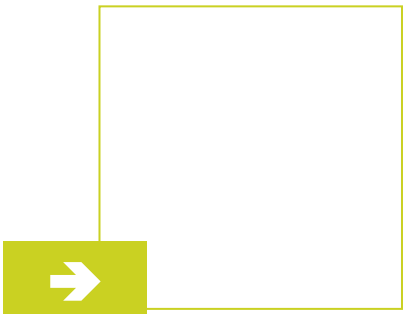
Annual report on the safety of trains



2012

Contents

0 Introduction

The object of this report is to:

- present the organisation of the railway system, the principles which govern it and the people who participate in it;
- communicate, in the form of a report, the figures associated with railway safety that occurred in 2012 on the area dealt with by EPSF which covers the national rail network and the French part of the international section Perpignan - Figueras.

It meets the obligation placed on EPSF by Article 17 of the amended Decree 2006-1279 of 19 October 2006 to prepare and publish, before 30 September, a report on the safety of rail traffic.

This report is prepared from information received before 30 June of each year from the Railway Undertakings and Infrastructure Managers in their respective safety reports, as well as that collected by the EPSF Departments. This year, EPSF has firstly supplied a report framework which aims to simplify the preparation and the operation, and secondly organised a programme of meetings where these reports are presented by the operators. Beyond the first objective to draw up a report on the level of safety, these meetings have formed an additional opportunity for discussions between EPSF and each of the operators.

This report is sent:

- to the *Ministère de l'Écologie, du Développement Durable et de l'Énergie* (MEDDE) [Ministry of Ecology, Sustainable Development and Energy];
- to the *Bureau d'enquêtes sur les accidents de transport terrestre* (BEA-TT) [Land Transport Accident Investigation Bureau];
- to the European Railway Agency (ERA)

It is also sent to:

- the Railway Undertakings (RUs) holding a safety certificate;
- the authorities and businesses which hold a safety authorisation.

It is also made available to the general public on the internet site of EPSF at the following address: http://www.securite-ferroviaire.fr/.

1 Description of the network and the traffic

EPSF, as the national safety authority, carries out its remit of inspection and supervision of railway operations on the national rail network and lines defined by Decree 2010-1201 of 12 October 2010, that is to say the French part of the international section between Perpignan and Figueras.

1.1 The French rail network

The *réseau ferré national* (RFN) [French rail network], which is owned by *Réseau ferré de France* (RFF) [French railway network] had a total of 29 675 km of lines at the end of 2012 of which about 28 000 km are open to commercial traffic made up of sections published by RFF.

An important part of this network is the high speed lines which have a total length of 2 059 km. These lines, which are dedicated to passenger traffic, correspond to the principle flows of traffic in the country. This high speed network connected to the conventional railway enables a large part of the national territory to be served and to provide international services, in particular to England and the north of Europe.

About half (15 815 km) of the lines of the network are electrified, of which 9 805 km at 25 kV, 5 881 km at 1 500 V and 106 km with a 3rd rail system.

RFN has a few metre gauge lines which are operated separately from this network:

- the Blanc-Argent line, between Salbris and Luçay-le-Mâle;
- the line from Saint-Gervais - Vallorcine.

RFF publishes annually the *Document de référence du réseau* [Reference document of the network], with an exhaustive description of the technical characteristics of the network, which also explains the procedure for application and allocation of paths and tariffs. This document is available on its internet site www.rff.fr.

1.2 The international section Perpignan - Figueras

Contracted out in 2004 to the TP Ferro company by the Spanish and French governments, the international section Perpignan - Figueras is a line of the trans-European network about 45 km long connected to the national railways of each country.

The principal characteristics of this network are as follows:

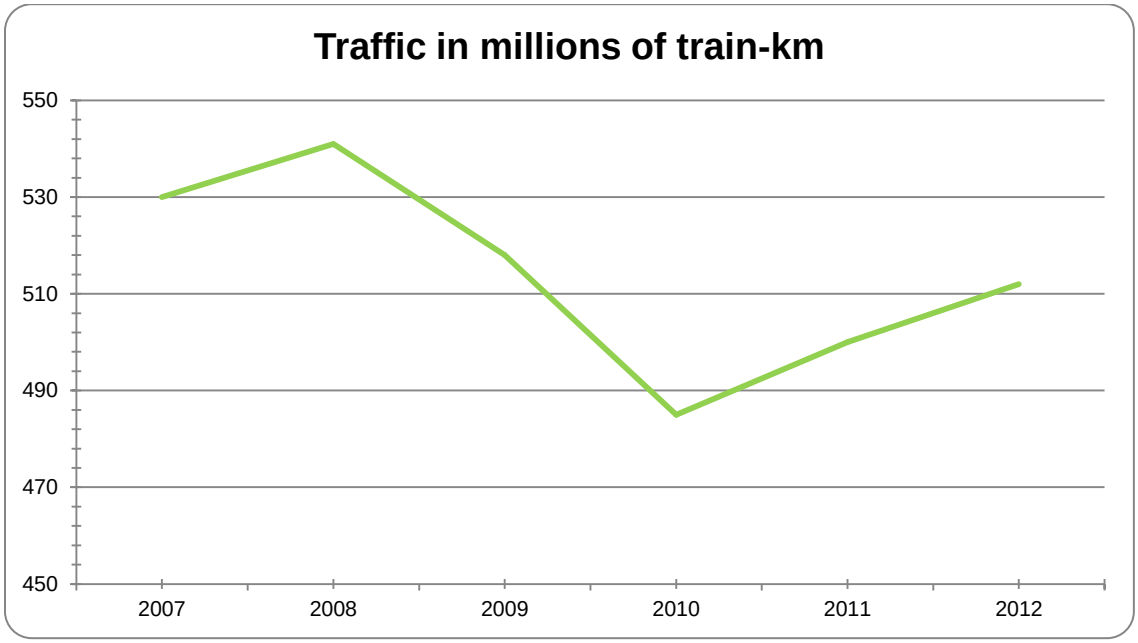
- two single lines for the connections with the conventional French network at Le Soler;
- a double track section of 17.26 km in the open air which extends from the origin of the concession at Le Soler up to the entry of the tunnel of Perthus;
- a bi-tube cross frontier tunnel (Perthus Tunnel) that is 8.3 km long of which 7.4 km is on French territory.

TP Ferro publishes annually the *Document de référence du réseau* [Reference document of the network] the object of which is to offer general information on the railway infrastructure of TP Ferro to companies that want to access this infrastructure. This document is available on its internet site www.tpferro.com

