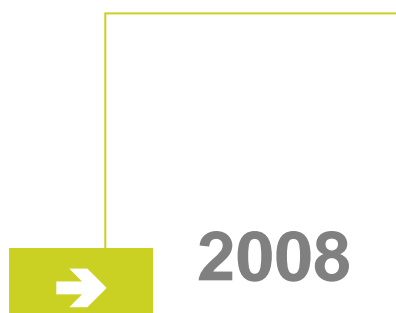


Report on the safety of the national rail network



A. FOREWORD	5
B. INTRODUCTORY SECTION.....	6
1. Introduction to the report	6
2. Information on the network and changes in the railway sector	7
3. Summary – General trend analysis	8
C. ORGANISATION OF THE FRENCH RAIL SAFETY BODY (ETABLISSEMENT PUBLIC DE SÉCURITÉ FERROVIAIRE – EPSF)	9
1. About the organisation.....	9
2. Relations between EPSF and its principal partners.....	10
D. THE DEVELOPMENT OF RAILWAY SAFETY	11
1. Initiatives for improving safety performance	11
2. Detailed trend analysis data.....	16
E. SIGNIFICANT CHANGES IN THE LEGISLATION AND REGULATIONS	18
F. CHANGES IN SAFETY CERTIFICATION AND APPROVAL	19
1. Effect of changes in the regulations	19
2. Numerical data	19
3. Procedural aspects	20
G. SUPERVISION OF INFRASTRUCTURE MANAGERS AND RAILWAY UNDERTAKINGS.....	21
1. Description of supervision of infrastructure managers and railway undertakings	21
2. Annual reports from infrastructure managers and railway undertakings	22
3. Checks carried out in 2008.....	22
4. Measures taken as a result of inspections.....	22
H. CONCLUSIONS.....	24
ANNEX A: INFORMATION RELATING TO THE NETWORK AND TO CHANGES IN THE RAILWAY SECTOR.....	26
A.1: Map of the national rail network (RFN).....	26
A.2: List of railway undertakings and the infrastructure manager	27
ANNEX B: ORGANISATION CHART OF THE EPSF	29
B.1 Figure: internal organisation	29
B.2 Figure: relations between EPSF and its principal partners.....	30
ANNEX C: COMMON SAFETY INDICATORS	31
C.1 Common safety indicators – data	31
C.2 Definitions used in the report.....	38

ANNEX D: SIGNIFICANT CHANGES IN THE LEGISLATION AND REGULATIONS	40
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ANNEX E: CHANGES IN SAFETY CERTIFICATION AND APPROVAL – NUMERICAL DATA	41
---	-----------

E.1 Safety certificates issued in accordance with Directive 2001/14/EC	41
--	----

E.2 Safety certificates in accordance with Directive 2004/49/EC	41
---	----

E.3 Safety approvals in accordance with Directive 2004/49/EC	42
--	----

E.4 Procedural aspects – Safety certificates part A	43
---	----

E.5 Procedural aspects – Safety certificates part B	44
---	----

E.6 Procedural aspects – Safety approvals	45
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A. Foreword

The 2008 annual report on the safety of the national rail network has been drawn up in accordance with Article 18 of Directive 2004/49/EC and its transposition into French law by Article 17 of Decree 2006/1279 of 19 October 2006.

The structure of this report complies with the recommendations of the European Railway Agency. It is based on information taken from the annual safety reports of the railway undertakings (RUs) and the infrastructure manager (IM), with additional information produced by EPSF in the course of its work.

The aim of this report is to describe the substantial changes in railway safety legislation and regulations and to analyse the overall safety of the railway system:

- in terms of common safety indicators (CSIs);
- through the results of the French Railways Safety Body (Établissement Public de Sécurité Ferroviaire (EPSF)) monitoring of the IM and RUs and lessons that can be learned from them.

B. Introductory section

1. *Introduction to the report*

This annual report on the safety of the national rail network is the fourth submitted by EPSF, but 2008 is only the second year since EPSF became fully operational.

During 2008, EPSF continued the procedures initiated in 2007 with a view to consolidating them, notably in the following areas:

- human resources, by setting up a skills- and job-management system;
- the 'quality' procedure, by introducing a 'quality' policy;
- 'system' feedback, by holding periodic meetings to share lessons learned, improve railway safety with all players, and ensure the coherence of the system;
- international relations, by developing European and international activities.

Pursuant to Decree 2006-1279 on rail traffic safety and the interoperability of the rail system, on 27 February 2008 EPSF granted safety approval to the infrastructure manager, Réseau ferré de France (RFF), and its deputy infrastructure manager.

This document is addressed to:

- the Ministry of Ecology, Energy, Sustainable Development and the Sea, responsible for green technologies and climate negotiations;
- the European Railway Agency;
- the Land Transport Accident Investigation Bureau (BEA-TT);
- the infrastructure manager, Réseau ferré de France;
- the deputy infrastructure manager (SNCF as deputy IM).

It is available on EPSF's website at the following address: <http://www.securite-ferroviaire.fr/>

The information given in this report will be used by the European Railway Agency in drawing up its biennial report on safety performance.

2. Information on the network and changes in the railway sector

The national rail network consists of 29 473 km of operational lines of which some:

- 50% comprise two or more tracks;
- 44% are single-track;
- 6% are twin-track high-speed lines.

It includes 15 424 km of electrified line, representing over 52% of all operational lines; some 61% of these electrified lines are fed at 25 000 volts AC. Note also that 58.7% of lines are equipped with an Automatic Train Protection (ATP) system.

The map of the national rail network is attached at Annex A.1.

The main characteristics of the infrastructure manager and the national railway network are set out in Annex A.2.

On 31 July 2008, a safety certificate was issued to the railway undertaking Colas Rail owing to the change of name of the Seco Rail undertaking.

Seven railway undertakings had their safety certificates amended:

- to be formatted as parts A and B: Veolia Cargo France and Seco-Rail;
- for the expansion of services: CFL Cargo, VFLI, Veolia Cargo France, Europorte 2 and SNCB;
- regarding part B following the reorganisation of their freight business: RU SNCF

At 31 December 2008, 10 railway undertakings had a safety certificate, and nine of them were actually engaged in commercial activities.

The railway undertakings are listed in Annex A.2.2

Five safety certificates were issued to the undertakings approved under Article 4.1 of the SNCF specifications, pursuant to Decree 2006-1279:

- Compagnie du Blanc Argent (CBA) to operate and maintain the Salbris - Luçay-le-Mâle line;
- Chemins de Fer et Transport Automobile (CFTA) to operate and maintain the lines in Brittany between Guingamp and Carhaix and between Guingamp and Paimpol;
- Chemins de Fer et Transport Automobile Cargo (CFTA Cargo) to operate and maintain the Etoile de Gray lines;
- CFTA Cargo to operate and maintain the Châtillonnais lines;
- Voies Ferrées Locales et Industrielles (VFLI) to operate and maintain the lines in Le Morvan.

Two training centre approvals were issued to the GETIF training centre and to SNCF for the rolling stock movement training centre. In 2008, EPSF also granted extensions for approvals to 13 training centres for new safety functions.

A total of 37 training centres had a valid approval at 31 December 2008.

Finally, for the first time in 2008 EPSF certified two authorised bodies (OQAs): CERTIFER on 1 April 2008 and TÜV Rheinland Intertraffic on 3 October 2008. These bodies have the task of assessing the design and implementation of new or substantially changed railway systems or sub-systems.

3. Summary – General trend analysis

Several serious accidents occurred in 2008 which gave rise to an investigation by BEA-TT:

- a collision between a car and a goods train on 25 January 2008 in Neufchâteau;
- an infrastructure maintenance operative was struck by a railway vehicle at the Bayard level crossing on 26 February 2008;
- a collision between a train and a school bus in Allinges on 2 June 2008 (investigation in progress);
- a collision between a goods vehicle and a regional train (TER) at La Roche-en-Brenil on 7 July 2008 (investigation in progress).

A similar investigation was carried out on an event that could have led to a serious rail accident. It involved a VEOLIA goods train that ran out of control in Montauban on 26 April 2008.

Two significant derailments also occurred:

- the first happened when the first regional train of the day hit a mudslide caused by bad weather between Le Mont Doré and La Bourboule on 12 September 2008;
- the second was caused by a regional train hitting a revetment, weakened by the weather, on 14 December 2008 at La Couronne – Caro.

Regarding the general level of traffic, the number of million train-km was up by 2% in relation to 2007, with an increasing share carried out by railway undertakings starting business in 2006.

The number of accidents (as defined in Annex C2) rose by 8.2% in relation to 2007. The accident rate per million train-km in 2008 (0.82) is comparable to the figure for 2006 (0.85), but up 6.4% in relation to 2007 (0.78).

Regarding the human consequences of accidents, we observe:

- a 9.6% increase in the number of deaths in relation to 2007, owing mainly to an increase in the number of deaths of 'unauthorised' and 'other' persons (as defined in Annex C2);
- a 21.7% drop in the number of serious injuries.

At the same time, passenger traffic rose slightly more than 10%, to 87 billion train passengers. The death rate per billion train passengers fell by 8%, from 0.113 to 0.103.

Detailed trend analysis data are given in Chapter D, point 2.

C. Organisation of the French rail safety body (Etablissement public de sécurité ferroviaire – EPSF)

1. About the organisation

At 31 December 2008, EPSF had a staff of 96, a slight increase.

From the organisational standpoint, EPSF consists, as in 2007, of two technical directorates, 'Authorisations and Monitoring' and 'Reference Systems and Europe' and one cross-cutting directorate, the General Secretariat.

As part of the 'quality' procedure that EPSF initiated early in 2007, processes and procedures for the activities of the various directorates were finalised and implemented in 2008.

The missions and composition of the two technical directorates are set out below.

The Authorisations and Monitoring Directorate

This Directorate comprises two departments, 'Authorisations' and 'Monitoring', composed of five and eight technical divisions respectively.

→ Authorisations Department

The missions of this department are as follows:

- appraisal and issue of safety certificates and safety declarations, safety approvals and approvals for training centres, commercial operating permits (systems and control, tractive stock, wagon stock, exceptional traffic);
- registration of rolling stock in a database;
- publication of guides for external use.

→ Monitoring Department

The missions of this department are as follows:

- checks (audits and inspections) that authorisations issued by EPSF, certificates or approvals, are being implemented under the conditions on which they were awarded;
- monitoring the level of safety by following up accidents and incidents which occur on the national rail network and triggering any necessary alerts;
- monitoring safety indicators and organising 'safety system' feedback for all operators authorised on the national rail network;
- publication of a monthly briefing note on incident statistics;
- publication of the annual safety report.

The Reference Systems and Europe Directorate

This Directorate comprises one department, 'Reference Systems', composed of three divisions, and two services: 'Safety/Interoperability' and 'International, Europe and Benchmarks'.

→ Reference Systems Department

The missions of this department are as follows:

- participation in drafting State regulations, issuing notices and proposals;
- checking the operating documentation of the national rail network;
- drawing up and publishing reference documents which are equivalent to recommendations.

→ The 'Safety/Interoperability' and 'International, Europe and Benchmarks' services have the following missions:

- steering French expertise within working parties of the European Railway Agency (ERA);
- contributing to the development of mutual recognition by the national safety authorities and ERA;
- organising partnerships with other national safety authorities;
- monitoring of industry and standards.

The organisation of EPSF is set out in Annex B.1

2. Relations between EPSF and its principal partners

Apart from the railway operators with which it is in regular contact, EPSF's most important relations are with the bodies listed below:

- the Directorate-General for the Sea and Transport – Directorate for Rail and Public Transport (DTFC) of the Ministry of Ecology and Sustainable Development and Planning, which supervises the EPSF and carries out the railway-safety missions for which the State is responsible;
- the Land Transport Accident Investigation Bureau (BEA-TT). EPSF has regular exchanges with the BEA-TT on incidents and accidents occurring on the national rail network; it monitors the implementation of its recommendations by railway undertakings and the infrastructure manager, and sends EPSF the necessary information to produce its annual report;
- the Dangerous Materials Transport Task Force (MMD);
- the Directorate for Civil Defence and Security (DDSC); EPSF consults it on safety definition dossiers (DDS), preliminary safety dossiers (DPS) and safety dossiers (DS) for new systems or new infrastructures which are sent to it in application for a commercial operating permit;
- the Rail Activities Monitoring Task Force (MCAF).

