have no report for 2008

H.2. Is there a procedure to allow RUs and IMs to express their experiences on the EC regulation on CSM on risk assessment

No report (see H.1).

H.3. Revision of NSRs to take into account the EC regulation on CSM on risk assessment

No report (see H.1).

I. NSA CONCLUSIONS ON THE REPORTING YEAR – PRIORITIES

I.1. Conclusion

This is our third year of operation as an independent agency within the European railway safety regulatory framework and we have made considerable progress towards conformance with the requirements of the Railway Safety Directive 2004/49/EC. In terms of international safety comparators, our rail industry continues to perform very well. However, areas where actions are needed have been identified and we are working with undertakings and other stakeholders to address these. Additional resources and expertise are being acquired to strengthen our ability to identify and manage risk.

I.2. Priorities

To build further on our good industry safety record the following are our immediate organisational priorities remain as follows:

- Increase the monitoring regime using the newly recruited staff
- Build on our established working relationships with industry stakeholders to ensure the most effective implementation of the safety regulatory framework
- Work to ensure full implementation of EU railway safety legislation and associated legislation

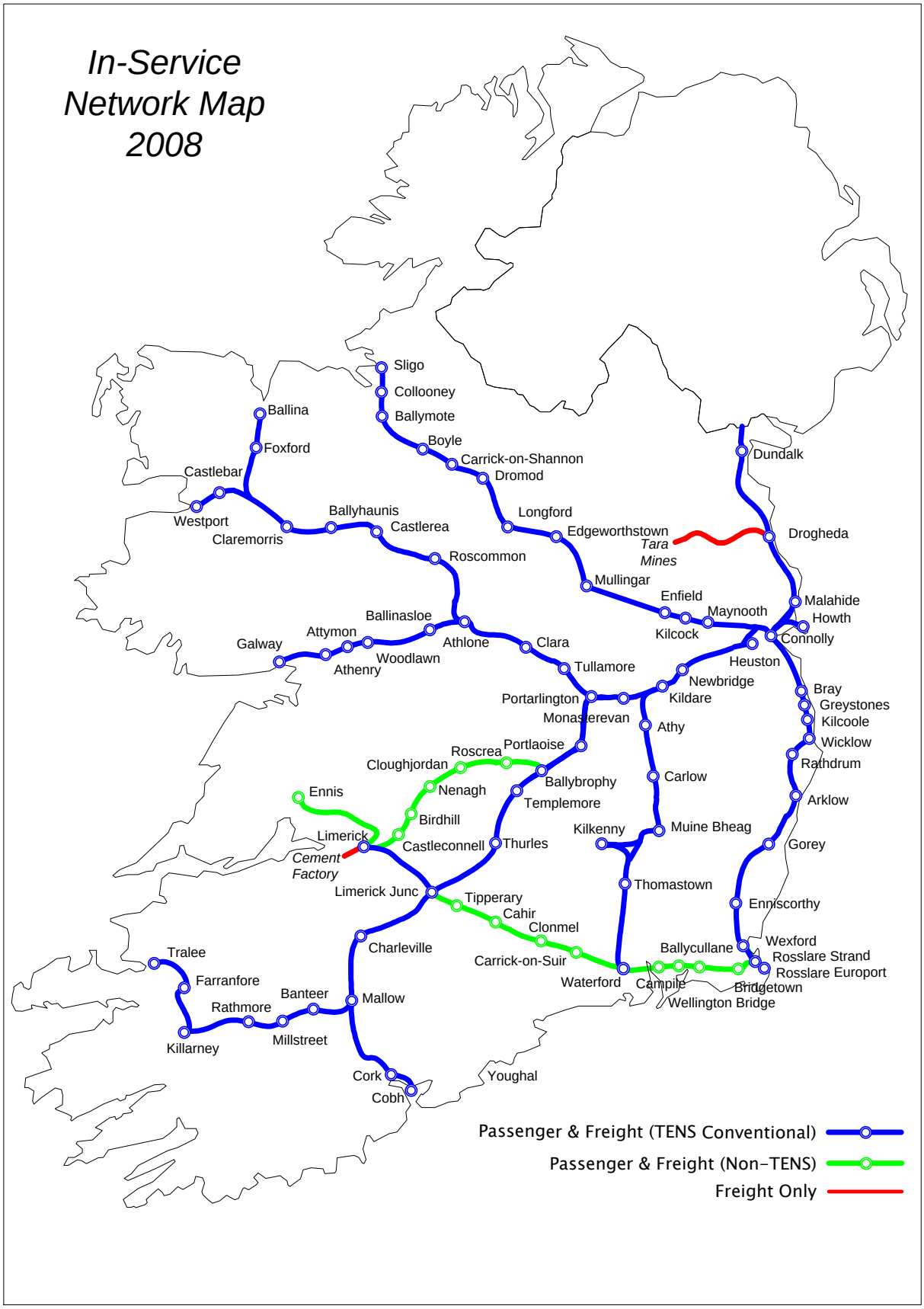
J. SOURCES OF INFORMATION

K. ANNEXES

ANNEX A: Railway Structure Information
ANNEX B: Organisation chart(s) of the National Safety Authority
ANNEX C: CSIs data – Definitions applied
ANNEX D: Important changes in legislation and regulation
ANNEX E: The development of safety certification and authorisation – Numerical Data

ANNEX A: Railway Structure Information

A.1. Network map



A.2. List of Railway Undertakings and Infrastructure Managers

A.2.1. Infrastructure Manager(s)

Name	*Address*	*Website/Network Statement Link*	*Safety Authorisation (Number/ Date)*	*Start date commercial activity*	*Total Track Length/Gauge*	*Electrified Track Length/Voltages*	*Total Double/Simple Track Length*	*Total Track Length HSL*	*ATP equipment used*	*Number of LC*	*Number of Signals*
Iarnród Eireann	Connolly Station Amiens Street Dublin 1	www.irishrail.ie	31/01/2007		2110 km[4] (lines in traffic) gauge 1600mm	99 km 1500V(DC)	454 km/ 1203 km[4] (lines in traffic)	none	CAWS, ATP	1095	2234

A.2.2. Railway Undertaking(s)

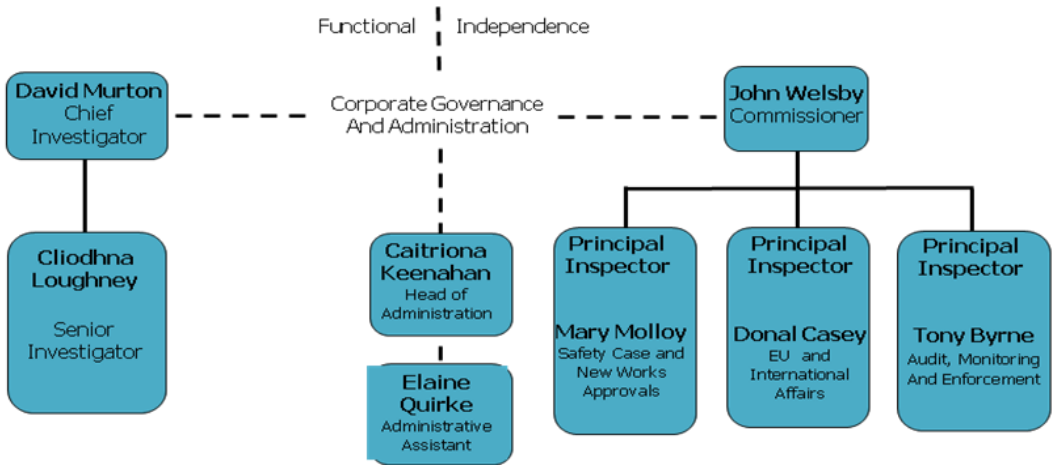
Name	*Address*	*Website*	*Safety Certificate 2001/14/EC (Number/Date)*	*Safety Certificate A-B 2004/49/EC (Number/Date)*	*Start date commercial activity*	*Traffic Type (Freight,...)*	*Number of Locomotives*	*Number of Railcars/Multiple Unit-sets*	*Number of Coaches/Wagons*	*Number of train drivers/safety crew*	*Volume of passenger transport*	*Tonnes of freight transport*
Iarnród Eireann	Connolly Station Amiens Street Dublin 1	www.irishrail.ie		31/01/2007		Passenger, Freight	69 (excluding OTMs)	330 DMU vehicles 154 EMU vehicles	202 coaches 419 wagons (including maintenance wagons)	483 train drivers	44.646 MLN	0.717 MLN tonnes