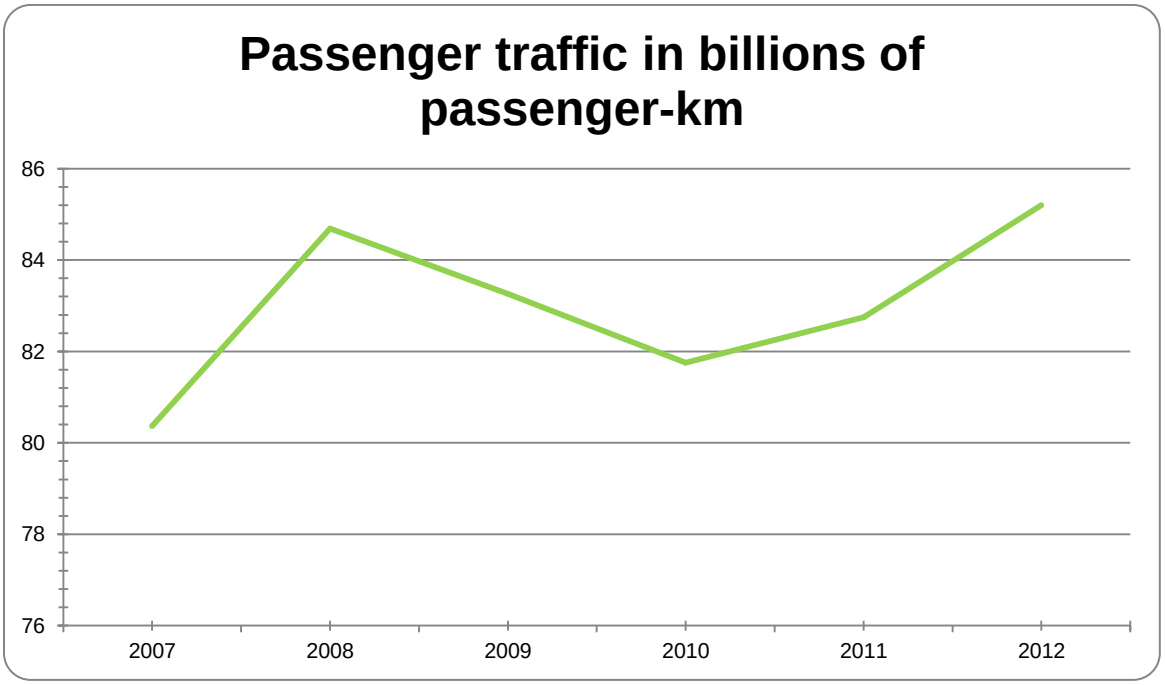
1.3 Access to the network and details of the traffic

At the end of 2012, 26 railway undertakings held a safety certificate and were authorised to carry out rail transport on the RFN (see Annex 2). 23 of them, in practice, operated trains during 2012.

The number of million train-km in 2012 was 2.4% up on the previous year. This new increase brought the level of traffic to marginally less than that in 2009.



Passenger traffic expressed in billion passenger-km is also up by 2.9% (85.23) with respect to 2011. This appreciable increase brings the passenger traffic to a maximum value compared with the five previous years.



2 The principles and people involved in the safety of rail traffic

2.1 The railway network: a complex system

The railway system is defined as the total formed by the public railway transport infrastructure for passenger and freight traffic, the rolling stock of any category and origin which uses it, the staff responsible for operating and maintaining it and the procedures used for this purpose. This definition is mentioned in Article 2 of the Order of 19 March 2012[1].

This definition enables the railway system to be considered as an integrated assembly of components with interactions of different natures and dynamics. Thus, the railway system can be considered as a complex system in the same class as those found within the risk sectors (nuclear, chemical, aeronautic, etc.). One of the essential characteristics of the railway system is that it is dependent on human beings. This results in a regulatory framework which lays down requirements for the certification or authorisation of the safety operators. One also regularly finds the positive role (recovery from a situation) or negative (human error or unsuitable behaviour) in the analysis of incidents.

2.2 The people involved in railways

The people involved in the railway system in France include all the institutions, organisations, railway operators, and entities operating or involved with the operation of railway traffic on RFN and other networks which have comparable operating characteristics.

As far as the management of safety is concerned, the responsibilities of each of the people involved, as well as their respective roles, are clearly identified.

- The State fixes the safety objectives and the way in which they should be obtained. It is responsible for the regulations and seeing that they are applied.
- EPSF issues the authorisations, carries out the audits and inspections, participates in the preparation of the safety rules and contributes to the harmonisation of the European rules.
- The Infrastructure Managers of the network, design and maintain the installations, manage the train movements and take action if there are incidents or accidents on the network. Within the area covered by RFN, the Infrastructure Manager, RFF has entrusted the day to day operation of the network to SNCF as 'Delegated Infrastructure Manager'. RFF also prepares the operating documentation that applies to the railway undertakings.
- The railway undertakings introduce their equipment, train their staff, and define their operational orders and instructions to comply with the operating regulations and documentation. They check that they are correctly applied.
- The emergency services also act to limit the consequences of accidents, in particular, in the case of fire or risks for the staff.
- BEAT-TT carries out investigations into railway accidents. It has a distinct role, which is complementary to that of EPSF.

[1] Order of 19 March 2012 fixing the objectives, the methods, the safety indicators and the technical safety and interoperability regulations applicable on the RFN

2.3 The regulatory framework of the railway system

The change in the regulatory framework of the railway system was born of the political wish to develop trans-European railway traffic, in particular, through the Directives of the first railway packet which since 2001 has modified the rules of access to the infrastructure, the issuing of licences to railway undertakings and the allocation of paths. This opening up of the railway market to competition cannot, however, be organised without taking account of the issues connected with safety and interoperability.

The *Traité sur le fonctionnement de l'Union européenne* (TFUE) [Treaty on the functioning of the European Union] thus gives the responsibility to the European institutions to take measures enabling, in particular, the safety of transport to be improved while Article 171.1(1) of the TFUE specifies that the Union 'shall introduce any action which may prove to be necessary to ensure the interoperability of the networks, in particular, in the field of the harmonisation of technical standards'. These actions are formulated by means of legislative acts (regulations and directives) by the European Parliament and the Council on the proposal of the European Commission.

In order to come into line with technical progress and changes in the sector, the Commission can decide to delegate the power to adopt non-legislative acts with a general scope (often regulations or decisions to do with technical specifications of interoperability (TSIs)) which supplement certain elements of the legislative act.

In this context the role of the ERA does not aim to create the law applicable but to support the work of the European Commission.

While complying with the legal scheduling and the pyramid of standards, the national law is involved to transpose the directives of the European Union, or to complement and add detail to the law of the Union. As far as the railway system is concerned, the majority of the arrangements – laws and orders – are now listed in the Code of Transport and EPSF publishes on its internet site all the regulations applicable to the sector.

Following the opening of the markets to competition, law 2006-10 dealing with the setting up of EPSF aims to respond to the functions delegated to the railway national safety authority in the sense of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways. EPSF carries out some tasks in the standardisation field in matters of railway safety and interoperability. EPSF thus carries out a task of extracting the important facts in order to guarantee the consistency of the regulatory framework by means of a coordinated approach because of the interconnection of the national and European arrangements. This is particularly important in the current period which sees the general revision of the framework for regulations and standardisation.

EPSF is for this reason responsible for assisting the State during the preparation of the texts of national regulations, (this can involve the transposition of directives), participating at its request in the work of ERA, as well as preparing and publishing recommendations, technical documents and rules of the art, certain of them forming *moyens acceptables de conformity* (MAC) [acceptable means of conformity] to the arrangements in the regulations.

Moreover, the Order of 19 March 2012 completes the structure of the French regulations by specifying in particular the delegated responsibilities of the various people in the sector as far as instructions are concerned. EPSF is entrusted with the task of checking the special operating documentation and operating rules published by RFF in accordance with Article 10 of Decree 2006-1279; it can require the withdrawal or the amendment of any rule which does not permit the level of safety to be maintained.

The railway operators which act as railway undertakings or Infrastructure Managers must comply with the provisions of the European and national regulations. They must take account of them when they

prepare their operating instructions and take all the necessary steps, in particular, with regard to their partners to operate in a safe manner. As financial managers, they are responsible both in civil law as well as in criminal law for the risk inherent in their activity.