A graphical representation of EPSF's relations with other national bodies is at Annex B.2.

N.B.: The names used are those predating the reorganisation of the Ministry of Transport in the summer of 2008.

D. The development of railway safety

1. Initiatives for improving safety performance

1.1 The French rail safety body (Etablissement public de sécurité ferroviaire – EPSF)

EPSF's activities and initiatives in 2008 are set out below:

- four feedback meetings with all the operators, pooling the lessons learned from the most significant incidents, the outcome of checks carried out by EPSF and the best practices of all those involved. Following those meetings, EPSF published decision sheets and contributed to studies on train departures and action by RUs regarding signals passed at danger;
- publication of nine rolling-stock acceptance specifications (SAM) and one infrastructure equipment acceptance specification (SAMI). Twelve others were in preparation and due for publication in 2009;
- drafting of guides on safety certification and commercial operating permits, in line with EPSF's goal of helping railway operators to submit permit application dossiers;
- drafting of a guide for the preparation of safety regulations for the operation of port railways;
- setting up a computerised register of all authorised rolling stock on the national rail network;
- updating of the national vehicle register (NVR);
- signature of mutual-recognition agreements for:
 - wagons between Belgium, Luxembourg and France,
 - locomotives and passenger rolling stock between Germany-France and Belgium-Luxembourg-France-Netherlands;
- preparation of data sheets for mutual-recognition agreements for:
 - wagons between Switzerland-France and Spain-France,
 - locomotives and passenger rolling stock between Switzerland-France and Spain-France;
- development of a new database (national rail network safety events) with a higher record capacity and more operational functionality;
- formalising the main EPSF processes involved in its quality procedure;
- improving mutual trust between national safety authorities by conducting peer reviews with ERA, helping to promote best practices and developing common methods and tools.

1.2 The infrastructure manager (RFF and SNCF)

The following major projects with a significant impact on safety were launched in 2008:

- East European High-Speed Line – phase 2:
 - production of the East European High Speed Line phase 2 DDS presenting the project organisation, its technical and operational content, and the reference system adopted for demonstrating the 'globally at least equivalent' (GALE) principle,
 - production of the East European High Speed Line phase 2 with the associated preliminary risk analysis which specified the organisation of the project actually implemented;
- Brittany-Pays de la Loire High-Speed Line:
 - preparation of the safety definition dossier;
- Marseille-Gardanne–Aix-en-Provence line:
 - on 4 November 2008 the commercial operating permit for the line was issued with reservations which were withdrawn in December 2008.

The main measures by RFF aimed at improving safety on the national rail network were taken in the areas discussed below.

1.2.1 Investments in network renewal

In 2008, EUR 709.9m were earmarked for the renewal of 564.2 km of running line and 208 items of track equipment, of all UIC groups. The work carried out on lines in UIC groups 1 to 6 allowed the most used track on the network to be modernised and the most critical parts of the track laid on concrete sleepers with corroded cross-bars to be eliminated.

The first renewals of lines in UIC groups 7 to 9 with passengers were carried out in 2008, thereby pursuing the renewal policy introduced in 2006.

Investments in engineering works amounted to EUR 123.5m, for the following projects:

- replacement of metal decking on 18 structures;
- structural renovation of arches in 14 tunnels;
- reinforcement of 13 concrete or brickwork bridges;
- rebuilding of three bridges;
- consolidation of 85 earthworks, notably on the Paris-Lille high-speed line at a cost of EUR 50m over 15 years.

Substantial investments were made in signalling installations; EUR 100m were earmarked mainly for renewal of signal boxes, broken down as follows:

- 1 commissioning operation (renewal of signal boxes at Bry and Gagny stations in Ile-de-France);
- 6 operations in progress (Lyon, Longueau, Dijon à Blaisy, Villeneuve St George, Castelnau-d'Aud, Sedan);
- 11 operations in preparation.

Investments in telecommunications installations, costing EUR 6.5m for 2008, focused on the deployment of GSM-R. The work carried out enabled the final phase to go into commercial production of the pilot lot (Châlons en Champagne / Bar-le-Duc) and GSM-R to be commissioned on 28 new sections representing 1 145 km of line. GSM-R was put into service on the first complete border zone between Forbach and Saarbrücken in cooperation with Deutsche Bahn.

1.2.2 Prevention of individual accidents

RFF continued its policy of preventing accidents on level crossings as follows:

- effective removal during 2008 of nine hazardous level crossings;
- signature of a performance contract between the State and RFF for the removal of 50 hazardous level crossings by the end of 2012;
- continuation of the experimental programme for equipment designed to improve safety at level crossings, with the Department of Road Safety and Traffic, covering:
 - experimentation with a new type of light signal for level crossings with crossbucks,
 - publication of a memo for road infrastructure managers on equipment to be installed (traffic island, sign with variable messages, 'R1' lights coupled with train announcements),
 - validation of the study of motorists' behaviour in relation to level crossings with crossbucks and those with lights but no barriers, with a view to finding new solutions.

Measures were also taken to prevent trains striking persons crossing the tracks in stations. In 2008, 83 stopping points were equipped with pictograms or simple alterations and five operations involving grade-separated crossings (bridges or underpasses) were initiated. Regarding track crossings away from stations and to comply with the new legislation, RFF devised a new policy for delimiting the lines of the national rail network. This policy will be implemented from 2009 with a survey of risk areas. Finally, in order to prevent trains striking personnel, equipment was installed to help personnel cross tracks.

1.2.3 Prevention of railway accidents

Two types of measures were taken to prevent railway accidents: the first to mitigate the consequences of driver errors, the second to prevent operating errors.

KVB speed-control beacons were fitted to the signals of non-electrified lines where crossing them at danger involves significant risks. These installations are studied on a case-by-case basis taking account of the consequences of driver errors and plans to deploy the ERTMS system.

To prevent operating errors, in agreement with the deputy IM, RFF carried out installations designed to:

- add interlocks in certain signal boxes;
- create zone counters to streamline the procedures before working on tracks;
- improve control of train arrivals on service tracks.

1.2.4 Improving the safety of dangerous goods transport sites

In 2008 this operation resulted in studies being conducted up to the project stage for the marshalling yards at Le Bourget and Somain. In December 2008, the safety upgrade of the Woippy marshalling yard reached the implementation stage.

1.2.5 Improving tunnel safety

The programme for improving tunnel safety made progress on two fronts:

- safety for persons without external assistance;
- response of emergency services.

Of the 31 tunnels involved in the fire prevention programme initiated in the year 2000, only the work on the Mont-d'Or tunnel remains to be completed.

1.2.6 Improving environmental safety

To improve environmental safety (proximity of listed facilities, wind turbines, etc.), RFF has begun drafting two documents 'Environmental Safety and Security: managing the proximity of the national rail network to SEVESO sites' and 'Environmental Safety and Security: managing the proximity of the national rail network to public assembly areas'.

1.2.7 The impact of security on rail safety

Two studies on infrastructure security began in 2008 and are due to be completed in 2009:

- study of detection equipment to combat thefts of line cables;
- detection measures and development of innovative solutions for repairing membranes.

Work began on identifying priority sites and types of work to be carried out at 35 sites (7 unmanned stopping points, 5 substations, 12 signal boxes, 11 storage sites).

In addition to these initiatives, several research projects carried out by SNCF on behalf of RFF in 2008 are linked to improving the safety of the railway system; they fall into three main groups:

- improved surveillance and monitoring of existing railway infrastructure;
- seeking new methods for renewing or maintaining railway infrastructure by reinforcing structures or parts;
- protecting installations against external phenomena or factors in areas as diverse as rockfalls or computer virus attacks.

1.3 Railway Undertakings

1.3.1 SNCF

In 2008, investments continued in the implementation of measures in response to serious events or recommendations of the Land Transport Accident Investigation Bureau, specifically:

- location of door-opening indicator lights on the sides of Transilien rolling stock;
- queue management for the doors of Z2 rolling stock;
- inhibiting the control for emergency opening of doors while in motion (Transilien Z2N rolling stock, etc.).

Investments in rolling stock were made, mainly involving equipment in control systems, and safer door operation.

- Thirty BB 36300 units intended to run interoperability traffic with Italy were equipped with the train control system (SCMT). Six TGV train sets on the Paris–Lyon–Turin route will also be fitted with SCMT.
- GSM-R radio was deployed on all Thalys units (PBA and PBKA train sets).
- The emergency brake override signal (SAFI) has been fitted to the whole fleet except for Eurostar and North of London (NOL) train sets.
- At the end of June 2008, 5 354 traction units had been fitted with KVB, including all the rolling stock allocated to Ile de France;
- For infrastructure equipment, it is planned to add safety equipment (including KVB), over the period 2008-2010, on forty BB 63500 and eighty 67200 units.
- Door operation in Z2 train sets has been modified to stay locked if the intercom alarm signal is used where the speed reaches 10 km/h when accelerating and 6 km/h when decelerating.
- On Z2N units, modification of the door unlocking threshold (3km/h rather than 6 km/h) is in progress.
- Improvement of arming control on the track-engine transmission system (KARM project). The first train sets will be equipped early in 2009.

Research and development has continued or begun in the following areas:

- use of virtual reality for training staff of the commercial train service in transshipments;
- implementation of a scientific approach to the causes and consequences of varying driver alertness and fatigue;
- passive 'collision' safety in order to define a low reference obstacle for use in future equipment specifications;
- study of side-winds to be used as a basis for establishing a benchmark for analysing side-winds for a conventional train on a standard line;
- study on the numerical simulation of fire propagation for developing a new method for designing trains in relation to their fire-hazard properties;
- improving fault detection in antifriction bearings.

1.3.2 EURO CARGO RAIL (ECR)

For ECR, 2008 was a year of strong growth: its traffic (in train-km) grew 95% in relation to 2007. Staff numbers grew as a result and new operational units were set up (Paris, Bourg en Bresse).

The company's main safety initiatives were as follows:

- determining annual safety objectives and guidelines and structuring them into eight action plans (one for the management and the centres and one for each operational unit);
- investments in rolling stock and equipment (14 new Class 77 type locomotives, 2 driving simulators, etc.) and human resources (hiring of a staff safety officer, two safety auditors, etc.).
- recasting of the safety management system (SGS) with three objectives:
 - to make the SGS visible to all ECR players;
 - to achieve consistency between ECR's values and its operating methods;
 - to improve performance through learning lessons from audits and benchmarking of the best SGSs.

1.3.3 VEOLIA CARGO France (VCF)

The RU Veolia Cargo France has experienced a substantial growth in traffic. This resulted in a doubling in the number of kilometres travelled in relation to 2007, the creation of a new Central France branch in October 2008 and the expansion of its fleet of traction units.

As its traffic increased, VCF continued its comprehensive review of all records (ATESS).

Measures to improve safety have been taken in the following areas:

- formalisation of safety objectives: devising of a safety quality action plan (PAQS) with a choice of themes, notably adopting for 2009 the recommendations made by BEA-TT following the incident when a goods train ran out of control at Montauban station;

- monitoring of achievement of objectives: programme of monthly safety meetings in each of the branches and quarterly meetings of the general management, branches and VCF headquarters to summarise them;
- internal controls: planning and carrying out audits on issues such as safety management, subcontracting and train manufacture;
- consolidation of the feedback procedure: local publication of safety info, publication of feedback evaluation forms.

1.3.4 Other RUs: SECO-RAIL, GROUPE VFLI, CFL CARGO, SNCB and EUROPORTE2

2008 was a period of substantial growth for these railway undertakings, too. Their action to consolidate the organisations set up in 2007 related mainly to establishing the skills and tools needed to monitor the operators and measure safety levels.

Efforts focused on:

- feedback;
- internal control;
- formalisation of company monitoring procedures;
- document management.