Abbreviations: HSL = High Speed Line (Definition acc. Directive 96/48/EC); ATP = Automatic Train Protection; LC = Level Crossing

[4, 4] Corrigenda to RSC 2007 Annual Report to ERA

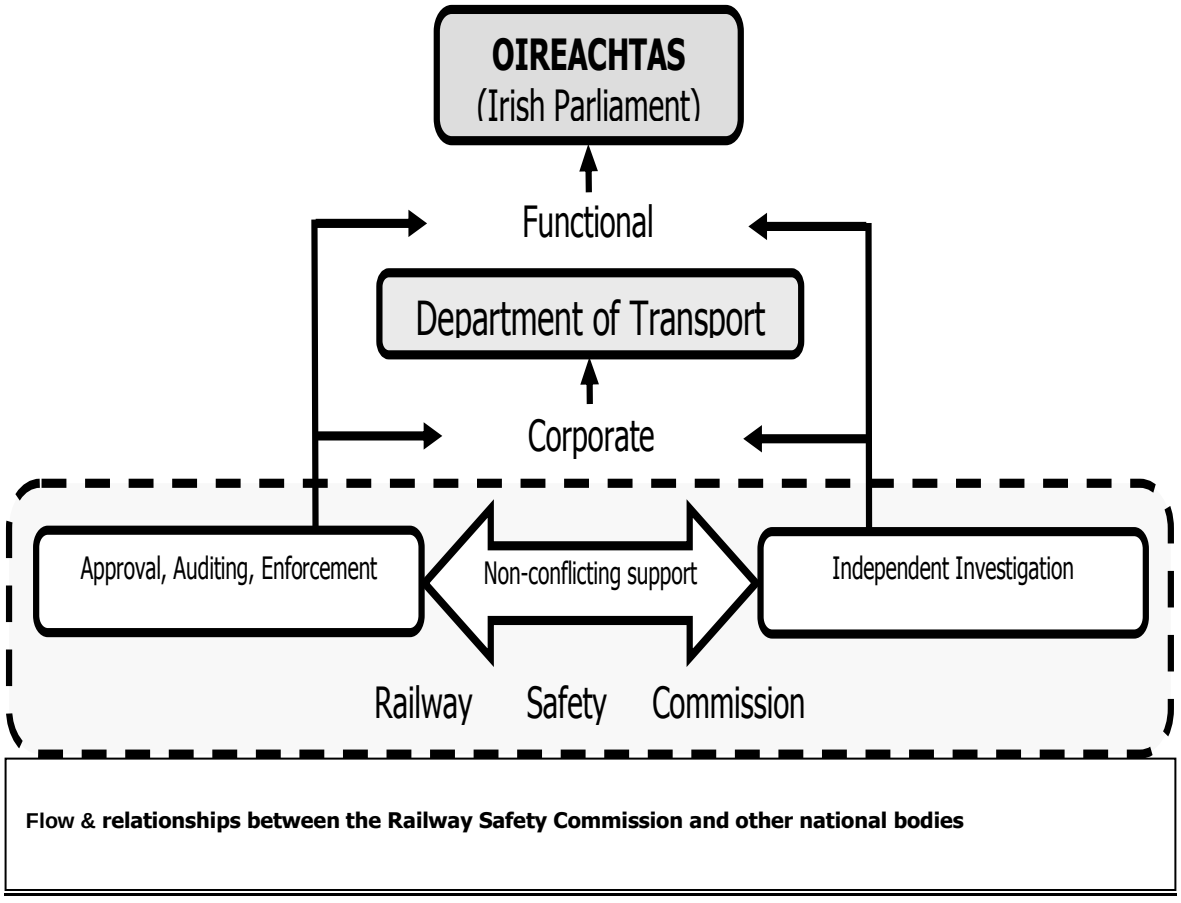
ANNEX B: Organisation chart(s) of the National Safety Authority

B.1. Chart: Internal organisation



Organisational Chart for the Railway Safety Commission for year 2008

B.2. Chart: Relationship with other National Bodies



Flow & relationships between the Railway Safety Commission and other national bodies

ANNEX C: CSIs data and Definitions applied

C.1. CSIs data and charts

*Number of significant accidents and Train*Km*

	Type of accident							
Year	*Collisions*	*Derailments*	*Level crossing accidents*	*Accidents to persons caused by RS in motion*	*Fires in RS*	*Others*	*Total*	*Train*Km (MLN)*
2006	1	0	0	0	0	1	2	18.24
2007	0	0	2	2	0	1	5	16.83
2008	0	1	1	3	0	0	5	16.49

*N° of fatalities, Train*Km and Passenger*Km*

	Category of persons							
Year	*Passengers*	*Employees*	*Level crossing users*	*Unauthorised persons*	*Others*	*Total*	*Passenger*Km (MLN)*	*Train*Km (MLN)*
2006	0	0	0	0	0	0	1872	18.24
2007	0	0	1	1	1	3	2007	16.83
2008	0	0	1	2	0	3	1976	16.49

*N° of serious injuries, Train*Km and Passenger*Km*

	Category of persons							
Year	*Passengers*	*Employees*	*Level crossing users*	*Unauthorised persons*	*Others*	*Total*	*Passenger*Km (MLN)*	*Train*Km (MLN)*
2006	0	1	0	0	0	1	1872	18.24
2007	0	0	0	1	1	2	2007	16.83
2008	0	0	0	0	1	1	1976	16.49

*Number of precursors and Train*Km*

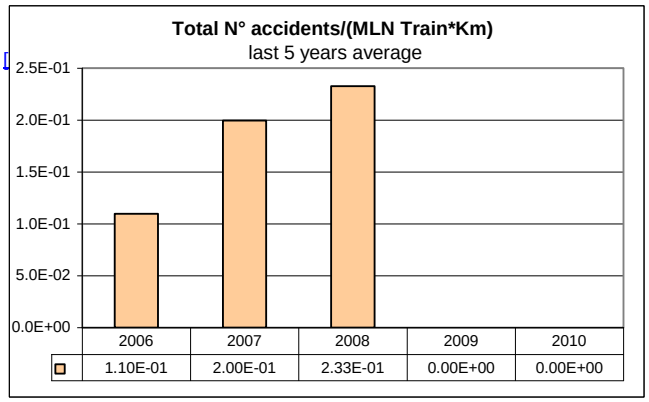
	Type of accident							
Year	*Number of broken rails*	*Number of track buckles*	*Number of wrong-side signalling failures*	*Number of signals passed at danger*	*Number of broken wheels on rolling stock in service*	*Number of broken axles on rolling stock in service*	*Total*	*Train*Km (MLN)*
2006	8	5	4	35	0	0	52	18.24
2007	1	1	1	31	0	0	34	16.83
2008	3	0	2	22	0	1	28	16.49