EPSF has come to play an increasingly important role aimed at assisting the operators in order to share a common understanding of the regulations and facilitate the interfaces between operators in the introduction of their safety management system (SMS) and their operating instructions.

2.4 The management of modifications

To control the changes to the railway system, each modification carried out by the operators goes through a process for which EPSF can issue an authorisation.

In all cases it is up to the entity concerned to carry out a risk analysis which enables the scope of the modification to be assessed. The choice of the method of analysis is left to the applicant, the standards EN 50126[2], 50128[3] and 50129[4] are in fact references for this.

The notion of 'substantial modification' comes down to an appreciation of the situation and the operating conditions of the system or subsystem considered. This appreciation must, in particular, be carried out with regard to the impact of the changes on this subsystem and on the interfaces with the environment with which it interacts, but also with respect to the state of the art. Thus the modification of the normal state of functioning (in terms of technical characteristics) is considered as substantial.

In the absence of a definition covering the technical and safety aspects in an exhaustive manner, it seems appropriate to talk of 'presumption of substantial modification' during the evaluation of the changes submitted for our consideration by the applicant.

The determination of the nature of the modification is based on the common safety methods described in Commission Regulation (EC) No 352/2009 of 24 April 2009, on the adoption of a common safety method on risk evaluation and assessment as referred to in Article 6(3)(a) of Directive 2004/49/EC of the European Parliament and Council from which, in particular, it should be noted:

- it is up to the proposer to consider whether the character of the changes is 'significant' and/or 'substantial';
- that a change considered as not significant requires the proposer to introduce it by applying his own method of safety;
- that a change that is significant but not substantial must be introduced by applying the regulations, without a specific intervention by EPSF being necessary;
- that if the change is considered as significant, and all the more if it is substantial, some community arrangements require a specific intervention by EPSF such as a new authorisation to put a vehicle into service, a revision/updating of the safety certificate of a railway undertaking or a revision/updating of the safety authorisation of an Infrastructure Manager.

In general any change of a 'system or subsystem already in use' is considered 'substantial' if it involves even indirectly:

- a modification of one or more of its functions regarding safety;
- a modification of one or more of its interfaces with the operation of the RFN:

[2] NF EN 50126 - Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 1: Basic Requirements and Generic Procedures
[3] NF EN 50128 - Railway Applications - Communication, Signalling and Processing Systems - Software for Railway Control and Protection Systems
[4] NF EN 50129 - Railway Applications - Communication, Signalling and Processing Systems - Safety Related Electronic Systems for Signalling

- a modification of the context of its use;
- the modification of the characteristics 'RAMS' (reliability, availability, maintenance and safety);
- a calling into question of the demonstration of conformity put forward during the authorisation of the introduction into commercial service of one or more items of the corresponding regulations or, if necessary, of the preliminary analysis of the risks for the fields not covered by the texts of the regulations.

In addition the regulations specify six criteria that the operator must take into consideration in his analysis:

- the consequence of a possible failure of the system evaluated (the scenario that is realistically the most unfavourable);
- the innovation (innovative feature used in the introduction of the modification);
- the complexity of the modification;
- the monitoring (whether or not it is possible to monitor the modification introduced throughout the life cycle of the system and to take appropriate measures);
- the reversibility (whether or not it is possible to put the system back to how it was before the modification);
- the additionality (the importance of the modification bearing in mind all the other modifications connected to safety which have been carried out recently to the system evaluated and which have not been considered as significant taken in isolation).

Thus EPSF authorises the introduction into commercial service of a project including the introduction of one or more new systems or subsystems or the modification of the operating rules (including some maintenance rules), after being assured that the global state of safety is at least equal 'GAME' (*Globalement Au Moins Équivalent*) [Globally at least equivalent] to the situation before this modification or incorporation.

2.5 The monitoring of activities

In order to be authorised, each operator has a duty to integrate in his safety management system and his procedures, the operating orders and instructions describing the organisation that he will put in place to ensure the monitoring of his activities. This monitoring is based on checks, inspections and audits and on a system of feedback of experience. These different elements form a monitoring system that enables the operator to check his level of safety, to detect the malfunctions and to remedy them by carrying out the appropriate corrective actions. These principles are described in Articles 9 and 23 of the Order of 19 March 2012.

The checks form the most operational elements of the monitoring system. The word 'checks' is understood to mean:

- the verifications carried out on the ground by the local management which aim to ensure that the activities are carried out in accordance with all the safety rules;
- the checks that enable the quality of the verification activity carried out on the ground to be guaranteed.

The monitoring system is also based on inspections. In general, these inspections are done without warning. They are based on a specific subject when events have directed the attention of the organisation to this subject.

To complete this system, the operator has a duty to programme and to carry out internal audits covering, on a previously defined period, all the components of his safety management system. These includes for example:

- the organisation of the safety management;
- the documentation;
- the training and authorisation of the staff;
- the inspection;
- the management of the sub-contractors;
- the feedback of experience.

EPSF as the national safety authority, is authorised by the State to check that all the operators are responsible for their part of the safety of their actions, and the rules regarding safety and interoperability of railway transport. To successfully carry out its task of monitoring, EPSF has authorised inspectors, who are responsible for carrying out these checks. They do this by means of audits and inspections:

- **systematic audits** carried out following authorisations issued and programmed in such a way as to check periodically and methodically that the conditions of issue are complied with. An initial audit is carried out, at the latest, a year after the issue of an authorisation by EPSF. Over a period of five years following this authorisation, the EPSF monitoring programme covers all the subjects described in the safety management system of the operator;
- **short term audits** when the attention of the organisation is drawn to the repetition of significant events on the subject of safety;
- **ad-hoc inspections** intended to investigate specific points.

Before the start of each year, the annual inspection programme is prepared and validated. For this the following are, in particular, determined according to the strategy put in place:

- the number of checks to be carried out;
- the division between audits and inspections;
- the subjects and/or operators to be targeted as a priority.

These elements are defined according to the needs connected with the issue of authorisations, the number of incidents, the results of previous checks, changes in the organisation and the activity of the operators, in particular when there are big variations of these. This programme is reviewed and adapted every month in order to take account of topical matters.

All these checks carried out both by the operators and EPSF enable the safety level of railway traffic to be continuously monitored.

2.6 The monitoring of safety and the feedback of experience

The monitoring of the activities carried out by the provision of checks is completed by the monitoring of the level of safety in operating events and a process of feedback of experience.

The events monitored in this field are identified by each railway operator reporting at least the common safety indicators (CSI) which are reported quarterly to EPSF and then to ERA each year on the occasion of the preparation of the annual safety report.