In addition to these measures, CFL CARGO finished recasting its SGS, which is now closely linked to its quality procedures.

1.4 BEA-TT

Two reports of BEA-TT investigations, incorporating recommendations, were published in March and June 2008, covering:

- train 141 280 which struck the buffers at Versailles Rive Gauche station on 13 August 2007;
- the derailment of train 17 417 on 9 November 2007 in Pertuis.

Following these two investigations, BEA-TT made a total of five recommendations, to the infrastructure manager and to one railway undertaking.

In their annual safety reports, all operators on the national rail network which are the subject of BEA-TT recommendations report on progress with implementing those recommendations.

EPSF monitors and reports on the implementation of the various recommendations every year to BEA-TT.

Four rail accidents occurring in 2008 led BEA-TT to open an investigation:

- a collision between a car and a goods train in Neufchâteau on 25 January 2008;
- a fatal accident of an SNCF staff member on the level crossing at Bayard on 26 February 2008;
- a collision between a train and a school bus in Allinges on 2 June 2008;
- a collision between a goods vehicle and a regional train at La Roche-en-Brenil on 7 July 2008.

BEA-TT also investigated an incident in which a goods train of the RU Veolia Cargo France ran out of control after a brake failure.

2. Detailed trend analysis data

The trend analysis is based on the common safety indicators (CSIs) set out in Annex C. According to ERA requirements, these indicators should be calculated as the average of the values for the past five years. However, since the first available data date from 2006, the trend graphs give three values: the value for 2006, the average for 2006-2007 and the average for 2006, 2007 and 2008.

Where two figures appear in brackets, in the following paragraphs, the first is for 2007 and the second for 2008.

Overview of performance

In 2008, the number of accidents per million train-km is up from 0.78 to 0.82 in relation to 2007 but still lower than the figure of 0.85 for 2006. Annex C confirms this trend with an average value 6% higher than in 2007 (0.818, 0.813), but still lower than the 2006 figure of 0.848. The increase is due to the higher number of derailments and collisions.

Accidents broken down by type

The collision rate per million train-km was slightly higher than in 2007 (0.16, 0.18). However, the number of collisions on main lines was 38% lower in 2008 than in 2007. Note that the proportion of these collisions due to shortcomings of the transport system rose from 27% in 2007 to 47% in 2008. There was a significant increase in the number of collisions on service tracks in relation to 2007, owing to an increase in collisions caused by shunting errors.

The rate of derailments per million train-km was higher than in 2007 (0.13, 0.18). The increase, shown in Annex C, is linked mainly to the condition of the network and the change of scope between 2006 and 2007 (mentioned in the 2007 annual report).

The rate of accidents at level crossings per million train-km fell slightly in relation to 2007 (0.217, 0.212), lower still than for 2006 (0.276). This seems to confirm the trend observed in 2007. Annex C shows this falling trend with an average value for 2008 (0.234) significantly lower than for 2006. These observations demonstrate the effectiveness of the measures taken by the infrastructure manager to improve safety on level crossings (see D.1.2).

The rate of accidents to persons caused by rolling stock in motion per million train-km is very much lower than for 2007 (0.145, 0.105). The three-year trend shown in Annex C showed a lower value of the indicator in 2008 while there was no significant change between 2006 and 2007. There is a similar trend in the lower number of door faults observed for events reported to EPSF between 2007 and 2008 explained by the measures taken by the RU SNCF (see D.1.3.1).

The rate of fires on rolling stock per million train-km was down on 2007 (0.07, 0.044). The falling trend over the past three years is confirmed as shown in Annex C.

The rate of other accidents per million train-km is up in relation to 2007 (0.058, 0.116) but is still below the 2006 value (0.128). Annex C shows a falling trend over the past three years.

Fatalities and serious injuries

Annex C shows a falling trend for fatalities and injuries per million train-km: a substantial drop in relation to 2006 and lower than in 2007.

The breakdown of fatalities as a percentage by category has not changed for passengers (10.84%, 9.89%) and staff (3.61%, 2.2%). At the same time, there was a reduction in the proportion of level-crossing users in the number of fatalities (45.78%, 40.66%) and, conversely, an increase in the proportion of unauthorised persons or others (39.76%, 47.25%).

The breakdown of injuries as a percentage by category has not changed for staff (10.87%, 11.11%). There was an increase in the proportion of passengers (21.74%, 27.78%) and level-crossing users (15.22%, 36.11%). Conversely, the proportion of unauthorised persons or others fell sharply (52.18%, 25%).

Accident precursors

The rate of broken rails per million train-km was down on 2007 (0.61, 0.51). This trend can also be seen in Annex C.

The rate of signals passed at danger per million train-km rose slightly from 0.228 in 2007 to 0.229 in 2008. The slight rise shown in Annex C (0.223, 0.225) seems to confirm that this indicator is tending to stabilise over 2008, but at a worrying level. EPSF addressed this issue several times at the quarterly 'system' feedback seminars that it organises.

track buckles per train-km rose from 0.33 in 2007 to 0.36 in 2008. The three-year trend shows a continuous increase in this indicator. The situation is especially worrying on lines in UIC groups 7 to 9 AV where the rate of buckles per 1 000 km rose from 6.83 in 2007 to 7.57 in 2008 (+10%) and on lines in UIC groups 1 to 6 where the rate rose from 0.96 in 2007 to 1.26 in 2008 (+31%).

Signalling faults per million train-km fell from 0.52 in 2007 to 0.51 in 2008. This slight drop confirmed the fall observed in relation to 2006 (0.57). Annex C confirms a downward trend for this precursor.

There were no events in the 'broken wheel' category in 2008. There was one broken axle in 2008. These figures confirm the values recorded since 2006, with an incident rate of around 10^{-3} per million train-km. Without restricting itself to breakages only, EPSF observed an increase for 2008 in the number of incidents involving antifriction bearings, especially on wagons.

E. Significant changes in the legislation and regulations

Order of 14 April 2008 on mandatory rail-safety certificates

Date of entry into force: 4 May 2008.

This decree lays down the implementing conditions of Regulation (EC) 653/2007 of 13 June 2007 and detailed provisions pursuant to Article 24 of Decree 2006-1279 of 19 October 2006 by specifying the procedure for issuing safety certificates. In particular, it describes the procedures for suspending, withdrawing and restricting safety certificates and defines the concept of 'substantial change'. The Decree specifies the procedure to be followed for obtaining safety certificates, notably the content of application dossiers.

Order of 30 June 2008 implementing the last indent of Article 3 of Decree 2006-1276 of 19 October 2006 on rail traffic safety and the interoperability of the railway system

Date of entry into force: 1 July 2008.

This Decree lays down the procedures for exemption from the requirement for three years' professional experience of driving or supervision of driving on the national rail network as defined in the Decree of 30 July 2003 for trainers and examiners of drivers of type MI 79 and MI 84 passenger train sets operating on B line sections of the Île-de-France regional network of the national rail network.

Order of 12 August 2008 implementing Article 13 of Decree 2006-1279 on action and safety plans on the national rail network

Date of entry into force: 29 August 2008.

This Order lays down the procedures for drawing up and implementing action and safety plans (PIS). It alters the type of safety events that trigger the activation of the PIS.

Order of 12 August 2008 amending the Order of 26 August 2003 on operating procedures for the national rail network

Date of entry into force: 3 September 2008.

The Order is amended to take account of the operating rules of the infrastructure manager and the rules of the infrastructure manager to be implemented by railway undertakings. This Order lists the serious accidents and incidents to be reported to the BEA-TT and the deputy infrastructure manager.

Order of 12 August 2008 amending the Order of 23 June 2003 on safety regulations applicable on the national rail network

Date of entry into force: 3 September 2008.

This Order amends the list of regulatory texts applicable on the national rail network by withdrawing three texts approved by Ministerial Decision.

Decree No 2008-887 of 2 September 2008 on the incorporation into the national rail network or the divestiture of tracks following the constitution of the port rail networks of the autonomous ports of La Rochelle, Le Havre, Nantes-Saint-Nazaire, Rouen, Bordeaux, Dunkirk and Marseille

Date of entry into force: 3 September 2008.

This decree defines the geographical boundaries between the autonomous ports of La Rochelle, Le Havre, Nantes-Saint-Nazaire, Rouen, Bordeaux, Dunkirk and Marseille, and the national rail network. The autonomous ports are responsible for managing and maintaining the port rail network.

F. Changes in safety certification and approval

1. *Effect of changes in the regulations*

1.1 Issue of safety certificates in accordance with Article 10 of Directive 2004/49/EC

Pursuant to Article 68 of Decree 2006-1279 of 19 October 2006 on rail traffic safety and the interoperability of the railway system, since 1 May 2007 all new or amended safety certificates are issued in accordance with Article 10 of Directive 2004/49/EC.

The Order of 14 April 2008 on requirements for rail safety certificates was published in the Official Journal of the French Republic of 3 May 2008. This Order, required by Article 24 of the above-mentioned Decree, lays down practical procedures for issuing, amending and renewing safety certificates based mainly on Commission Regulation (EC) 653/2007 of 13 June 2007 on the use of a common European format for safety certificates and application documents.

1.2 Issue of safety approvals in accordance with Article 11 of Directive 2004/49/EC

Pursuant to Article 68 of Decree 2006-1279 of 19 October 2006 on railway traffic safety and the interoperability of the railway system, the infrastructure manager (RFF) and the deputy infrastructure manager (SNCF) had until 31 October 2007 to file their application for approval.

These two bodies complied with this provision and received their safety approvals on 27 February 2008.

1.3 National safety rules relating to railway undertakings and infrastructure managers

State regulations (laws, decrees, orders) are available on www.legifrance.gouv.fr and the EPSF website: www.securite-ferroviaire.fr.

The operating safety regulations applying to railway undertakings (consisting of the texts required by the Order of 23 June 2003 on the regulations applicable on the national rail network and the texts produced by the infrastructure operator under Article 10 of Decree 2006-1279) are supplied to them on request by the infrastructure RFF on CD-Rom.

2. *Numerical data*

In 2008, safety certificates were amended or issued for eight railway undertakings: VEOLIA CARGO France, SECO-RAIL, SNCF, CFL-CARGO, COLAS-RAIL, VFLI, EUROPORTE 2 and SNCB.

The numerical data are given in Annex E.

3. Procedural aspects

3.1 Safety certificates, part A

Three new or amending certificates were applied for and granted in 2008.

3.2 Safety certificates, part B

Ten new or amending certificates were applied for and granted in 2008.

3.2.1 Main reasons for updating or amendment

Main reasons for updating or amendment:

- operation on new lines of the national rail network;
- change in the operational organisation;
- change of the company's name.

3.2.2 Cost of issuing a certificate

There is no charge for services relating to the appraisal of an application for a safety certificate.

3.2.3 Feedback on appraisal of dossiers

Feedback meetings are held at quarterly intervals, to which all railway undertakings, the infrastructure manager (RFF) and its deputy are invited. Participants may discuss their problems at these meetings. Specific meetings were held to present the guides for safety certificates and commercial operating permits (see **Error! Reference source not found.**)

3.3 Safety approval

The infrastructure manager (RFF) and its deputy have applied for approval.

G. Supervision of infrastructure managers and railway undertakings

1. Description of supervision of infrastructure managers and railway undertakings

1.1 Safety checks and monitoring

1.1.1 Checks

Thirty-nine checks (29 audits and 10 inspections)¹ were conducted in 2008.

All RUs, the IM and the deputy IM are audited at least once a year. All issues and dossiers associated with safety certificates or approvals are audited during the course of their five-year validity.

Newly authorised RUs are systematically checked before the end of their first year of authorisation.

New systems posing the most significant safety challenges are also checked between 6 and 18 months of entering service.

Approved training centres are checked every 2.5 years after an initial two-year trial period.

The other checks carried out relate to undertakings, systems or issues defined on the basis of analyses of events occurring on the national rail network.

Significant developments in applicable regulations or reference systems are also subject to checks of implementation by the various stakeholders of the railway system, between 6 and 12 months after the date they first apply.