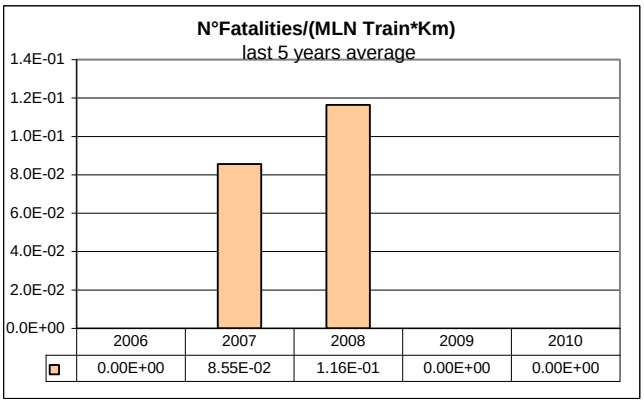
Cost of all accidents, safety hours

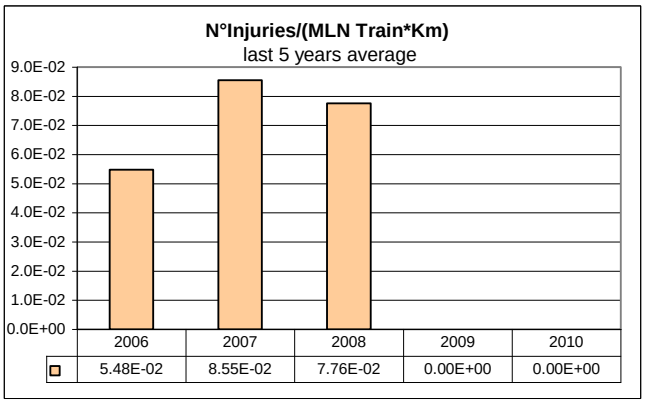
	Type of accident							
Year	*Costs of deaths in MLN €*	*Costs of injuries in MLN €*	*Costs of replacement or repair of damaged rolling stock and railway installations in MLN €*	*Costs of delays, disturbances and re-routing of traffic, including extra costs for staff and loss of future revenue in MLN €*	*Total costs in MLN €*	*Total number of working hours of staff and contractors lost as a consequence of accidents*	*Total number of working hours*	*Train*Km (MLN)*
2006	0	0	750000	0	750000	0	0	18.24
2007	0	0	110000	0	110000	0	0	16.83
2008	0	0	800000	0	800000	0	0	16.49

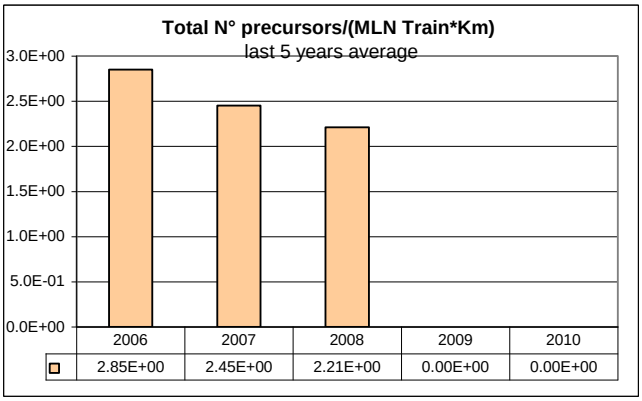
Technical safety of infrastructure and its implementation, management of safety

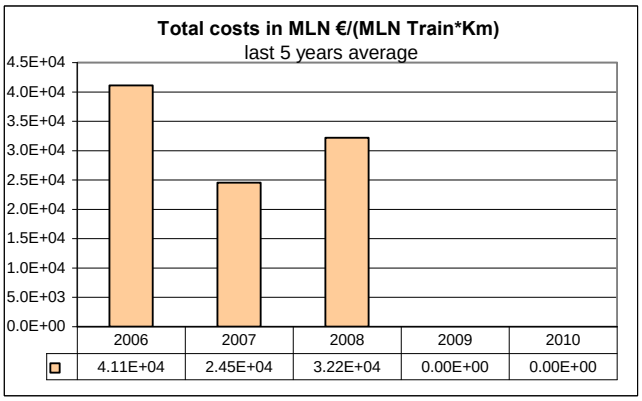
	Type of accident						
Year	*Percentage of tracks with Automatic Train Protection (ATP) in operation*	*Percentage of Train*Km using operational ATP systems*	*Total number of level crossings*	*Number of track Km (double track lines are to be counted twice)*	*Total number of level crossings per track Km*	*Percentage of level crossings with automatic or manual protection*	*N°of audits accomplished / N° of audits required (and/or planned)*
2006	5.00%	12.00%	1171	2110	5.55E-01	17.00%	105.00%
2007	5.00%	13.70%	1126	2110	5.34E-01	19.27%	100.00%
2008	5.00%	13.30%	1095	2110	5.19E-01	20.00%	105.00%





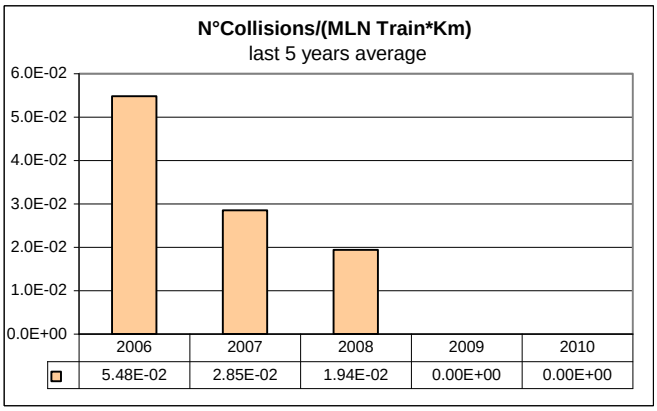


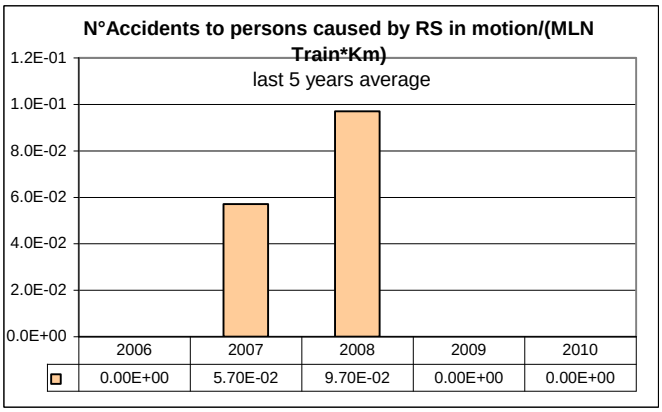


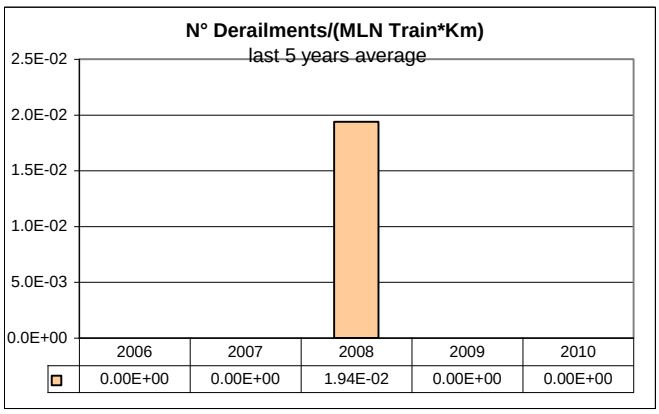


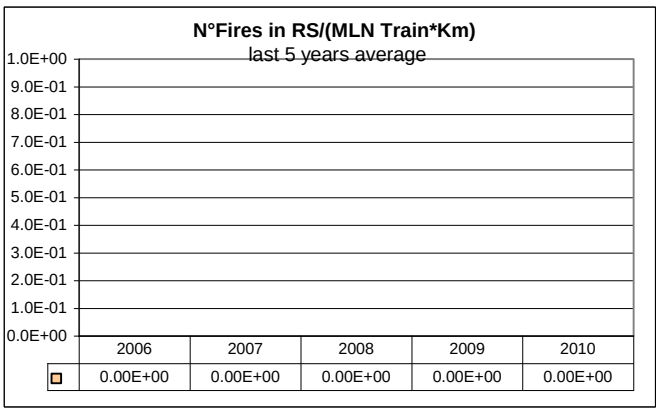
2007 report: values related to 2006.
2008 report: values related to the average between 2006 and 2007.
2008 report: values related to the average among 2006, 2007 and 2008.
2009 report: values related to the average among 2006, 2007, 2008 and 2009.