The evaluation of the overall safety performance of the system is done with the help of common safety objectives (CSOs) which are defined for eight indicators relative just to accidents. In order to guarantee the comparability of the figures, the methods of calculating the CSOs were laid down by Commission Decision 2009/460/EC of 5 June 2009 on the adoption of a common safety method for assessment of achievement of safety targets. This decision also introduces the principle of national reference values (NRVs) for each of the indicators. While the CSO is the objective to be complied with

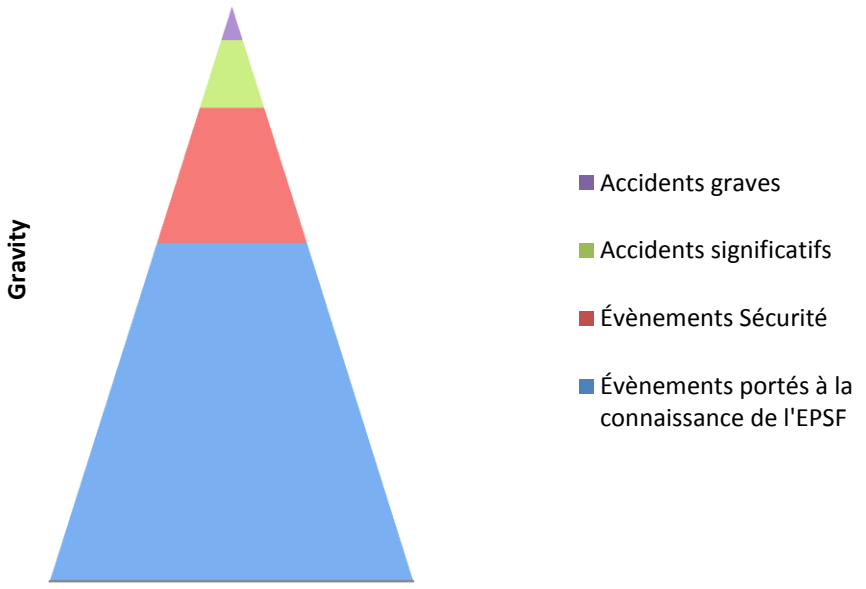
throughout the European Union, the NRV is calculated by countries on a statistical series of previous events; complying with it, therefore, ensures that each country keeps it level of safety.

The following table gives the categories of risk and units of measurement used for the calculation of the CSOs and NRVs:

Category of risk	Units of measurement
1.1 Passenger	passengers / passenger train-km
1.2 Passenger	passengers / passenger-km
2. Staff	staff / train-km
3.1 Users of level crossings	users of level crossings /train-km
3.2 Users of level crossings	users of level crossings / [(train-km x no of LCs / track-km)]
4. Others	'Other' people / train-km
5. Non authorised	non-authorised persons / train-km
6. Social	total / train-km

EPSF monitors the safety level by the operation of a database of incidents in which, since July 2006, all the events reported by these sources of information have been recorded (messages from the national railway operations centre, analysis report of the railway traffic department, etc.) coming from the railway operators. This system is completed by the analysis of the change of the CSIs and additional safety indicators.

Pyramid of the events dealt with by EPSF



Serious accidents
Significant accidents
Safety events
Events reported to EPSF

The events recorded in the field of monitoring of safety can be classified depending on their seriousness in the form of a pyramid such as is shown in the diagram above. At the base of this pyramid there are the events reported to EPSF from different sources of information. The 'safety' events are there because of a wish to have special attention on these events. The definition belonging

to EPSF gives the events which have or which could have had prejudicial consequences. In other words, these 'safety' events can be considered as the total of the accidents and quasi accidents. Among the accidents, special treatment is given to the significant accidents of which the definition is given in Annex VI of the Order of 19 March 2012. These accidents are those used in the CSIs. Finally the summit of the pyramid is formed of the serious accidents the definition of which is given in Article 3 of the European Directive 2004/49/EC. These accidents were the subject of a technical investigation by BEA-TT.

In addition to the feedback of experience that each operator must provide for his own activity, EPSF leads and organises a feedback of experience system by:

- organising four meetings a year to share experience during which all the RUs/IMs authorised by EPSF share their experience on the trends observed by EPSF, and at the same time the description, the analysis and the resulting action plans arising from the incidents are presented by the railway operators.
- organising four quarterly meetings between EPSF / DST (*Direction des Services de Transport*) [Directorate of Transport Devices] / RFF / DCF (*Direction de la Circulation Ferroviaire*) [Railway Operating Department] and SNCF IM, during which methods to improve the level of safety and performance of the RFN Infrastructure Manager are analysed;
- publishing a monthly note giving information of the most significant incidents sent to all the undertakings and Infrastructure Managers;
- initiating some service feedback called 'local' to analyse, with the people concerned, the significant incidents in order to draw useful information on the basis of a shared determination of the causes.

Finally for the whole of the railway system, feedback of experience on the most serious accidents is carried out by BEA-TT which is responsible for the tasks delegated to an investigating organisation as specified in Directive 2004/49.

3 Report for 2012

3.1 Important events

11 January
Safety certificate issued to the company Euro Cargo Rail (ECR), a subsidiary of DB, in order to enable it to operate rail passenger transport services on the high speed lines between Paris and Frankfurt in Germany, as well as between Paris, London and Brussels.

16 January
Signature by EPSF and its opposite numbers of an agreement for the mutual recognition of the authorisations of conventional and high speed locomotives and passenger vehicles between Belgium, Holland, France, Luxembourg, Switzerland and Spain.

23 January
REX seminar (feedback of experience) organised by EPSF in the offices of OECD [Organisation for Economic Co-operation and Development] in Paris. Just like every year, the object of this seminar was to bring together all the railway operators in order to contribute actively to the development of the feedback of experience process.

1 February
Signature by EPSF and ANSF *Agenzia Nazionale per la Sicurezza delle Ferrovie* [The Italian National Safety Organisation overseeing the safety of the country's rail system] of an agreement for the mutual recognition of the authorisations of conventional and high speed locomotives and passenger vehicles between France and Italy.

1 February
Collision of two freight trains at Maillé (37): following a fractured rail, several trains were immobilised on the line from Saint-Pierre-des-Corps to Poitiers. A Euro Cargo Rail train running on sight on this line crashed at 20 km/h into a train that was stopped in front of it. Some material damage was found on both trains. BEA-TT published a report on this accident in November 2012.

17 February
Derailment of a freight train at Breteuil Junction (60): an SNCB Logistics train derailed when it ran between Ailly-sur-Noye and Breteuil Junction at about 100 km/h. After investigation it turned out that the cause of the derailment was due to irregularities in the loading formed by the tarpaulin sheets.

25 April
A Part B safety certificate issued to the railway undertaking Società Viaggiatori Italia srl (SVI) in order to enable it to run on the frontier section situated between the Franco/Italian frontier and Modane Station. This undertaking operates in partnership with the SNCF, of which it is a subsidiary, the TGV services between Paris, Turin and Milan.

16 May
A Part B safety certificate issued to the Italian railway undertaking Nordcargo enabling it to carry out freight transport services on the section of the RFN between the Franco/Italian frontier and Modane Station. This Part B has been issued in application of the simplified procedure provided for the limited train services on the frontier sections.

22 May
Derailment of a TER at Mercuès (46). An SNCF regional train running on the line from Montauban to Les Aubrais derailed after hitting a rockfall from a cliff at the side of the track. The two bogies of the locomotive derailed. There were no injuries to people on the train. BEA-TT opened a technical investigation into this accident.

6 July
Authorisation to put into commercial service the *poste d'aiguillage informatique à technologie PC* (PIPC) [a system to achieve centralised control of small stations with a single track] at Vertaizon. Command by an interface of the MISTRAL type 'mono operator', the principle objective of the operation consists in improving the attractiveness of the rail mode on the line east/west from Clermond-Ferrand by increasing the level of service significantly.

17 July
Qualified approval for the title of organisation issued to the Belgian company Belgorail. This approval is to do with the subsystems: control/command/signalling, rolling stock excluding freight wagons, infrastructure and energy. Belgorail, set up in 2004, is already a 'designated organisation' as well as a 'competent organisation' in Luxembourg.