1.1.2 Monitoring

There are two aspects of safety monitoring:

- monitoring of incidents occurring on the national rail network that have been notified to EPSF;
- monitoring of safety indicators.

In 2008:

- 5 210 events were recorded in the EPSF database;
- 1 504 of those events had a direct impact on safety.

Graphs of the trend of the number of incidents by type and type of undertaking are updated monthly to monitor the overall safety levels of the national rail network.

EPSF has requested the IM and RUs to provide it, at the beginning of each quarter, with the values of the CSIs and of any safety indicators specific to them.

1.2 Aspects of surveillance / sensitive points to be monitored

EPSF's checks of the RUs and the IM/deputy IM show that most of them are in control of the following areas:

- feedback;
- management of disruptions;
- protection of personnel.

These checks also reveal vulnerable areas common to most national rail network operators. The main dysfunctions are:

- document management;
- authorisation of operators carrying out safety-critical operations;
- internal checks and audits;

¹ EPSF's inspections correspond to the ERA definition of "checks".

- devising, monitoring of implementation and measuring the efficacy of corrective action.

The database of incidents notified to EPSF can trigger alerts resulting in additional checks (prompted by symptoms), requests for information and analysis and, where necessary, preventive or corrective measures. In 2008, such alerts led to one audit, several inspections and a large number of requests for information or incident analysis dossiers.

As system feedback facilitator, in 2008 EPSF held four seminars for the principal stakeholders in the railway system: the RUs, the IM (and deputy IM), BEA-TT and the Ministry. These meetings are a means of pursuing the 2007 initiative on sharing best practice and identifying vulnerabilities. EPSF also drafted 12 monthly letters dealing with the main incidents occurring on the national rail network for the previous month.

2. Annual reports from infrastructure managers and railway undertakings

All annual reports by the IM and the RUs were sent to EPSF by 30 June 2009.

3. Checks carried out in 2008

3.1 Number of audits of RUs/IM carried out in 2008

	IM/deputy IM	RUs	Training centres
Number of audits planned	2	15	10
Number of audits carried out	4	15	10

All audits in the planned programme were carried out.

All RUs, IMs and deputy IMs authorised more than six months previously were checked at least once over the year.

All systems authorised more than six months previously were checked in the first year.

3.2 Number of inspections of RUs/IMs carried out in 2008

	IM/deputy IM	RUs	Training centres
Number of inspections carried out	4	5	1

During these inspections, deviations were often reduced. Additional checks help to ensure that the agreed corrective action has actually been taken.

4. Measures taken as a result of inspections

The 39 inspections carried out by EPSF in 2008 identified 134 issues overcome and 257 deviations.

These deviations break down into:

- 40 serious situations (malfunction which may cause an accident in the very short term);
- 102 major deviations (malfunction which may cause an accident in the short term);
- 115 reservations (malfunction which may cause an accident in the medium term)

Serious situations and major deviations require immediate preventive measures.

For all malfunctions, EPSF requires corrective or preventive measures to be taken and then implemented by the agreed deadlines.

Of all deviations found during inspections, 99.61% were uncontested.

Seventy percent of deadlines for implementation of curative and corrective measures were met as at the end of 2008.

Final on-site inspections ensure that the agreed corrective action has been taken. This was the case in particular in 2008 for a training centre inspected when finalising the audit conducted in 2006 which had led to its authorisation being suspended.

H. Conclusions

2008 was the second full year of EPSF's operation. The quality upgrade of our operating procedures, started in 2006 and consolidated in 2007, enabled us to continue developing our authorisation, inspection and monitoring activities and drafting of texts. There were more exchanges with the other national safety authorities and ERA and more substantial contributions to European working parties. EPSF is fully embracing its role in maintaining safety levels on the national rail network but without preventing it from developing.

In the light of these results and analyses, EPSF will focus its work on the following areas in 2009:

- Internally, by adapting its means and procedures in line with the development of its missions and their scope in its new premises in Amiens. The main item is the commissioning of its new database of incidents on the national rail network: it will help EPSF to monitor and analyse incidents and indicators, and identify precursors. It will also improve EPSF's monitoring and inspection facilities.
Implementation of the EU Directive on the certification of train drivers will also begin in 2009, after preparations for application in 2008.
- Nationwide, the system feedback procedure with all stakeholders which began late in 2007 and was enhanced in 2008 proved its worth for maintaining and improving safety levels. Feedback, also applying to EPSF, will improve its effectiveness in 2009.
To facilitate the implementation of Decree No 2008-887 of 2 September 2008 on railways in the main ports and their operation, EPSF will publish recommendations for drawing up rules to operate those lines.
- In Europe, EPSF will step up exchanges with ERA and the national safety authorities by:
 - ongoing participation in peer-review work,
 - facilitating existing partnerships and initiating new agreements, notably for mutual recognition of permits,
 - stepping up participation in the work of ILGGRI,
 - contributing to exchanges of staff between national safety authorities,
 - steering EPSF's international expertise missions.
- More generally, EPSF will endeavour, as in 2008, to develop working relations which are as 'upstream' as possible with the players in the railway system in order to forestall any difficulties and improve mutual understanding.

Regarding monitoring, special attention will be paid to the condition of the network. Indeed, the serious efforts made to renovate it have not yet succeeded in containing the flood of incidents linked to the condition of the track, especially on lines in UIC groups 7, 8 and 9. Operating restrictions are in force on the older lines; coupled with special surveillance, they are still essential to ensure safe travel on those lines. The steering of the infrastructure's manager's maintenance and surveillance of the network has to be adapted accordingly.

The maintenance of wagons is still a matter for concern as in previous reports. The number of incidents affecting axles is not decreasing; broken axles or wheels are still exceptional but overheating axle boxes are accident precursors that require vigilance.

The number of signals passed at danger, with occupation of the protected section, slightly up in 2008, seems to be stabilising. These incidents are regularly discussed at the feedback meetings held by EPSF; exchanges of information and pooling of best practice help to contain the problems and restrict their numbers.

Finally, despite the established downward trend in the rate of fatalities per million train-km since 2006, fatalities rose in 2008 owing principally to the increase in the number of deaths in the categories of unauthorised persons and others. The causes of these accidents are not within the control of stakeholders in the railway system alone. The safety of the railway system installations must be

improved at the same time as carrying out specific measures, in cooperation with the other players, to inform the public of the risks linked to level crossings and railway installations not open to the public.

In conclusion, the operation of a growing proportion of traffic by railway undertakings authorised on the national rail network since 2006 has not had a significant impact on network safety levels. The detailed analysis of the safety indicators by undertaking confirms the observation made in 2007: some undertakings still have difficulty managing safety in a context of strong growth of traffic or major changes in their organisation. EPSF is always particularly vigilant regarding such changes.

A.1: Map of the national rail network (RFN)



A.2: List of railway undertakings and the infrastructure manager

A.2.1: Infrastructure manager

Name Street address:	Web address: Link to network reference document	Safety approval (number/date)	Start date of commercial operation	km of lines, by gauge	km of electrified lines, by type	km of double- and single- track lines	km of high- speed lines	km of lines equipped with ATP system	Number of level crossings	Number of signals
RFF 92, avenue de France 75648 Paris Cedex 13	www.rff.fr --- rff-document-de- reference.eu	27/02/2008	July 1997	29 473 km including 166 km of metre- gauge	15 424 km including 5 904 km at 1 500V 9 904 km at 25 000V 122 km with 3rd rail	16 478 km of double track 12 995 km of single track	1 881 km	17 536 km	14 640 *	Approx 40 000

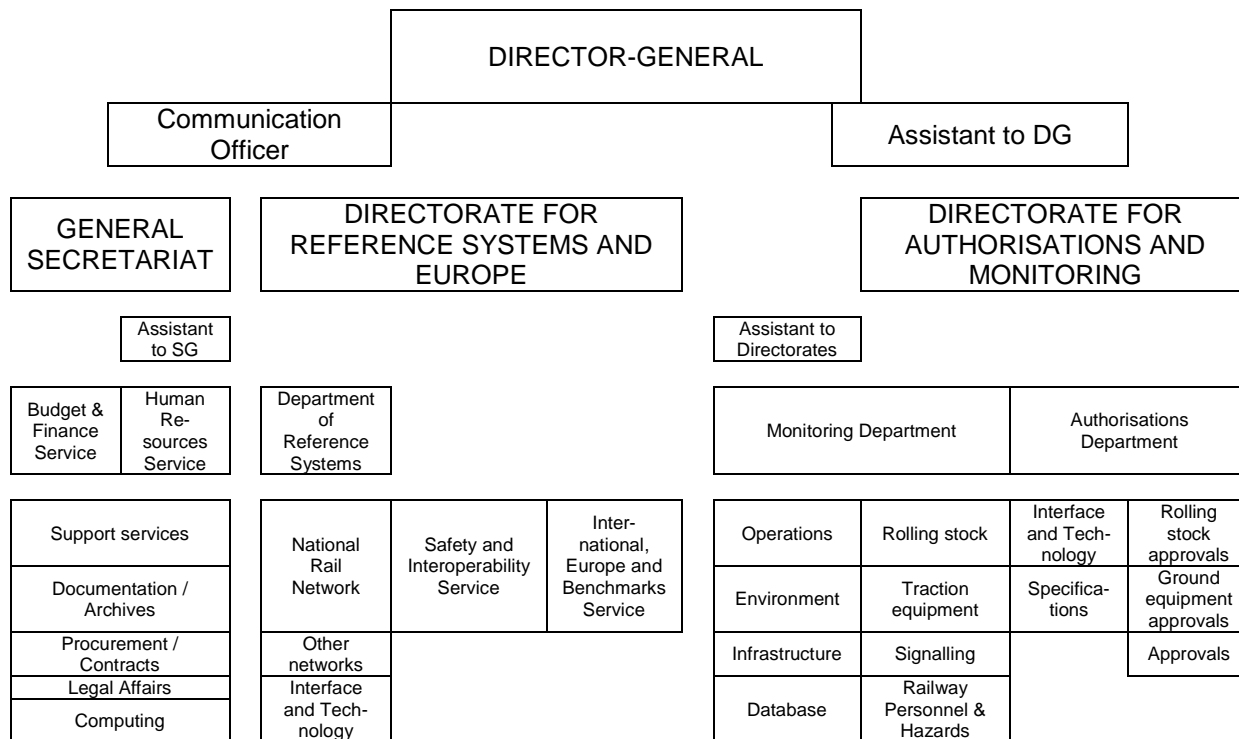
* level crossings on operated lines of the national rail network