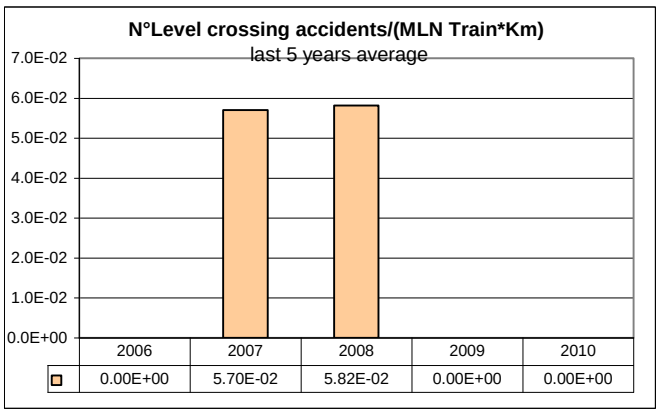
Accidents divided by type

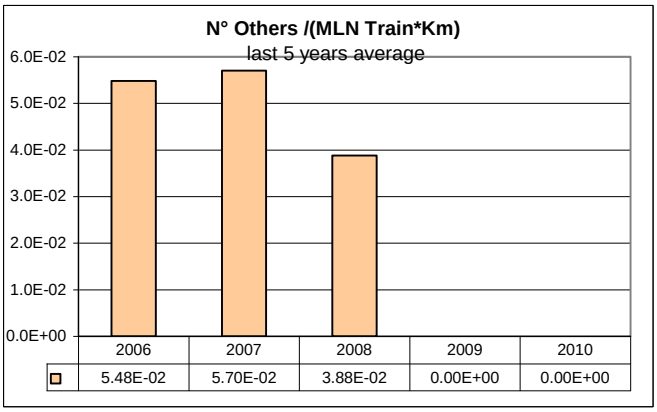












2007 report: values related to 2006.
2008 report: values related to the average between 2006 and 2007.
2008 report: values related to the average among 2006, 2007 and 2008.
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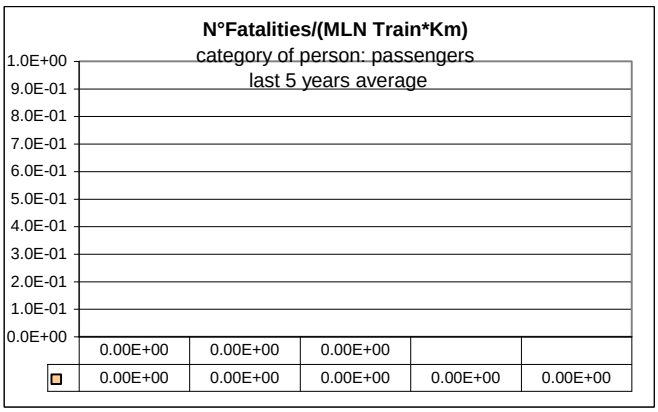
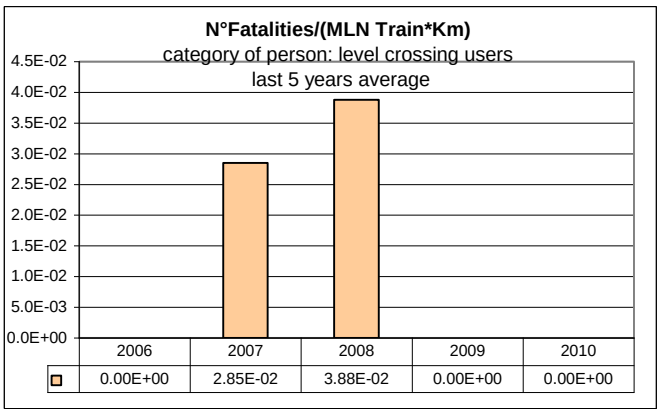
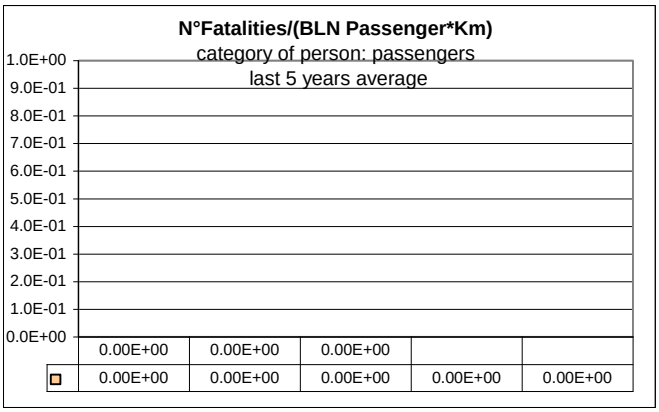
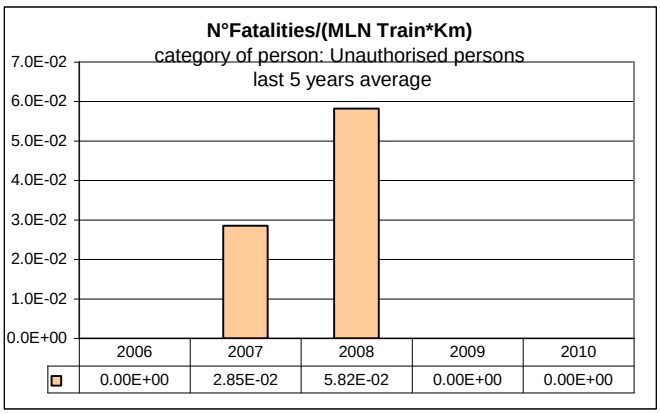
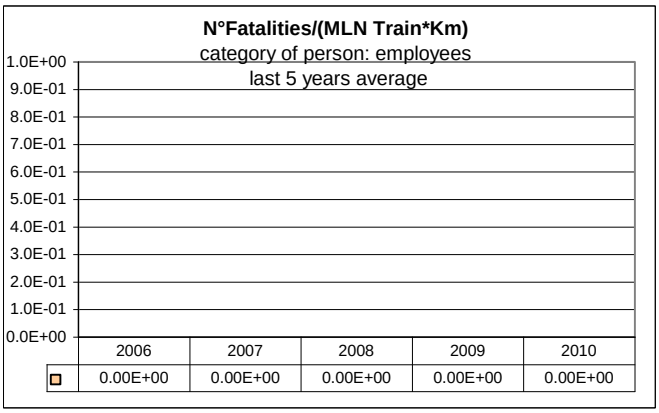
Fatalities divided by category of people involved