18 July
Safety certificate issued to the railway undertaking Egénie to enable it to operate freight transport services on the RFN. This railway undertaking, the head office of which is in Saint-Sulprice (81) operates trains which carry out removals and supply of railway construction sites on the RFN. It also

operates ballast trains in the Midi-Pyrénées region and various traffic on the Bordeaux - Miramas line in order to connect the region to the big freight corridors.

13 August
Safety certificate issued to the railway undertaking ETMF to enable it to operate freight transport services over the whole of the RFN. ETMF plans to operate the movement of trains to supply building sites and trains to carry out removals between building sites as part of the major job of track renewal on the RFN.

3 September
Authorisation of the Fanps type of wagon. This new wagon with two hoppers is fitted with a system of braking under each of the two Type 'T12023A' bogies. It is fitted with brake blocks made of composite material and complies with the requirements of the TSIs applicable to this type of vehicle. It is designed to carry ballast.

12 October
Authorisation to put into commercial service the section of line from Tassin to Brignais, amended to enable trams-trains to run on this second branch of the East Lyonnais railway system. The work carried out will enable the direct connection between Lyon Saint-Paul Station and Brignais via the shunt of Tassin, a special type of structure that has a radius of curvature of 63 m that can only be used by tram-train vehicles. The first commercial services took place on 8 December.

14 October
Authorisation to put into commercial service a new poste d'aiguillage informatique à technologie PC (PIPC) [a system to achieve centralised control of small stations with a single track]. The project is part of the modernisation of the safety installations on the Mulhouse - Chalampé line and consists of replacing signal box No 27 at Bantzenheim which has become obsolete and integrating it into the new remote control box of the safety installations of signal box No 26 at Ile Napoléon depot.

24 October
Holding of the first meeting of the management committee to review the operating rules with RFF, DCF and the railway undertakings represented by their representative organisation, The Union of Public Transport (UTP).

27 October
Collision between a train, a minibus and a light vehicle at Amilly (28): an SNCF freight train running towards Amilly-Ouerray. When approaching level crossing 40 the train driver saw a minibus and a car passing each other on the level crossing. In spite of sounding his horn and an emergency brake application, the impact could not be prevented. The human cost was one person dead and five injured of which three seriously among the people in the road vehicles. BEA-TT opened a technical investigation into this accident.

14 November
Authorisation of the introduction into commercial service of a type SEI (System d'enclenchement intégré) Integrated Interlocking System] signal box at Reding (57). This signal box replaces the old boxes at Reding and Sarrebourg and is remotely controlled by a Mistral Type interface situated at the Reding centralised traffic control centre (PCD). This operation is part of the western sector programme defined in the master scheme of the centralised control of the Alsace network.

6 December
Authorisation of the introduction into commercial service of four signal boxes of the PIPC type installed at Sennecy-le-Grand, Tournus, Uchizy and Fleurville, on the section of line from Chalon-sur-Saône to Mâcon (71). These remotely controlled electronic signal boxes of the PCD type are controlled by an

interface of the Mistral Type situated at Chalon-sur-Saône. They replace the old signal boxes which had electro-mechanical locking on the Jeumont block type. This operation is part of the modernisation work which enables the capacity on the Dijon - Lyon line to be increased and the introduction of centralised control of the line from Dijon - Mâcon.

13 December
Signature of an agreement between EPSF and ORR (Office of the Rail Regulator) for the mutual recognition of authorisations for conventional and high speed vehicles between France and England.

3.2 Changes to the regulations

3.2.1 Important modifications to the legislation and the regulations

The various amendments to the legislation and regulations that have affected the activity of the railway system are as follows:

Orders

19 March 2012

Order of 19 March 2012 fixing the objectives and methods of the safety indicators and the technical safety and interoperability regulations applicable on the RFN

This order, which is important for the control of railway safety has several objectives:

- it defines and details the standard responsibilities that lie within the field of each railway manager;
- it fixes the general safety requirements in the matters listed in Articles 2 and 3 of the Decree 2006-1279;
- it fixes the arrangements applicable to the lines and sections of lines of the RFN;

  it makes the 'safety' regulations much more readable in order to simplify access to the RFN and to better describe the scope of the responsibility of the various people concerned;
- it affirms the role of the EPSF in the preparation of documentation that is applicable by the whole of the profession and consolidates its role of guarantor of the technical consistency;
- it is accompanied by the decision of 8 February 2013 granting dispensation to the heading of section IV of the Article 124 and a note that can be consulted below.

Special attention must be given to the HEADING VI (Various arrangements and applications) which lists the orders and other texts modified, repealed, or which will be repealed at dates which it specifies.

Finally, in accordance with Article 4 of this order and the note of 19 March 2012 which specifies the framework and the application and monitoring procedure for it, compliance with the arrangements of the MACs published by EPSF under the heading of regulation texts, forms a presumption of conformity with the safety requirements provided for in the Order..

This Order has resulted in almost unanimous comments on the volume of work in terms of taking over and rewriting of regulations in the safety reports sent by the railway operators. The capacity to manage this volume of work has been different depending on the size of the railway operators. The smallest entities have expressed their concern about the future volume of regulations which will result from it.

23 July 2012

Order of 23 July 2012 regarding the authorisations for completion and introduction into commercial service of systems or other subsystems of new or substantially modified rail transport

This order updates the arrangements in force by fixing pursuant to Articles 44, 53, 54 and 56 of Decree No 2006-1279 of 19 October 2006, the procedures and conditions by which EPSF authorises, suspends, limits or definitely stops the carrying out or the introduction into commercial service of new or substantially modified railway systems or subsystems.

It repeals the Order of 31 December 2007 regarding the authorisations for completion and introduction into commercial service of systems or other sub-systems of new or substantially modified rail transport.

22 October 2012

Order of 22 October 2012 fixing the procedure of certification of entities mentioned in Article 27-2 of Decree No 2006-1279 of 19 October 2006. The Commission Regulation (EU) No 445-2011 of 10 May 2011 establishes a system of certification of entities in charge of maintenance of freight wagons.

The object of this Order is to define:

- the status of the organisation of certification of the entities in charge of the maintenance (ECM) of freight wagons;
- the procedures which enable the certificate of the entities in charge of maintenance of freight wagons to be obtained.

Decisions

25 January 2012

Commission Decision 2012/88/EU of 25 January 2012 on the TSI relating to the control-command and signalling subsystems of the trans-European railway system

This decision authorises a series of TSIs relating to the control-command and signalling 'on-board' subsystem and the subsystems of control-command and 'ground' signalling of the European railway system (high speed and conventional). This decision repeals the decisions 2006/679/EC and 2006/860/EC and thus combines the TSIs 'control-command and signalling' (CCS) 'conventional rail' and TSI CCS 'high speed' into a single TSI decision. It amends Commission Decision 2011/291/EC of 26 April 2011 concerning a TSI relating to the rolling stock subsystem - 'Locomotives and passenger rolling stock' of the trans-European conventional rail system, in particular, regarding the interfaces with the CCS subsystems.

23 April 2012

Commission Decision 2012/226/EU of 23 April 2012 on the second set of common safety targets as regards the rail system

This decision establishes the values of the second series of CSTs calculated from data covering the period 2004-2009. It repeals Commission Decision 2010/409/EU of 19 July 2010 which fixed the values of the first series of common safety targets on the basis of national reference values by continuing to apply the common safety method established by Community Decision 2009/460/EC of 5

June 2009 on the adoption of a common safety method for assessment of achievement of safety targets.