A.2.2 : Railway Undertakings

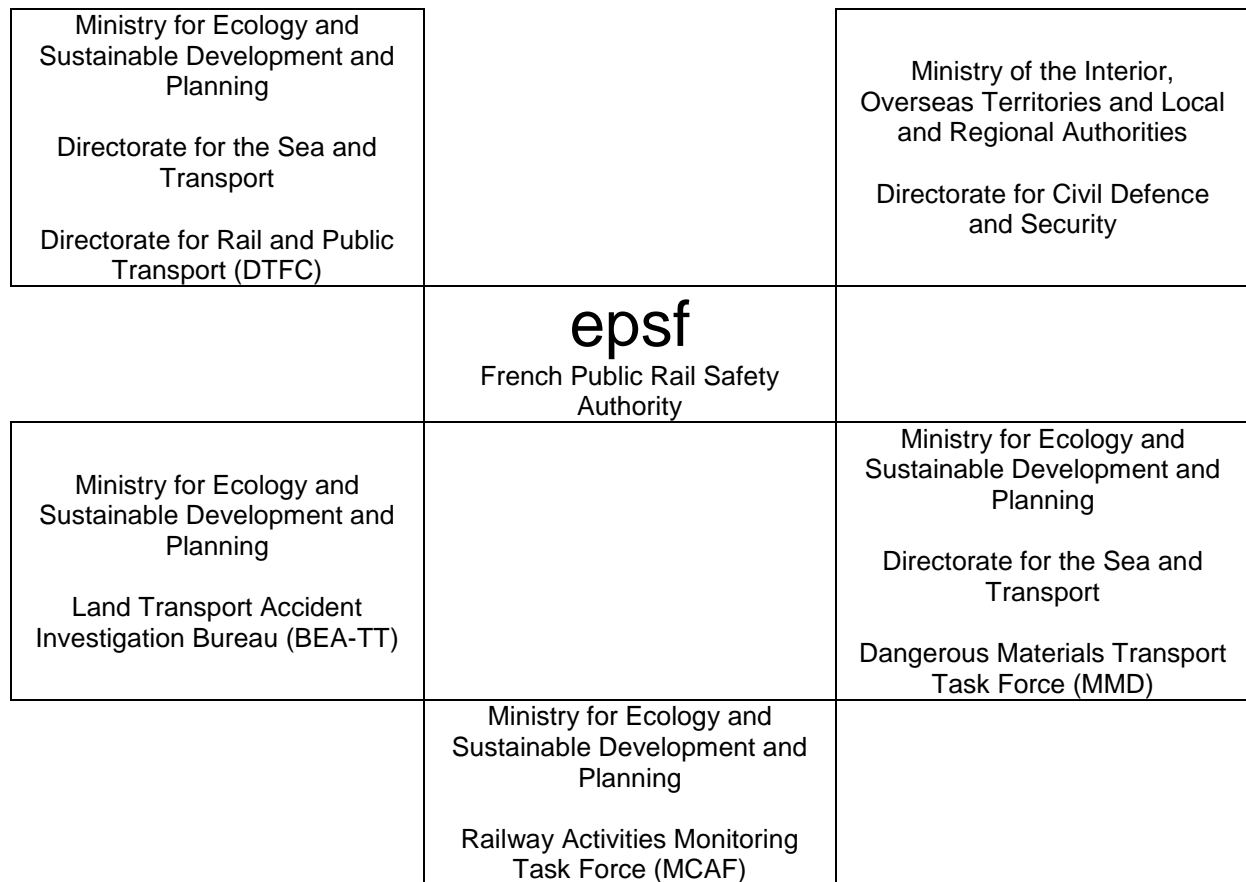
Name	Street address: --- Web address	2001/04/EC Safety certificate (number/date)	2004/49/EC Safety certificate A-B (number/date)	Start date of commercial operation	Type of traffic	Number of locomotives	Number of rail cars and motor-coach trains	Number of coaches/ wagons	Number of drivers, safety teams	Volume of passenger transport	Volume of goods transport
RAIL4CHEM	Schützenbahn 60 D- 45127-Essen Germany --- www.rail4chem.com			No commercial service	/	/	/	/	/	/	/
SNCB	80, rue des 2 gares B 1170 Brussels Belgium --- www.bcargo.be			11/12/2006	Freight	17	/	/	30	/	/
CFL	9, place de la gare L- 1616 Luxembourg --- www.cfl.lu			19/12/2006		All services operated by CFL-CARGO					
VEOLIA Cargo	15, rue des Sablons 75016 Paris France --- www.veolia-cargo.com			13/06/2005 under CFTA CARGO certificate	Freight	27	/	227	156	/	695 million tonne km
ECR	60, avenue Hoche 75008 Paris, France --- www.eurocargorail.com			13/06/2006 under EWSI certificate	Freight	89	/	2000	297	/	1 991 billion tonne km
COLAS RAIL	3, rue des Beaunes 78400 Chatou, France --- www.colasrail.com			08/01/07 under SECO RAIL certificate	Freight	26	/	164	69	/	1 256 million tonne km
SNCF	34, rue du commandant Mouchotte 75699 Paris --- www.sncf.com			before the certificate is issued	All types	2 860	2731	16 120 88 960	16 105	87.227 billion passenger-km	36 265 billion tonne km
VFLI	6, rue d'Amsterdam 75009 Paris, France --- www.groupe-vfli.com			04/10/2007	Freight	194	/	276	29	/	242.214 million tonne km
EUROPORTE2	37, rue des Mathurins 75008 Paris, France --- www.eurotunnel.com			26/11/2007	Freight	1	/	0	21	/	272 208 tonne km
CFL CARGO	11, boulevard Kennedy L-4170 Esch sur Alzette Luxembourg --- www.cflcargo.lu			04/02/2008	Freight	25	/	600	20	/	22 349 million tonne km

Annex B: Organisation chart of the EPSF

B.1 Figure: internal organisation



B.2 Figure: relations between EPSF and its principal partners



N.B.: Names current at 1 January 2008

Annex C: Common safety indicators

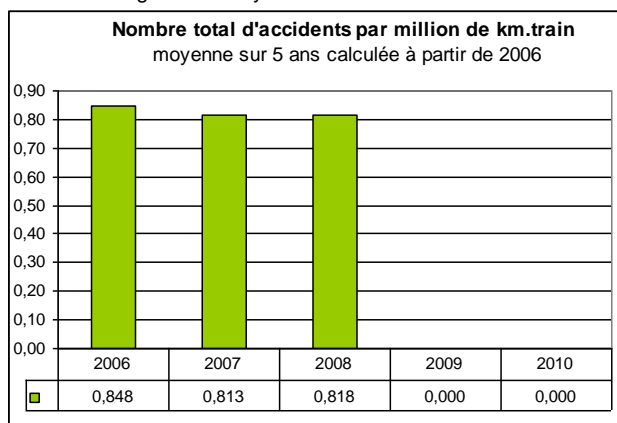
C.1 Common safety indicators – data

For all the graphs in this section, the data are calculated as follows:

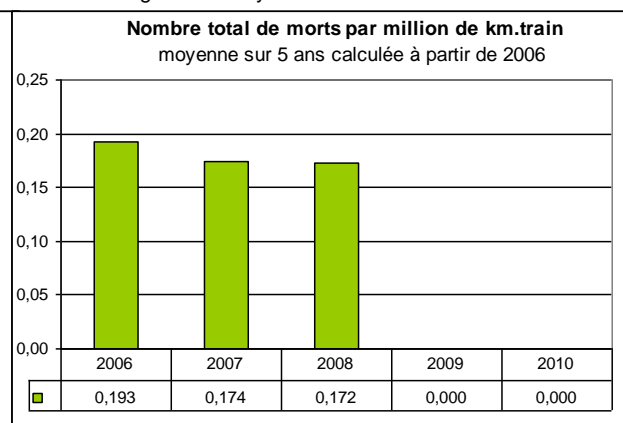
- 2006: values for the year 2006;
- 2007: average values for the years 2006 and 2007;
- 2008: average values for the years 2006, 2007 and 2008.

Overview of performance

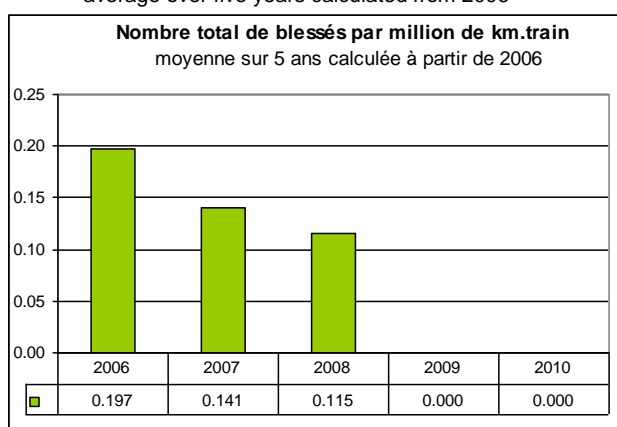
Total number of accidents per million train-km
average over five years calculated from 2006



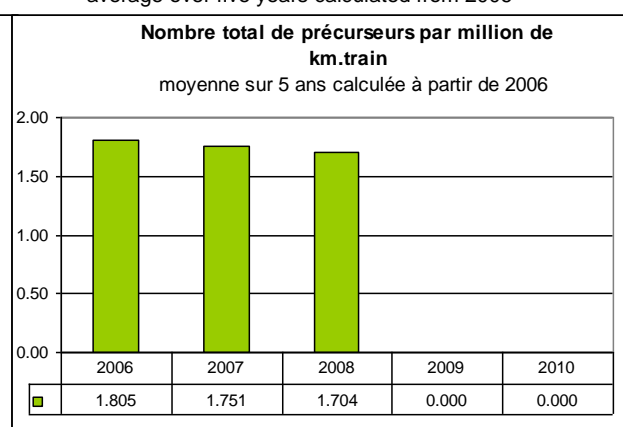
Total number of fatalities per million train-km
average over five years calculated from 2006



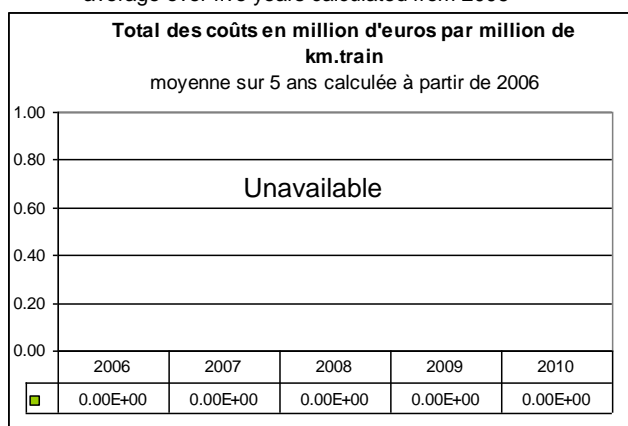
Total number of injuries per million train-km
average over five years calculated from 2006



Total number of precursors per million train-km
average over five years calculated from 2006

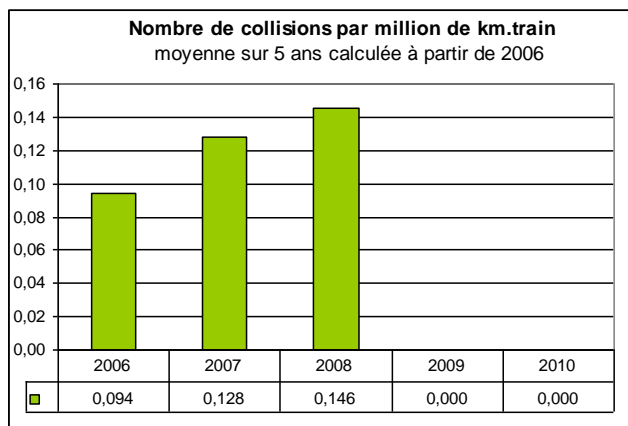


Total costs in millions of euros per million train-km
average over five years calculated from 2006

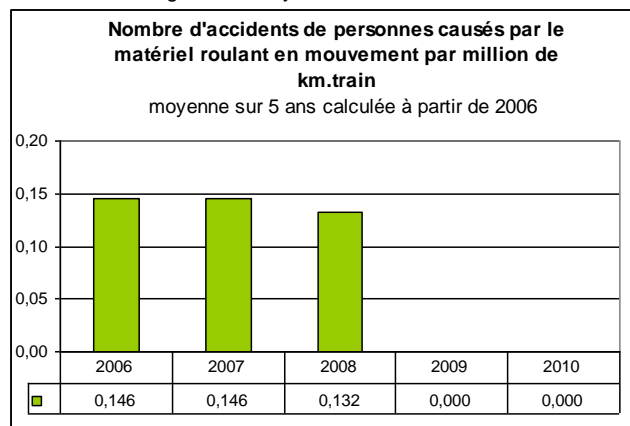


Accidents broken down by type

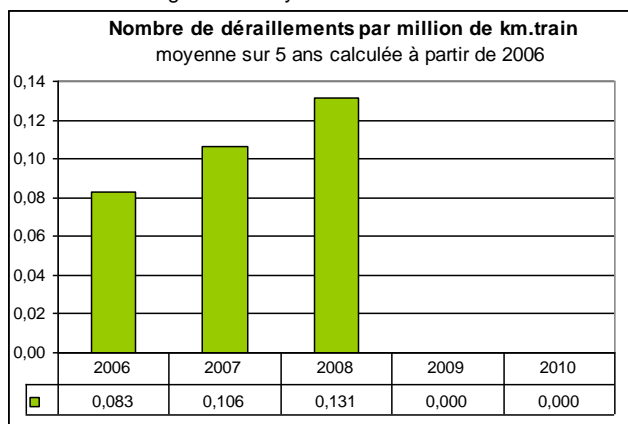
Number of collisions per million train-km
average over five years calculated from 2006