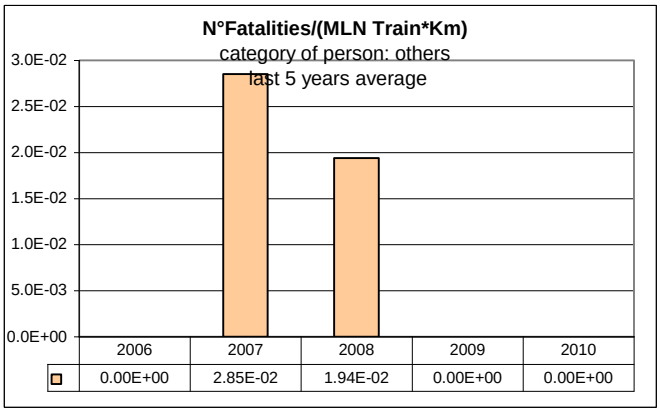












2007 report: values related to 2006.
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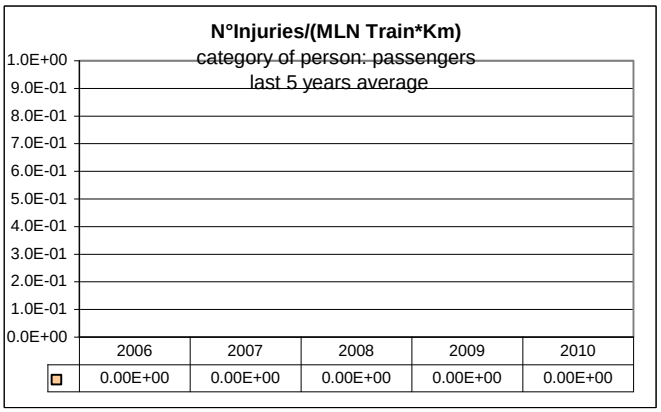
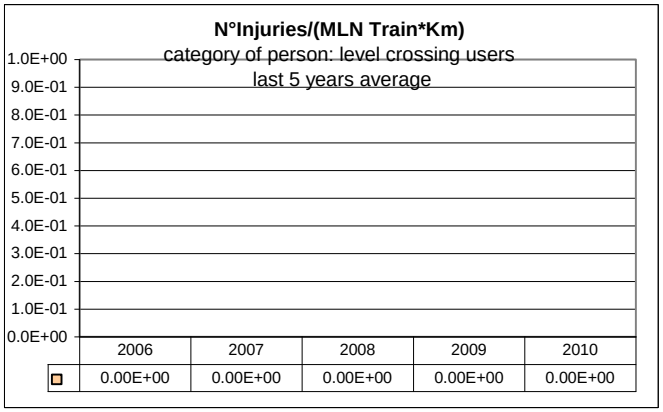
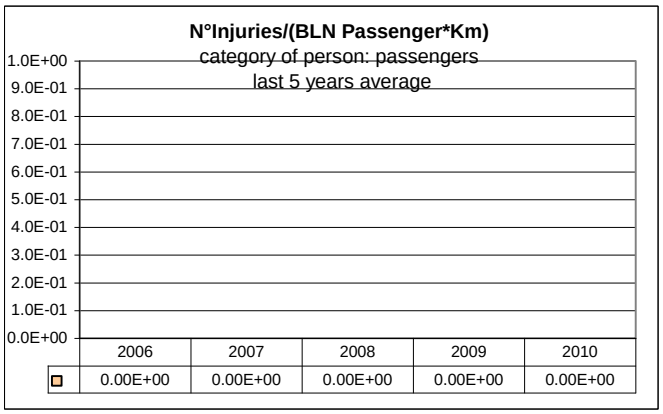
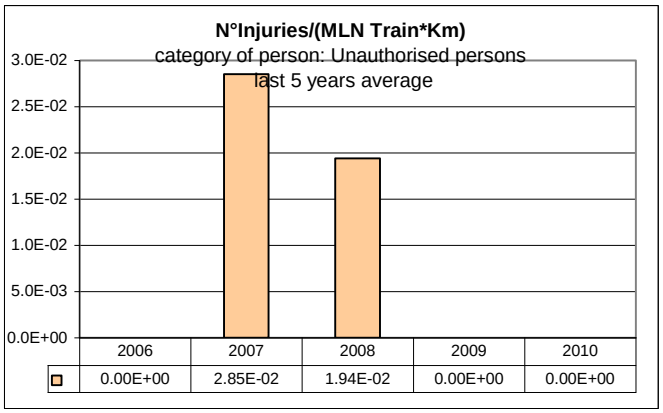
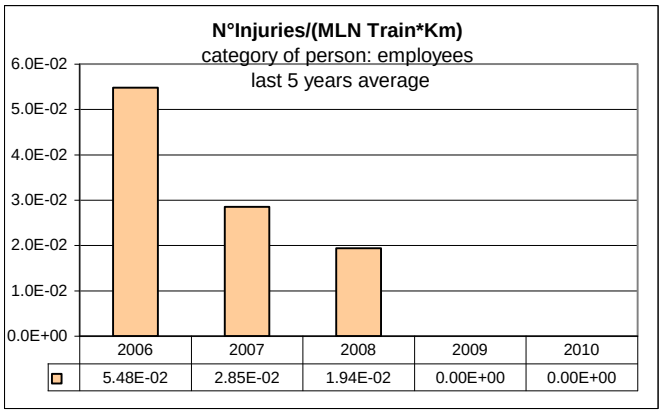
Injuries divided by category of people involved

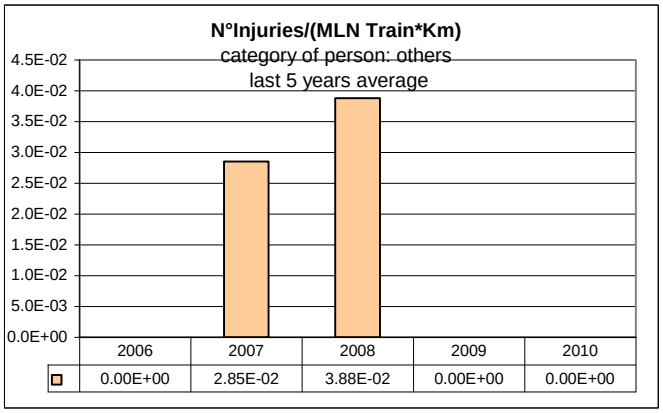












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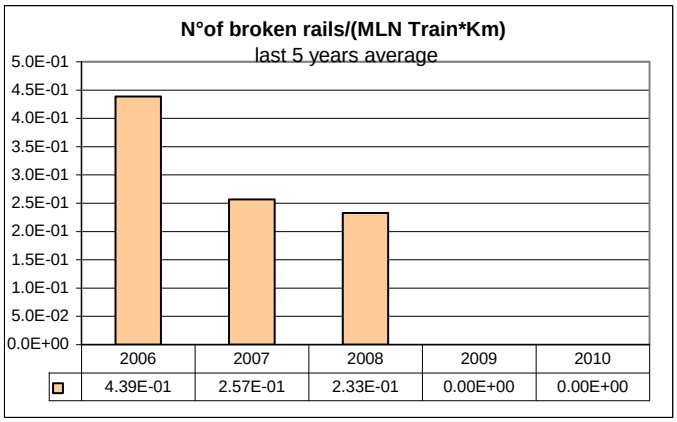