23 July 2012

The following decisions constitute some amendments to existing TSIs:

Commission Decision 2012/462/EU of the 23 July 2012 amending Decisions 2002/731/EC, 2002/732/EC, 2002/733/EC, 2002/735/EC and 2006/66/EC and repealing Comission Decision 2002/730/EC regarding the TSIs

Commission Decision 2012/463/EU of 23 July 2012 amending Decisions 2006/679/EC and 2006/860/CE regarding TSIs

Commission Decision 2012/464/EU of 23 July 2012 amending Decisions 2006/861/EC, 2008/163/EC, 2008/164/EC, 2008/217/EC, 2008/231/EC, 2008/232/EC, 2008/284/EC, 2011/229/EU, 2011/274/EU, 2011/275/EU, 2011/291/EU and 2011/314/EU regarding some TSIs

6 November 2012

Commission Decision 2012/696/EU of 6 November 2012 amending Decision 2012/88/EU on the TSI relating to the subsystems 'control-command and signalling' of the trans-European railway system

This decision amends the Commission Decision 2012/88/EU on the TSI CCS. It is about the adoption of the baseline 3 specifications of ERTMS. This decision clarifies the questions of compatibility between the different versions of ERTMS.

14 November 2012

Commission Decision 2012/757/EU of 14 November 2012 concerning the TSI on the 'operation and traffic management' subsystem of the rail system in the European Union and amending Decision 2007/756/EC

This decision merges the two previous TSIs relating to the subsystem 'operation' (2008/231/EC and 2011/314/EU which applied respectively to the trans-European high speed and conventional network) and extends its field of application to the whole of the European network. The two previous TSIs will be repealed at the same time as Decision 2012/757/EC comes into force on 1 January 2014. In addition this decision amends Decision 2007/756 on the National vehicle register (NRV) by transferring to it the data relating to the registration previously included in the 'operating' TSIs.

Regulations

17 April 2012

Commission Regulation No 328/2012 of 17 April 2012 amending Regulation No 62/2006 relating to the TSI on the subsystem 'telematic applications for the freight service' of the conventional trans-European railway system

This Regulation amends Chapter 7 of Regulation 62/2006 on the introduction of the TSI 'telematic applications to the TAF freight service' and Annex A listing the technical documents referenced in the TSI.

20 July 2012

Commission Regulation No 665/2012 of 20 July 2012 amending Regulation No 454/2011 on the TSI regarding the subsystem 'telematic applications for passenger services' of the trans-European railway system

This regulation amends Annex III of Regulation 454/2011 which lists the referenced technical documents in the TSI used by the railway undertakings that operate passenger services in order to make available data on their activities.

16 November 2012

Commission Regulation (EU) No 1077/2012 of 16 November 2012 on a common safety method for supervision by national safety authorities after issuing a safety certificate or safety authorisation

This regulation establishes a common safety method for the attention of the national safety authorities for the supervision of the activities previously authorised by the issue of a safety certificate or a safety authorisation. It introduces several requirements concerning the strategy and the monitoring plan, in particular, in terms of publication and specifies some principles of cooperation and of coordination between the national safety authorities of different member States. It is applicable from 7 June 2013.

Commission Regulation No 1078/2012 of 16 November 2012 on a common safety method for monitoring to be applied by railway undertakings and Infrastructure Managers after receiving a safety certificate or safety authorisation and by entities in charge of maintenance

This regulation establishes a common safety method for the attention of railway undertakings, Infrastructure Managers after obtaining a safety certificate or a safety authorisation, as well as some entities responsible for the maintenance of vehicles. This method aims to introduce harmonised inspection procedures for their own activities. It introduces some requirements in terms notably in the structure of the processes of inspection or flow of feedback of experience related to the application of this common safety method. It is applicable from 7 June 2013.

3.2.2 Preparation and revision of the regulations

The Order of 19 March 2012 has clearly defined the roles and responsibilities of the ministry, RFF and EPSF in the standard organisation applicable to the RFN. Three dates for the realigning of the texts with respect to this Order have been fixed. Of these dates, two in particular concern 2013:

- **28 February 2013**: the particular rules and regulations mentioned in Article 3 of the amended Order of 23 June 2003 on the safety regulations applicable on the RFN;
- **31 December 2013**: the texts published by RFF to apply Article 10 of the Decree of 19 October 2006 mentioned above or mentioned as such in the safety authorisation which it has at the date of publication of this Order shall be brought into line with the requirements laid down in Articles 3 and 12 and Annex 4 of the Order of 19 March 2012.

The texts written by RFF come from the operating documentation or from the special operating rules. These texts are imposed on the railway enterprises.

Moreover EPSF has the job of preparing the texts called *moyens acceptable de conformity* 'MAC' [acceptable means of conformity] which enable each undertaking which applies them to obtain the presumption of conformity with the safety requirements.

As a result, the work of RFF and EPSF in 2012 consisted of dividing up the revision of the texts mentioned in the Annex of the Order of 23 June 2003. This division had to be consistent, coordinated and planned. Monthly meetings have, therefore, been organised between EPSF, RFF and the DFC in order to fix the common work programme bearing in mind the opinion of the sector.

A steering committee was set up formed of representatives of the ministry, EPSF, RFF, DFC, railway undertakings and the *Union des transports publics et ferroviaires* (UTP) [Union of Public Transport and Railways], an organisation that represents the profession of railway undertakings. This enables discussion on what policy should be adopted on particular subjects and on the time schedule.

Each text is dealt with by a Working Group in which the representatives of these same organisations, with the exception of the ministry contribute to the preparation of a version which is then submitted by EPSF to a consultation by the people directly interested by the measures envisaged.

In 2012 the revision of the regulations can be divided into two big tasks:

Withdrawal of operating documents in favour of texts prepared by EPSF

Four Working Groups were set up to deal with the three following problem areas:

The composition of trains
The appearance of a new text will enable the withdrawal of three operating documents and three recommendations.

Couplings, brake gear and brake tests
The recommendation on the subject will form the object of a MAC replacing two existing operating documents.

Hot box detectors
Two Working Groups have been formed on the subject, one with railway undertakings to discuss their role, the other with, in particular, RFF and SNCF IM on the role of the Infrastructure Manager. Two documents will be produced at the end of this work. The first will be an operating document, the other document will be a recommendation.

Bringing the 31 texts annexed to Order of 23 June 2003 into line

Four Working Groups have been set up:

Signalling
The work consists of preparing a document designed to complete Annex 7 of the Order of 19 March 2012 and replace two existing operating documents.

Ground to train radio
Following the incident at Mitry-Claye on 7 November 2011, and to meet the request of the Minister responsible for transport, it was decided to amend the rules to be applied by drivers when a radio alert is triggered in a dense zone. These amendments take account of the drafts of European rules.

Shunting
The work consists of repealing two operating documents and two application documents in favour of an MAC.

Shunting of simple installations by railway undertaking operators
This recommendation is intended to put back the contents in a part of the operating document relating to shunting. Its object is to specify the scope of action of railway undertakings in the shunting of simple installations.

Revision of the technical documentation

In addition to the preparation and revision work following the appearance of the Order of 19 March 2012, EPSF is continuing to revise the recommendations regarding the technical rules for the admission of rolling stock.