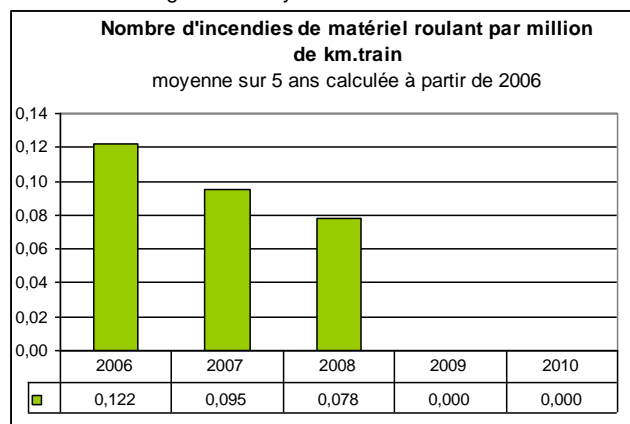
Number of accidents to persons caused by rolling stock in motion per million train-km
average over five years calculated from 2006



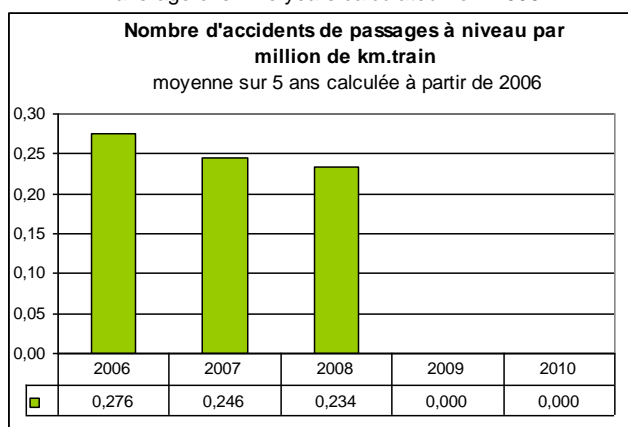
Number of derailments per million train-km
average over five years calculated from 2006



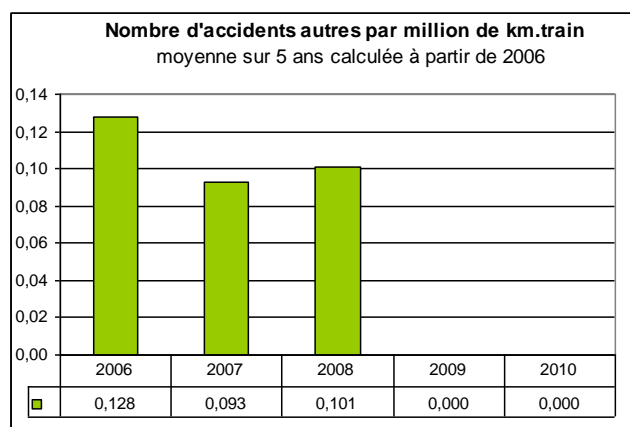
Number of fires in rolling stock per million train-km
average over five years calculated from 2006



Number of accidents at level crossings per million train-km
average over five years calculated from 2006

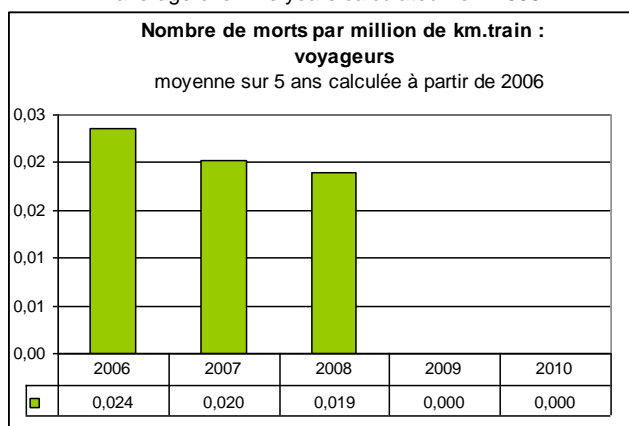


Number of other accidents per million train-km
average over five years calculated from 2006

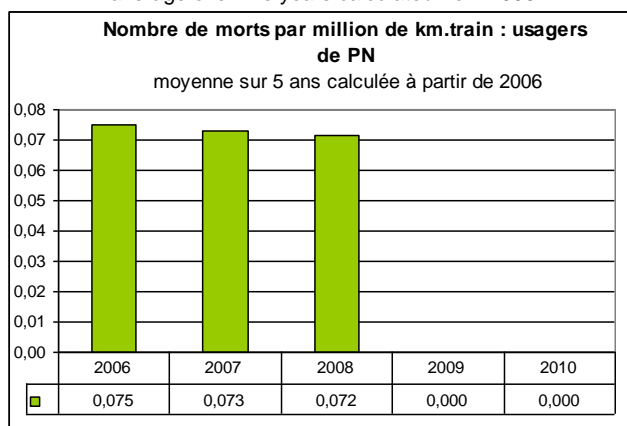


Fatalities by category: passengers, level-crossing users, unauthorised persons, staff of contractors including subcontractors, others.

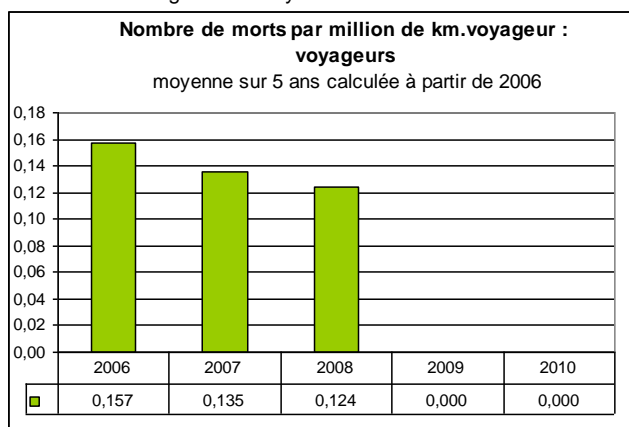
Number of fatalities per million train-km : passengers
average over five years calculated from 2006



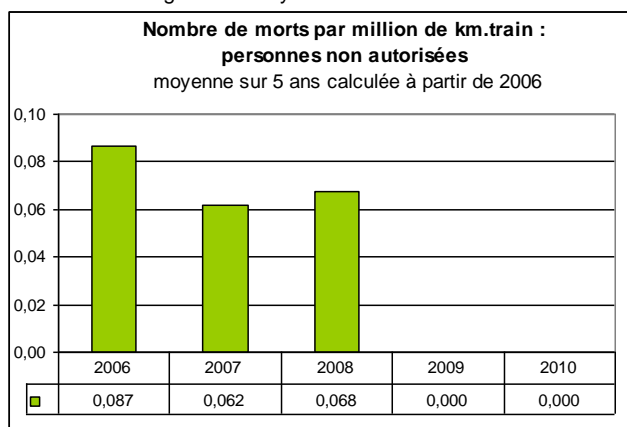
Number of fatalities per million train-km: level-crossing users
average over five years calculated from 2006



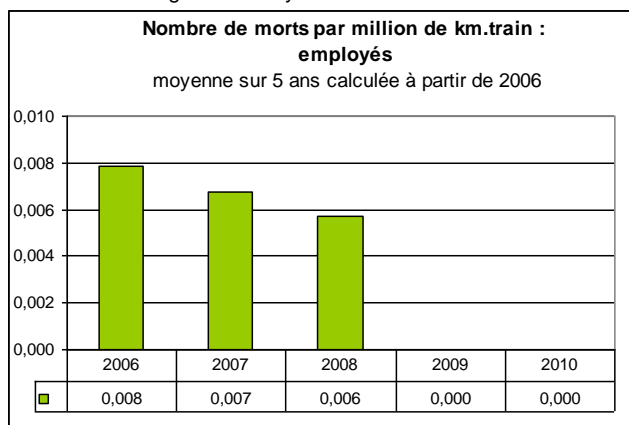
Number of fatalities per million passenger-km: passengers
average over five years calculated from 2006



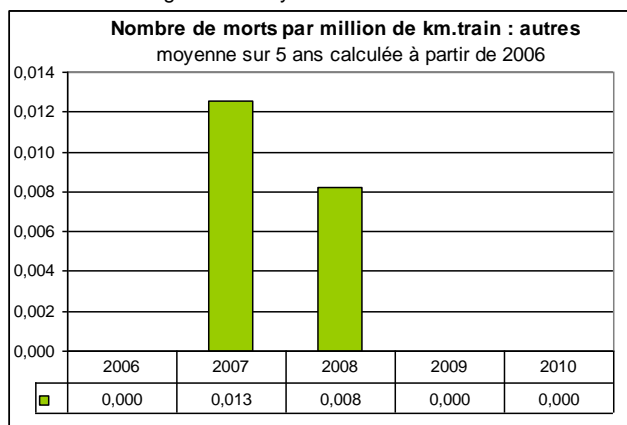
Number of fatalities per million train-km: unauthorised persons
average over five years calculated from 2006



Number of fatalities per million train-km: employees
average over five years calculated from 2006

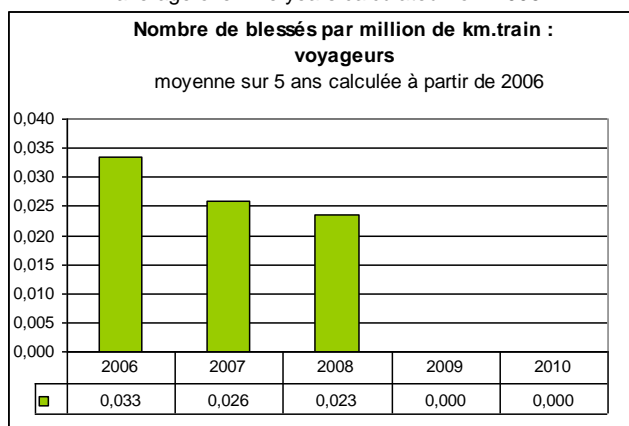


Number of fatalities per million train-km: others
average over five years calculated from 2006

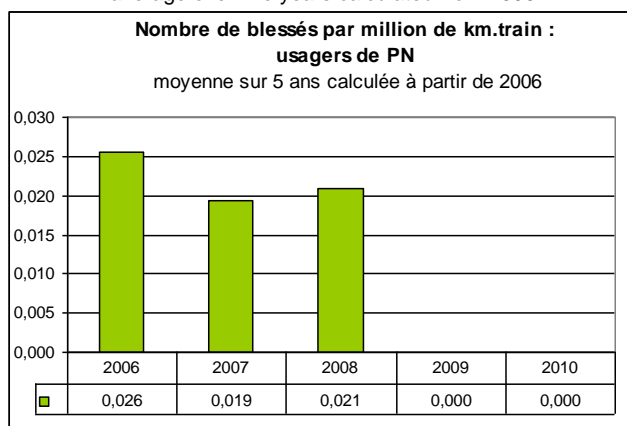


Injuries by category: passengers, level-crossing users, unauthorised persons, staff of contractors including subcontractors, others.