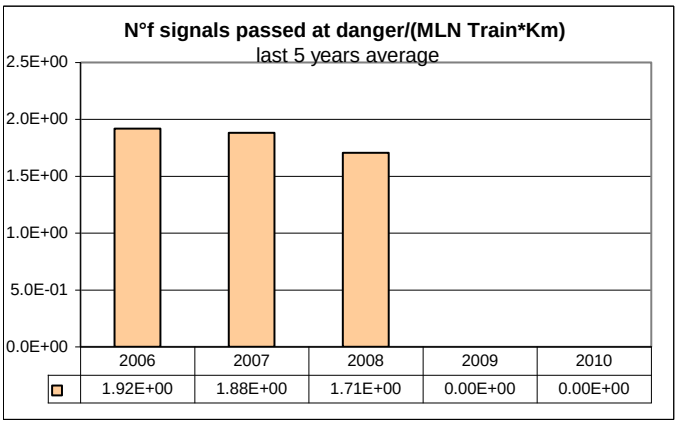

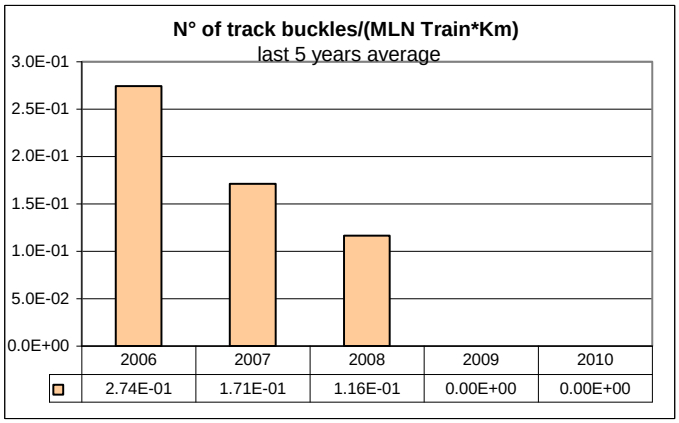

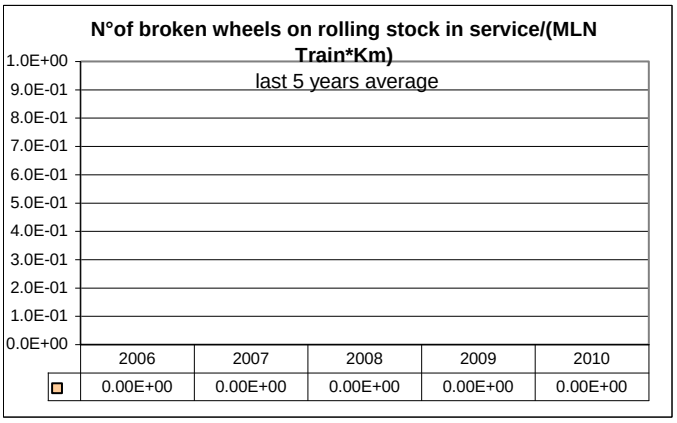

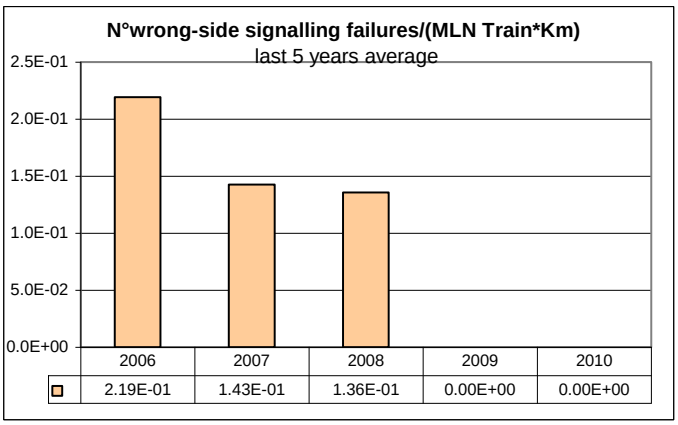

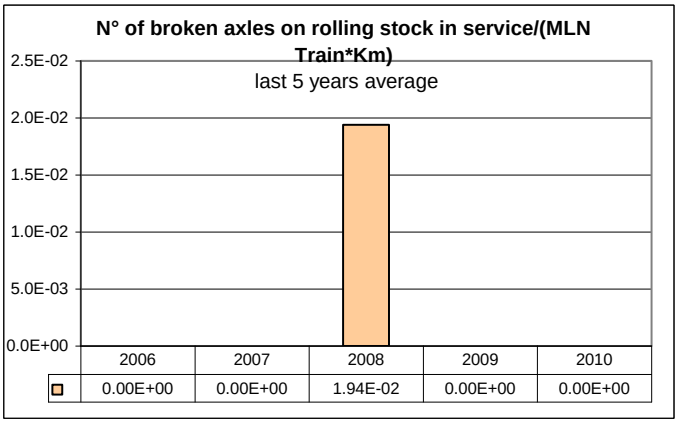

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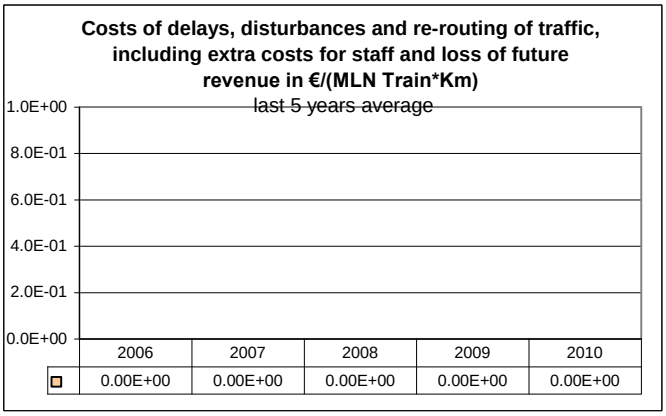
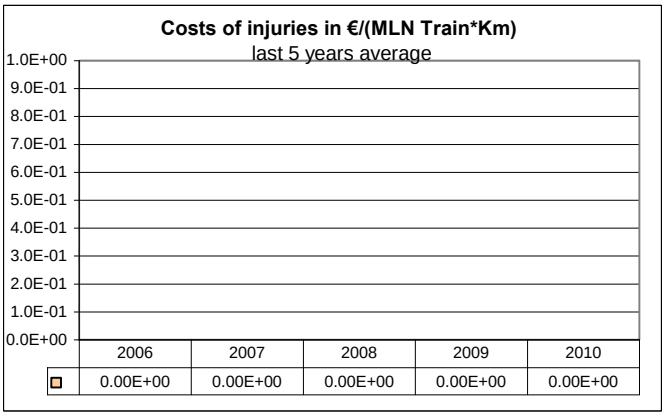
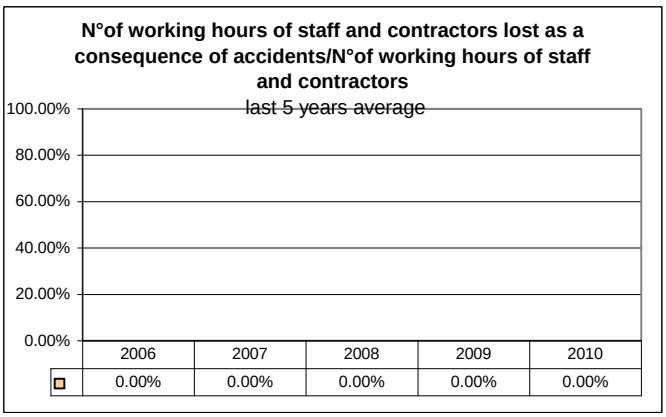
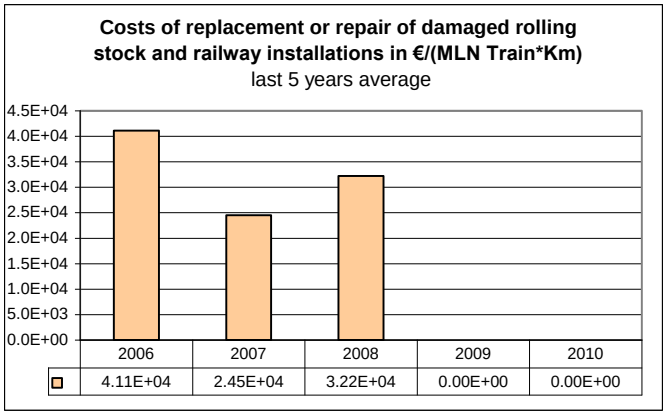
Cost of all accidents, number of working hours of staff and contractors lost as a consequence of accidents