Eleven Working Groups have been engaged in 2012 with various organisations such as UTP, the *Fédération des Industries Ferroviaires* (FIF) [Federation of Railway Industries] and the *Centre d'ingénierie du matérial* (CIM) [Rolling Stock Technical Centre] of SNCF. The methodology is the same as for the operating texts, i.e. the preparation and then the consultation of the people concerned on the final version before publication by EPSF.

The subjects dealt with are as follows:

- the document of national references, in association with the insertion of the Annex to the rolling stock Order of 1 July 2004;
- ground to train radio;
- side winds;
- contact brushes;
- eddy current brakes;
- recognition of the results of tests;
- emergency couplings;
- lubrication of the wheel-rail contact by rolling stock;
- device to help cross separating sections;
- interaction between pantograph and catenary;
- access doors to passenger vehicles.

Preparation of a monograph of the texts

In general, for the operating texts and for the technical documents, a monograph listing all the standards applicable on the RFN will be available in due course on the EPSF internet site. A summary table that is sent periodically to railway operators which gives an outline of the monograph was prepared in 2012. It gives the references:

- of the 31 texts annexed to the Order of 23 June 2003 and specifies their future when it is known;
- of the texts of the operating documentation (RFF), with the foreseeable changes;
- of the recommendations, state of the art, technical documents in force and in draft.

3.3 Management of changes to the system

3.3.1 Issue of authorisations by EPSF

Safety certificates

In order to carry out rail transport services on RFN a railway undertaking must hold a safety certificate issued by EPSF. A safety certificate is made up of two parts:

- a Part A which corresponds to the safety management system set up by the undertaking;
- a Part B which forms the operational instructions that apply to a network, of the processes and procedures described in Part A.

In accordance with the provisions of Directive 2004/49/EC the Part A issued by a member State is valid over all the lines of the European Union provided;

- that the services envisaged are equivalent to those carried out in the country of origin (type, volume of activity, etc.);
- that the arrangements presented in Part A are not in contradiction with the requirements of the national regulations which would require a change of the Part A processed in collaboration with the national safety authority of the country of origin.

The activity of the Authorisations Department in terms of processing the application file for a safety certificate is given in the following tables:

	Total number of certificates
Number of Part A safety certificates issued during previous years and valid for 2012	13

		Total number of certificates
Number of Part B safety certificates issued during previous years and valid for 2012	Number of Part B certificates for which the Part A has been issued in France	13
	Number of Part B certificates for which the part A was issued in another member State	8

The list of undertakings holding a safety certificate on 31 December 2012 is given in Annex 2.

			Applications accepted	**Application rejected**	**Application in progress**
Number of new applications for Part A safety certificates submitted by railway undertakings in 2012	7	Nouveaux certificates	3 (1)	1 (2)	
		Certificates revised / amended			1 (3)
		Certificates renewed	2 (4)		

(1) Egenie – ETMF – NRS / (2) Ferovergne / (3) TSO / (4) SNCF - VFLI

			Applications accepted	Application rejected	Application in progress
Number of new applications for Part B safety certificates submitted by railway undertakings in 2012	when Part A was issued in France	New certificates	3 (1)	1 (2)	
		Certificates revised / amended	2 (3)		2 (4)
		Certificates renewed	2 (5)		
	when Part A issued by another member State	New certificates	2 (6)		
		Certificates revised / amended	6 (7)		
		Certificates renewed	1 (8)		

(1) Egenie – ETMF – NRS / (2) Ferovergne / (3) TVT - TPCF / (4) TSO – TPCF / (5) SNCF – VFLI / (6) SVI – Nordcargo / (7) SVI – Nordcargo – Trenitalia (x2) – Eurostar – CFL Cargo / (8) CFL Cargo

During 2012 the only request for a safety certificate which was rejected by EPSF was that of Ferovergne. This rejection was due to the fact that this company has not obtained its railway undertaking licence issued by the ministry in charge of transport.

No safety certificate Part A or part B has been suspended, restricted or withdrawn in 2012.

Safety authorisation

No safety authorisation has been issued, renewed or suspended in 2012.

Delay in dealing with applications for authorisation (safety certificates and authorisations)

The table below gives the average time taken in 2012 to deal with a file once all the information require has been supplied

	New	Updated / amended	Renewed
Application for Part A safety certificate in 2012 (in days)	107	101	112
Application for Part B safety certificate in 2012 (in days)	107	80	112
Application for safety authorisation for Infrastructure Managers in 2012 (in days)	/	/	/

Regarding these times, it does not correspond strictly to the time elapsed between the completion of the file and the issue of the safety certificate, in particular for the new certificates issued to companies which hold a licence issued by the minister in charge of French transport.

In fact the railway undertakings and, in particular, the micro and small companies, apply for a licence simultaneously to the Minister and to EPSF. As a result the files received which do not contain a licence are declared incomplete. In spite of this EPSF start the examination and consults the Infrastructure Manager.

As the time required to issue the licence by the Minister is three months, it is often issued when the examination of the application for a safety certificate is completed or on the point of being completed. As a result, the time counted in days between the administrative completion of the application file and the notification of the issue of the safety certificate can be very short. In the case of the company NRS it was eight days.

Other authorisations issued by EPSF

In 2012 EPSF also issued other authorisations regarding, for example, approvals and/or assessment for training centres, approvals for qualified organisations or for introduction into commercial service of railway systems and subsystems. The list of these authorisations can be consulted on the internet site of EPSF or in its activity report for 2012.

3.3.2 Report of the changes apart from issue of authorisations

The railway operators have managed some changes not requiring the issue of authorisation by EPSF but which have been brought to its attention for opinion or information.

These changes have, for example, been concerned with:

- the modification of the GPS beacon on wagons - TNI;
- the running of a 16 axle non-RIV-STSI Italian wagon;
- the introduction of anti-crash buffers and heating equipment on VOOSLOH MAK G 1206 - NETINERA;
- the installation of the software for the VOSSLOH ground to train radio;
- the change of the H4.0 software on locomotives PRIMA 3UJ5B to version H4.J - ALSTOM;
- the modification on the EMU Z2 carried out in the same way on X72500 /.SNCF.

Regarding the application of the common safety method for the evaluation and assessment of the risks, the majority of the railway undertakings have taken into account these provisions regarding the management of the changes. In practical terms, several cases have been dealt with in accordance with these arrangements.

3.4 Monitoring of activities

3.4.1 Monitoring of the railway operators on their activity

All the railway operators monitor their activities which takes the form of checks, inspections and safety audits.

The first two items - checks and inspections - represent the big majority of the monitoring actions declared by the operators in their annual safety reports. The principle subject dealt with is the checking of the essential safety tasks carried out by staff as part of their continuous checking of their authorisation. The checking actions also concern the operations carried out by the operators who are signatories to the *Contrat Uniforme d'Utilisation des wagons* (CUU) [Standard contract for the use of wagons] as part of the technical handover inspection. These operators advise the results of checks in accordance with the requirements described in this convention.

Each railway undertaking or Infrastructure Manager has declared a total number of internal audits carried out which is a function of his activity. These audits, unlike checks and inspections aimed at an operational aspect, ensure that the organisational process conforms with the safety management planned. They require the frequent intervention of several auditors for several weeks. In total 211 audits have been carried out by the railway operators corresponding to a rate of about 90% of the

annual plan. Among the reasons for not carrying out audits are the difficulties of small railway undertakings to find independent external auditors to carry out these audits.