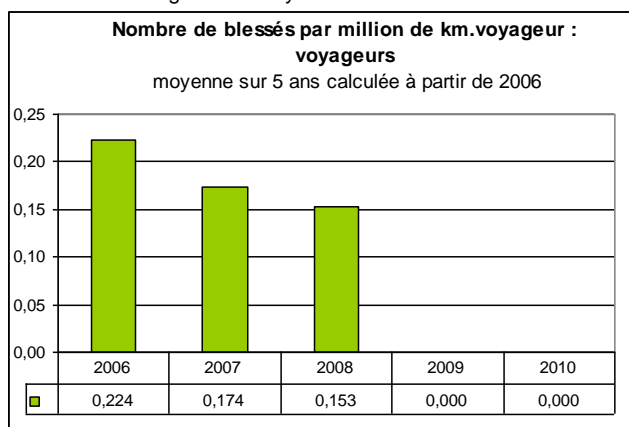
Number of injuries per million train-km: passengers
average over five years calculated from 2006



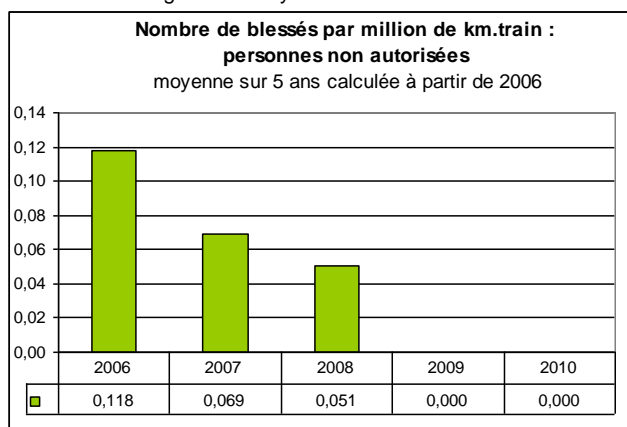
Number of injuries per million train-km: level-crossing users
average over five years calculated from 2006



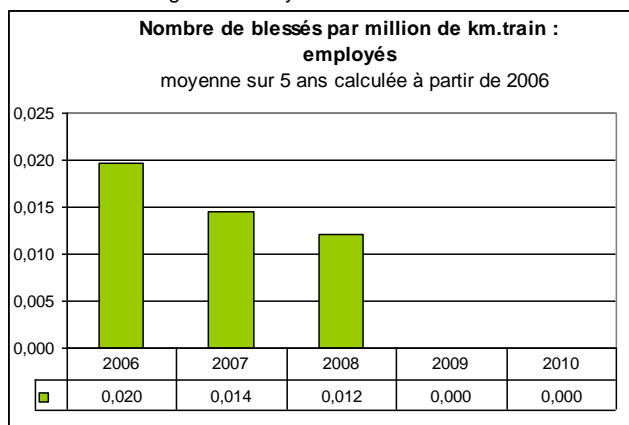
Number of injuries per million passenger-km: passengers
average over five years calculated from 2006



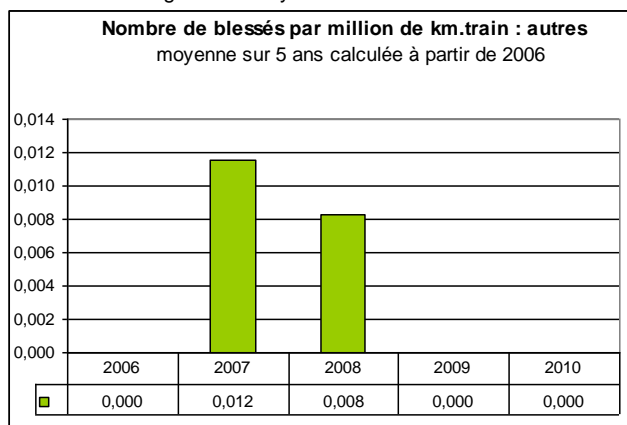
Number of injuries per million train-km: unauthorised persons
average over five years calculated from 2006



Number of injuries per million train-km: employees
average over five years calculated from 2006

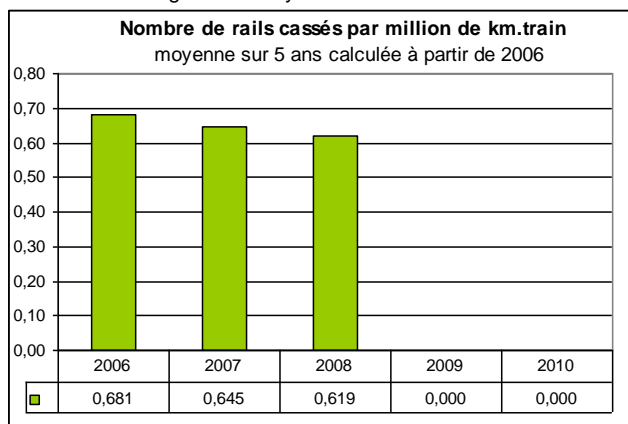


Number of injuries per million train-km: others
average over five years calculated from 2006

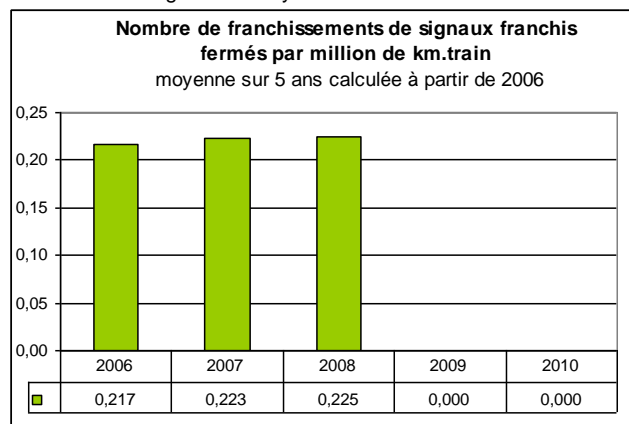


Accident precursors

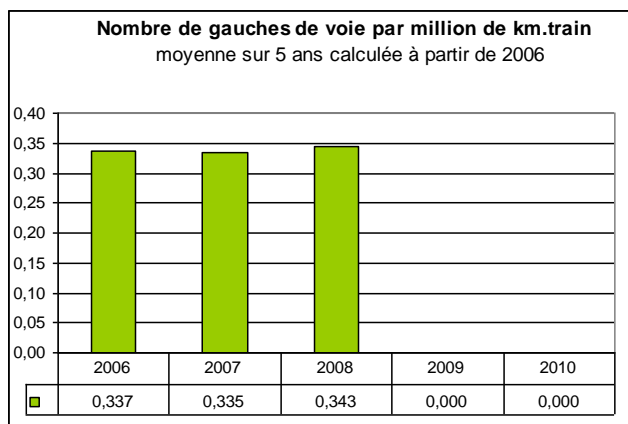
Number of broken rails per million train-km
average over five years calculated from 2006



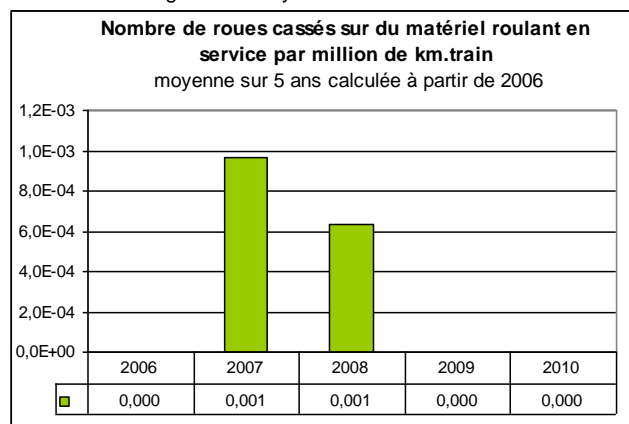
Number of signals passed at danger per million train-km
average over five years calculated from 2006



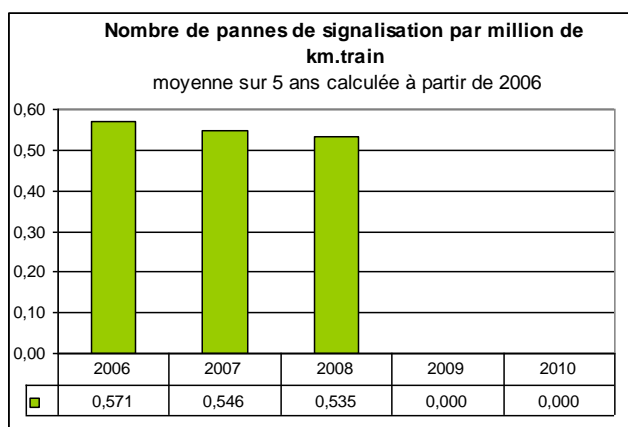
Number of track buckles per million train-km
average over five years calculated from 2006



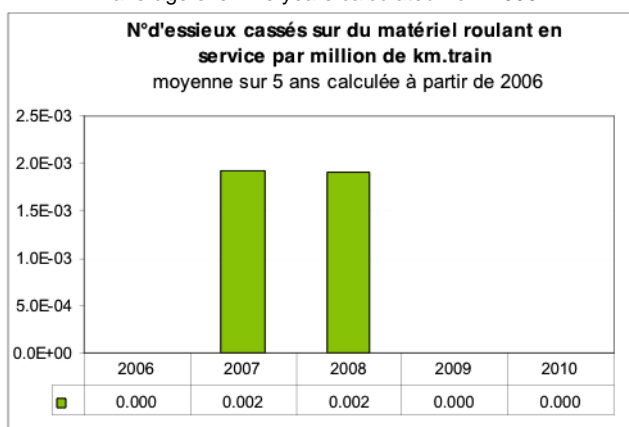
Number of broken wheels on rolling stock in service per million train-km
average over five years calculated from 2006



Number of signalling faults per million train-km
average over five years calculated from 2006

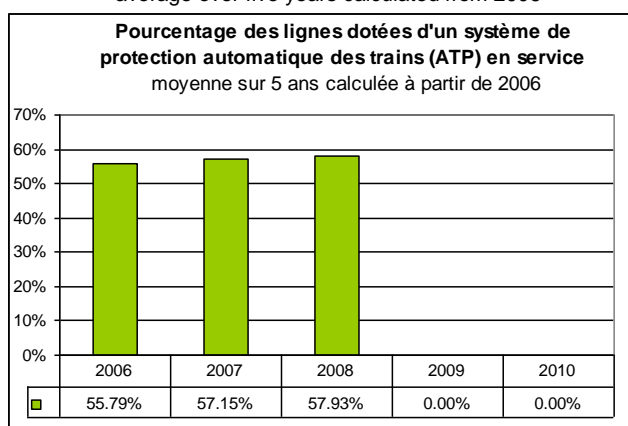


Number of broken axles on rolling stock in service per million train-km
average over five years calculated from 2006

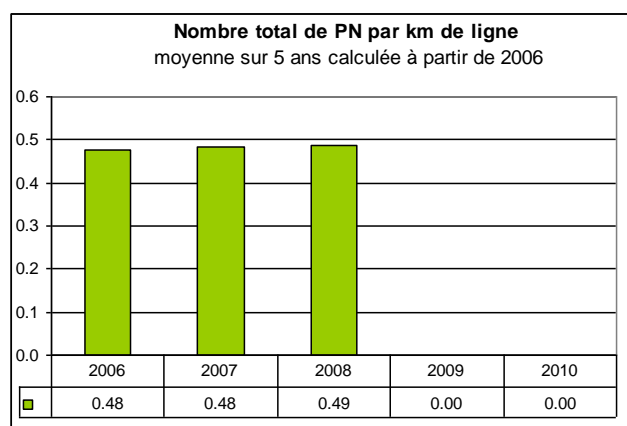


Technical safety of the infrastructure and its implementation, safety management

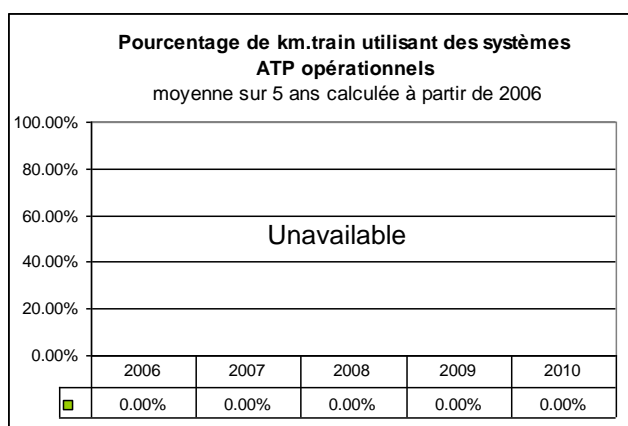
Number of lines fitted with automatic train protection (ATP) in service
average over five years calculated from 2006