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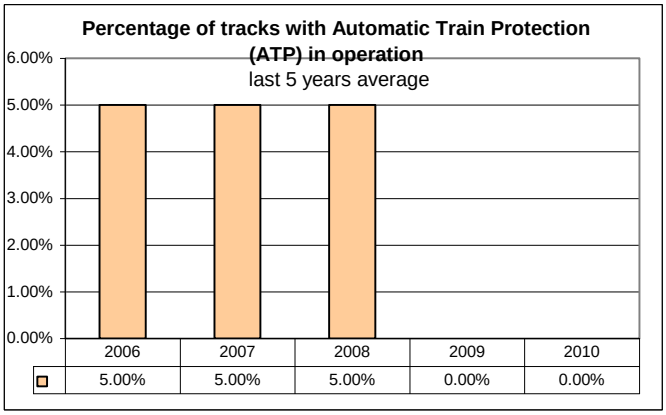

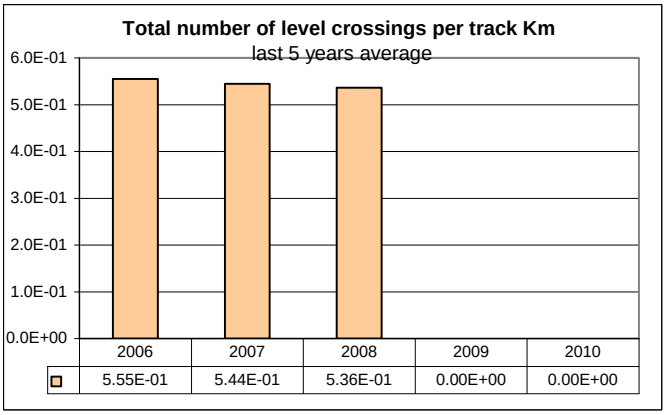

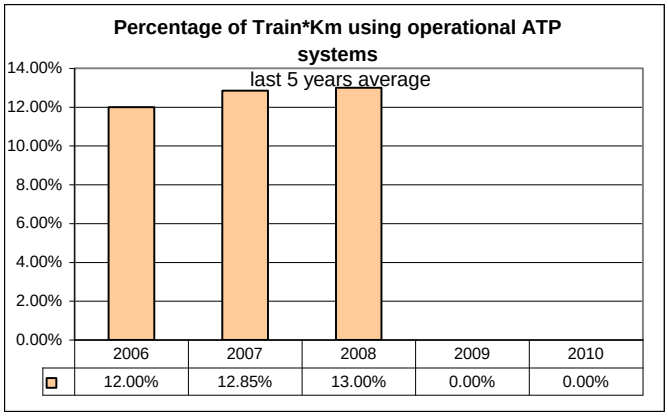

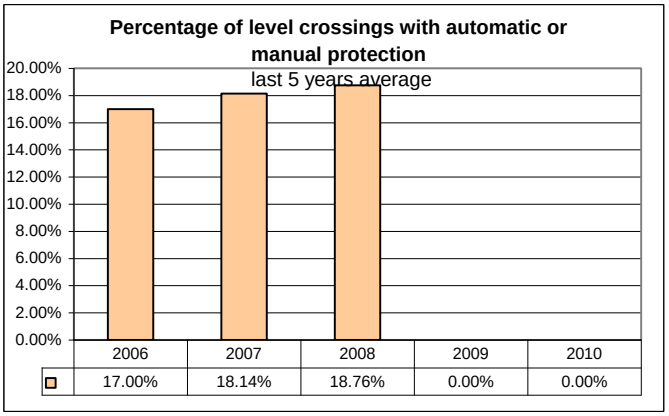

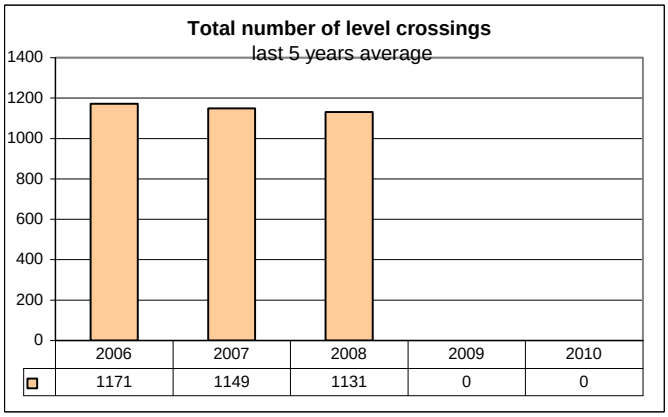

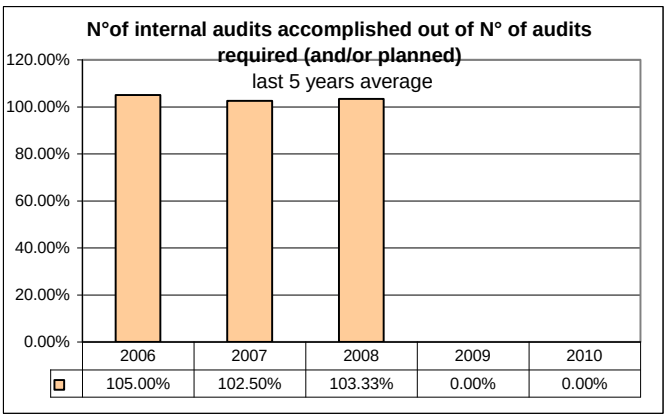

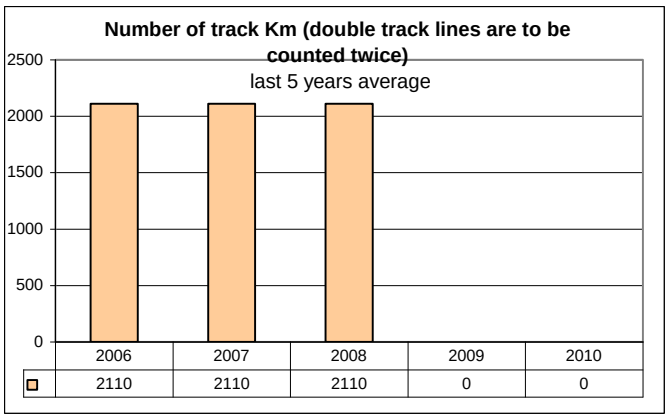

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2009 report: values related to the average among 2006, 2007, 2008 and 2009.

C.2. Definitions used in the annual report

C.2.1. Definitions in Regulation 91/03 to be applied:

deaths (killed person*)*
means any person killed immediately or dying within 30 days as a result of an injury accident, excluding suicides

injuries (seriously injured person)
means any person injured who was hospitalized for more than 24 hours as a result of an accident, excluding attempted suicides

passenger-km
means the unit of measure representing the transport of one passenger by rail over a distance of one kilometre. Only the distance on the national territory of the reporting country shall be taken into account

rail passenger
means any person, excluding members of the train crew, who makes a trip by rail. For accident statistics, passengers trying to embark/disembark onto/from a moving train are included

suicide
means an act to deliberately injure oneself resulting in death, as recorded and classified by the competent national authority

significant accident
means any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, track, other installations or environment, or extensive disruptions to traffic. Accidents in workshops, warehouses and depots are excluded

train
means one or more railway vehicles hauled by one or more locomotives or railcars, or one railcar traveling alone, running under a given number or specific designation from an initial fixed point to a terminal fixed point. A light engine, i.e. a locomotive traveling on its own, is not considered to be a train

train*Km
means the unit of measure representing the movement of a train over one kilometre. The distance used is the distance actually run, if available, otherwise the standard network distance between the origin and destination shall be used. Only the distance on the national territory of the reporting country shall be taken into account

C.2.2. National definitions

Directive 2004/49/EC lays down in Annex 1, point 6:

"Definitions

The reporting authorities may use nationally applied definitions of the indicators and methods for calculation of costs when data according to this Annex are submitted. All definitions and calculation methods in use shall be explained in an Annex to the annual report described in Article 18."

National definitions and methods to calculate costs concerning the items listed in the Annex 1 to Directive 2004/49/EC are to be reported in this paragraph, whether not defined in this legal act and in the Reg.91/03.

The definitions used in this report correspond with the definitions outlined in Annex C.2.1 above and elaborated in revised Annex I to the Directive 2004/49/EC, as approved at the 52nd meeting of the RISC at Brussels on 11th June 2009.

C.3. Abbreviations

ATP	Automatic Train Protection;
BLN	10^9
CSI	Common Safety Indicator
ERA	European Railway Agency
IÉ	Iarnród Éireann – Irish Rail
LC	Level Crossing
HSL	High Speed Line (Definition acc. Directive 96/48/EC);
LC	Level Crossing
MLN	10^6
NIB	National Investigating Body for railway accidents
NSA	Network Safety Authorities
RS	Rolling Stock
RSC	Railway Safety Commission
RU/IM	Railway Undertaking and Infrastructure Manager

ANNEX D: Important changes in legislation and regulation

For important changes of the legislations or regulations (including also the notified rules), the following information should be stated in the table in ***Annex D****:*

- The legal reference

- The date the change comes into force

- The reason for the introduction of the change (Specify if it is new legislation or an amendment to existing legislation)

- The description of the change

	Legal reference	**Date legislation comes into force**	**Reason for introduction (Additionally specify new law or amendment to existing legislation)**	**Description**
General national railway safety legislation	NONE			
Legislation concerning the national safety authority	SI 61 of 2008	07/03/2008	Amendment to Railway Safety Act 2005, to implement Safety Directive 2004/49/EC	Regulations establish the Commission as the National Safety Authority and outline additional duties;
Legislation concerning notified bodies, assessors, third parties bodies for registration, examination, etc.	NONE			
National rules concerning railway safety				
Rules concerning national safety targets and methods	NONE			
Rules concerning requirements on safety management systems and safety certification of Railway Undertakings	NONE			
Rules concerning requirements on safety management systems and Safety Authorisation of Infrastructure Managers	NONE			
Rules concerning requirements for wagonkeepers	NONE			
Rules concerning requirements for maintenance workshops	NONE			
Rules concerning requirements for the authorisation of placing in service and maintenance of new and substantially altered rolling stock, including rules for exchange of rolling stock between Railway Undertakings, registration systems and requirements on testing procedures	NONE			
Common operating rules of the railway network, including rules relating to the signalling and traffic procedures	NONE			
Rules laying down requirements on additional internal operating rules (company rules) that must be established by the Infrastructure Managers and Railway Undertakings	NONE			

Rules concerning requirements on staff executing safety critical tasks, including selection criteria, medical fitness and vocational training and certification	NONE			
Rules concerning the investigation of the accident and incidents including recommendation	SI 61 of 2008	07/03/2008	Amendment to Railway Safety Act 2005, to implement Safety Directive 2004/49/EC	Regulations establish the harmonised duties, powers and terms of reference of the independent Investigation Unit
Rules concerning requirements for national safety indicators including how to collect and analyse the indicators	NONE			
Rules concerning requirements for autorisation of placing in service the infrastructure (tracks, bridges, tunnels, energy, ATC, radio, signalling, interlocking, level crossing, platforms, etc.)	NONE			

ANNEX E: The development of safety certification and authorisation – Numerical Data

E.1. Safety Certificates according to Directive 2001/14/EC

Number of Safety Certificates issued according to Directive 2001/14/EC, held by Railway Undertakings in year 2008	being licensed in Member State	1
	being licensed in another Member State	0

E.2. Safety Certificates according to Directive 2004/49/EC

		New	Updated / amended	Renewed
*E.2.1. Number of valid Safety Certificates **Part A** held by Railway Undertakings in the year 2008*	being registered in Member State	0	0	0
	being registered in another Member State	0	0	0

		New	Updated / amended	Renewed
*E.2.2. Number of valid Safety Certificates **Part B** held by Railway Undertakings in the year 2008*	being registered in Member State	0	0	0
	being registered in another Member State	0	0	0

			A	R	P
*E.2.3. Number of applications for Safety Certificates **Part A** submitted by Railway Undertakings in year 2008*	being registered in Member State for	new certificates	0	0	0
		updated / amended certificates	0	0	0
		renewed certificates	0	0	0
	being registered in another Member State for	new certificates	0	0	0
		updated / amended certificates	0	0	0
		renewed certificates	0	0	0

			A	R	P
E.2.4. Number of applications for Safety Certificates ***Part B*** *submitted by Railway Undertakings in year 2008*	being registered in Member State for	new certificates	0	0	0
		updated / amended certificates	0	0	0
		renewed certificates	0	0	0
	being registered in another Member State for	new certificates	0	0	0
		updated / amended certificates	0	0	0
		renewed certificates	0	0	0

A = Accepted application, certificate is already issued
R = Rejected applications, no certificate was issued
P = Case is still pending, no certificate was issued so far

E.2.5. List of countries where RUs applying for a Safety Certificate Part B in your Member State have obtained their Safety Certificate Part A:

No application received in 2008.

E.3. Safety Authorisations according to Directive 2004/49/EC

	New	Updated / amended	Renewed
E.3.1. Number of valid Safety Authorisations held by Infrastructure Managers in the year 2008 being registered in your Member State	0	0	0

		A	R	P
E.3.2. Number of applications for Safety Authorisations submitted by Infrastructure Managers in year 2008 being registered in your Member State	new authorisations	0	0	0
	updated / amended authorisations	0	0	0
	renewed authorisations	0	0	0

A = Accepted application, authorisation is already issued
R = Rejected applications, no authorisation was issued
P = Case is still pending, no authorisation was issued so far

E.4. Procedural aspects – Safety Certificates part A

		New	Updated / amended	Renewed
*Mean time after having received all necessary information between the receipt of an application and the final delivery of a Safety Certificate **Part A** in year 2008 for Railway Undertakings*	being registered in your Member State	0	0	0
	being registered in another Member State	0	0	0

E.5. Procedural aspects – Safety Certificates part B

		New	Updated / amended	Renewed
*Mean time after having received all necessary information between the receipt of an application and the final delivery of a Safety Certificate **Part B** in year 2008 for Railway Undertakings*	being registered in your Member State	0	0	0
	being registered in another Member State	0	0	0

E.6. Procedural aspects – Safety Authorisations

		New	Updated / amended	Renewed
Mean time after having received all necessary information between the receipt of an application and the final delivery of a Safety Authorisation in year 2008 for Infrastructure Managers	being registered in your Member State	0	0	0
	being registered in another Member State	0	0	0