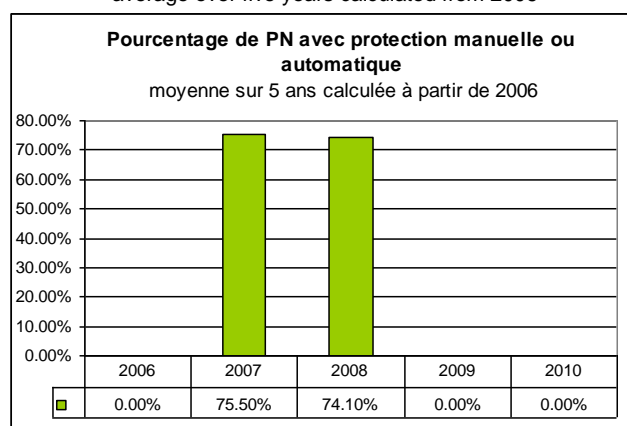
Total number of level crossings per km of line
average over five years calculated from 2006



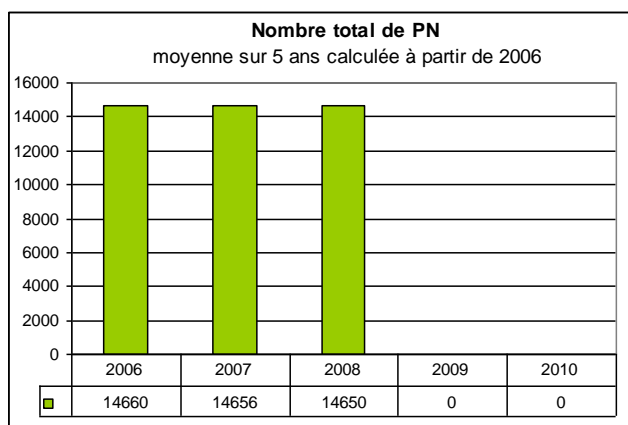
Percentage of train-km using operational ATP systems
average over five years calculated from 2006



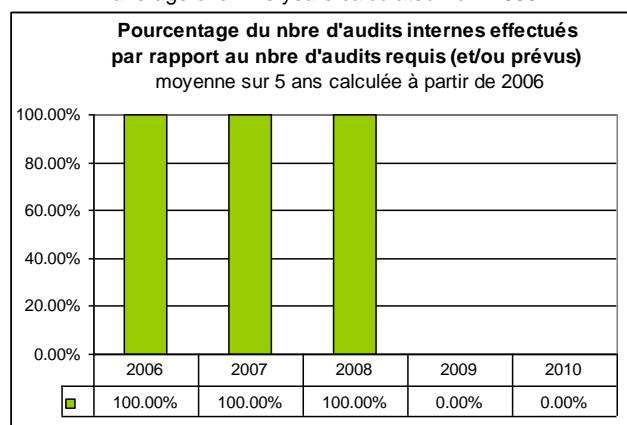
Percentage of level crossings with manual or automatic protection
average over five years calculated from 2006



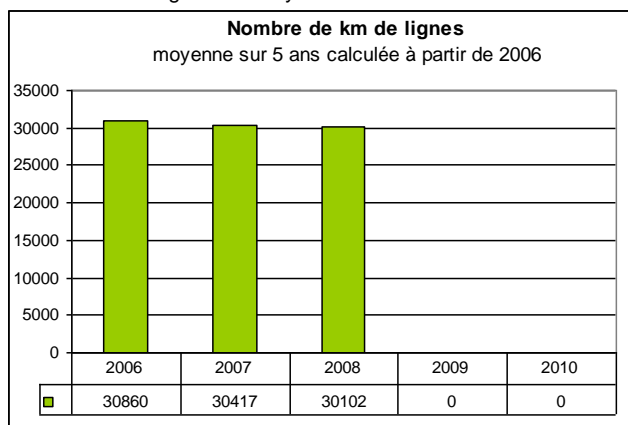
Total number of level crossings
average over five years calculated from 2006



Internal audits conducted as a percentage of required (and/or planned) audits
average over five years calculated from 2006



Number of km of lines
average over five years calculated from 2006



C.2 Definitions used in the report

Definitions linked to types of accident:

→ Collision

Accident occurring on the national rail network, resulting principally in an impact within the clearance gauge, between a part of a train and:

- a part of another train (front to front, front to end or side collision);
- fixed infrastructure parts (buffers, etc.); ;
- shunting rolling stock;
- any object (excluding animals) temporarily present on or near the track (except at level crossings if lost by a crossing vehicle or user).

A collision occurring during a derailment is counted as a collision.

In 2008, train collisions were counted only if they had the following consequences: a fatality, serious injury, emergency call, mandatory crew change or material damage costing more than EUR 150 000.

→ Derailment

Accident occurring on the national rail network, with the main consequence that at least one wheel of a train leaves the rails.

In 2008, derailments on main lines and service lines were counted only if they had the following consequences: a fatality or serious injury taking place either during the arrival or departure of a train or involving material damage costing more than EUR 150 000.

→ Level-crossing accident

Significant accident occurring on the national rail network with the main consequence of a collision, at a level crossing, of at least one railway vehicle and:

- one or more crossing vehicles;
- other crossing users such as pedestrians or other objects temporary present on or near the track (if lost by a crossing vehicle or user).

→ Accident to persons caused by rolling stock in motion

Accident, not on a level crossing, involving one or more persons who are hit either by a railway vehicle or by an object attached to, or that has become detached from, the vehicle. Persons who fall from railway vehicles are counted in this indicator.

→ Fire in rolling stock

Accident occurring on the national rail network requiring intervention by the fire service, with the main consequence of a fire and/or explosion occurring in a railway vehicle (including its load) when running between the departure station and the destination, including when stopped at the departure station, the destination or intermediate stops, as well as during re-marshalling operations.

→ Other accidents

Accident occurring on the national rail network, not classed as a train collision, train derailment, level-crossing accident, accident to persons struck by rolling stock in motion or fire in rolling stock.

Definitions linked to the human consequences of accidents:

→ Fatality

Any person killed outright or dying within 30 days as a result of a railway accident, excluding suicides.

→ Serious injury

Any person injured who was hospitalised for more than 24 hours as a result of a railway accident, excluding attempted suicides.

→ Passenger

Person, excluding members of the train crew, who makes a trip by rail, including any person attempting to board or alight from a train in motion.

→ Staff of contractors including subcontractors

Person whose employment is in connection with a railway and is at work at the time of the accident. This includes train crews and persons handling rolling stock and infrastructure installations (including management and personnel of subcontractors).

→ Level-crossing user

Person using a level crossing by any means of transport or by foot.

→ Unauthorised person

Person present on railway premises where such presence is forbidden, with the exception of level-crossing users.

→ Others

Persons not defined as passengers, staff of contractors including subcontractors, level-crossing users or unauthorised persons on railway premises.

Definitions linked to precursors;

→ Broken rail

Any rail which is separated into two or more pieces or which exhibits a gap in the running surface more than 60 mm in length where the two following criteria are met:

- the gap is more than 10 mm in depth;
- the residual width of the rail head, measured on the running surface, is less than 30 mm.

→ Track buckle

Fault related to the continuum and the geometry of the track, requiring track obstruction or immediate reduction of permitted speed limit to maintain safety.

→ Signalling fault

Any failure of a signalling system (either to infrastructure or to rolling stock) resulting in signalling information less restrictive than that demanded.

→ Signal passed at danger

Any occasion when a train passes a signal at danger without authorisation and occupies the protected section. Cases in which, for any reason, the signal is not turned to danger in time to allow the driver to stop the train before the signal are not included.

→ Broken wheel

Break affecting the essential parts of the wheel.

In 2008, broken wheels were counted only where they could cause a derailment or collision.

→ Broken axle

Breakage affecting the essential parts of the axle.

In 2008, broken axles were counted only where they could cause a derailment or collision.

Annex D: Significant changes in the legislation and regulations

These changes are set out in section E.

Annex E: Changes in safety certification and approval – Numerical data

E.1 Safety certificates issued in accordance with Directive 2001/14/EC

Number of safety certificates issued in 2008	with licence issued by France	0
	with licence issued in another Member State	0

E.2 Safety certificates in accordance with Directive 2004/49/EC

		New	Updated/ amended	Renewed	RU
E.2.1. Number of valid safety certificates part A recorded in 2008	with licence issued by France	1	2		COLAS RAIL VEOLIA CARGO France SECO RAIL
	with licence issued in another Member State				

		New	Updated/ amended	Renewed	RU
E.2.2. Number of valid safety certificates part B recorded in 2008	With part A issued in France	1	7		COLAS RAIL VEOLIA CARGO France (twice) SECO RAIL SNCF VFLI (twice) Europorte 2
	with part A issued in another Member State		2		SNCB CFL CARGO

			A	R	I	RU
E.2.3. Number of applications for safety certificates part A recorded in 2008	with licence issued by France	new certificates	1		1	COLAS RAIL TSO
		updated / amended certificates				
		renewed certificates	-	-	-	-
	with licence issued in another Member State	new certificates	-	-	-	-
		updated / amended certificates	-	-	-	-
		renewed certificates	-	-	-	-

			A	R	I	RU
E.2.4. Number of applications for safety certificates part B recorded in 2008	with part A issued in France	new certificates	1		1	COLAS RAIL TSO
		updated/amended certificates	5		1	SNCF VFLI (twice) VEOLIA CARGO France Europorte 2 VFLI
		renewed certificates				
	with part A issued in another Member State	new certificates				
		updated/amended certificates	2			CFL CARGO SNCF
		renewed certificates				

A = application approved, certificate already issued

R = applications refused, no certificate issued

I = matter still pending as at 31 December 2008

E.3 Safety approvals in accordance with Directive 2004/49/EC

	New	Updated/ amended	Renewed
E.3.1. Number of valid safety approvals held during 2008 by infrastructure managers recorded in your Member State	2	-	-

		A	R	I	IM
E.3.2. Number of safety approval applications submitted during 2008 by infrastructure managers recorded in your Member State	new approvals	2			RFF SNCF
	updated/amended approvals	-	-	-	-
	renewed approvals	-	-	-	-

A = application approved, approval already issued

R = applications refused, no approval issued

I = matter still pending as at 31 December 2008

E.4 Procedural aspects – Safety certificates part A

		Railway Undertaking	New	Updated/amended	Renewed
Period of time, after receipt of all necessary information, between receipt of an application and final issue of a safety certificate part A during 2008 for railway undertakings which hold:	a licence issued by France	COLAS RAIL VEOLIA CARGO France SECO RAIL	31 days	24 days 120 days (*)	
	a licence issued by another Member State	-	-	-	-

(*) Long delay owing to consultation of the Ministry regarding the scope of a safety certificate (transport of works vehicles running on their own wheels, works trains, etc.)

E.5 Procedural aspects – Safety certificates part B

		Railway Undertaking	New	Updated/amended	Renewed
Period of time, after receipt of all necessary information, between receipt of an application and final issue of a safety certificate part B during 2008 for railway undertakings which hold:	part A issued in France	COLAS RAIL	31 days		
		VEOLIA CARGO France		24 days	
		VEOLIA CARGO France		56 days	
		SECO RAIL		120 days (*)	
		SNCF		26 days	
		VFLI		28 days	
		VFLI		120 days (**)	
		Europorte 2		30 days	
	part A issued in another Member State	CFL CARGO		68 days	
		SNCB		14 days	

(*) Long delay owing to consultation of the Ministry regarding the scope of a safety certificate (transport of works vehicles running on their own wheels, works trains, etc.).

(**) Long delay owing to the complexity of the dossier and a request for further information.

E.6 Procedural aspects – Safety approvals

		Infrastructure Manager	New	Updated/amended	Renewed
Period of time, after receipt of all necessary information, between receipt of an application and final issue of an approval certificate during 2008 for an infrastructure manager	registered en France	RFF SNCF	120 days (*)		
	registered in another Member State				

(*) Time between the receipt of the application dossier on 30 October 2007 and the issue of the approval on 27 February 2008 – Final dossier received on 21 February 2008.