The subjects preferred by the railway operators in these audits is the operation of the safety management system, the management of documentation and the checking of subcontractors. It appears from these audits that there are a certain number of malfunctions which the operators use to check the level of safety performance of their different internal structures. To correct these malfunctions actions are put into place to improve the safety of operation. Regular monitoring of these actions is organised and can, in certain cases, result in audits to check that things have been put right.

3.4.2 Issue of authorisations by EPSF

95 checks consisting of 56 audits and 39 inspections were carried out in 2012 by EPSF on RFN, the number of checks is stable compared with 2011.

Of the 56 audits carried out 47 were systematic audits and 9 were 'short term' audits. Regarding the systematic audits, 2012 focused particularly on two subjects of the safety management system of the railway operators: the training /authorisation of the operators as well as the checking and feedback of experience.

Number of audits and inspections carried out by EPSF in 2012

	IM	RU	Training centres	Others	Total
Number of systematic audits	12	19	15	1	47
Number of short term audits	3	6	0	0	9
Number of inspections carried out	16	15	1	7	39
Total	31	40	16	8	95

As far as the short term audits are concerned an audit carried out on the frontier sections (Belgium, Luxembourg, Germany, Switzerland, Italy and Spain) of RFN should be mentioned. The object of this audit was to check the conformity, the effectiveness and the observance of the procedures regarding the safety requirements in the different phases of the safety of the operation at the frontiers of RFN. This audit dealt with the organisation put in place to ensure the safety of the operation at the frontiers in particular on:

- the interface between the IM and the neighbouring IMs;
- the communication procedures;
- the running and the spacing of the trains;
- the operation of the safety installations;
- the introduction of the work procedures;
- the measures in relation to the level crossings;
- the safety of the staff and passengers;
- the consignments subject to restrictions.

This audit also enabled the introduction of the actions that the entities put in place following the recommendations formulated by BEA-TT concerning the collision at Zoufftgen on 11 October 2006 to be verified.

Certain topics marked as weak during the checks in 2012 are the subject of increased vigilance on the part of the railway undertakings and the Infrastructure Manager and were taken into account in the programming of the checks carried out by EPSF in 2013. These topics were:

- the function of the driver as a result of the issue of the additional certificates and the putting into place of the register of these certificates;
- the carrying out of maintenance on the rolling stock.

In addition a constant watch remains essential on the maintenance of the railway infrastructure.

No withdrawal or suspension of safety certificates or authorisation was announced by EPSF in 2012. The 95 inspections resulted in the notification to the entities inspected, of 246 deviations of which 3 were blocking points, 70 major deviations and 173 reserve points. These figures are slightly less than those in 2011 in the course of which EPSF recorded 285 deviations on a similar number of inspections. The reduction is particularly visible on the number of reserve points (210 in 2011) due in part to the experience acquired by the operators recently authorised in matters of safety management.

3.5 The monitoring of safety and the feedback of experience

3.5.1 Report of the monitoring of safety

In 2012 the group 'incident database' recorded 8 224 events regarding the operation of which 2 178 directly affected safety. All the information reaches this group from the sources of information of the IM and RUs.

EPSF launched three consecutive safety alerts, either due to the recurrent character of an incident, or the necessity of quickly informing all the RUs, holders of wagons and other national safety authorities because of the seriousness of events which necessitated the introduction of recommendations or the taking of protective measures. This was the case, for example, after the moving of a wheel on the axle following poor maintenance on a wagon carried out on 6 June 2012.

The figures given below are put in the table of the CSIs. In accordance with the methods of calculation, the indicators of accidents given in this paragraph only concern the significant accidents. Where necessary, some corrections have been made in order to take into consideration the new facts or the errors of classification discovered after the publication of the 2011 safety report.

People killed and seriously injured

The table below gives the numbers of people killed or seriously injured during a railway accident, according to the categories laid down by the CSIs.

The number of people killed and seriously injured from 2008 to 2012

	People killed				
	2008	2009	2010	2011	**2012**
Passengers	10	7	1	7	**2**
Staff	2	1	1	2	**4**
Level crossing users	38	36	27	29	**33**
Unauthorised persons	43	31	37	50	**32**
Others	0	1	0	0	**0**
Total	**93**	**76**	**68**	**88**	**71**
	People seriously injured				
	2008	2009	2010	2011	**2012**
Passengers	13	14	7	14	**6**
Staff	4	3	4	5	**6**
Level crossing users	14	22	17	9	**10**
Unauthorised persons	6	21	16	23	**11**
Others	2	1	2	2	**4**
Total	**39**	**61**	**46**	**53**	**37**

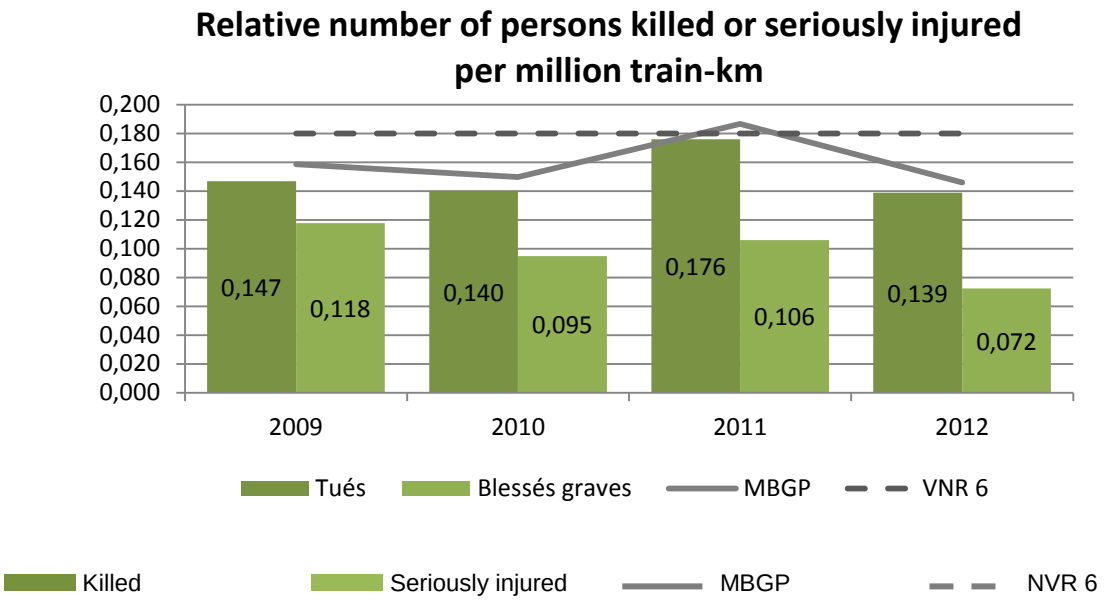
In 2012 the total number of people killed and seriously injured on RFN was 108 compared with 141 in 2011 and 114 in 2010. Among these people, it is necessary to distinguish the categories of people involved. That is to say passengers, staff, users of level crossings and people who were not authorised to be on railway premises. These last two categories continue, as in previous years, to represent more than three quarters of the people killed or seriously injured in the field covered by EPSF.

The year 2012 was marked by a reduction of the total number of people killed and seriously injured resulting from:

- a big reduction in the number of people killed and seriously injured, compared to 2011, for the categories of people not authorised to be on railway premises and users of level crossings

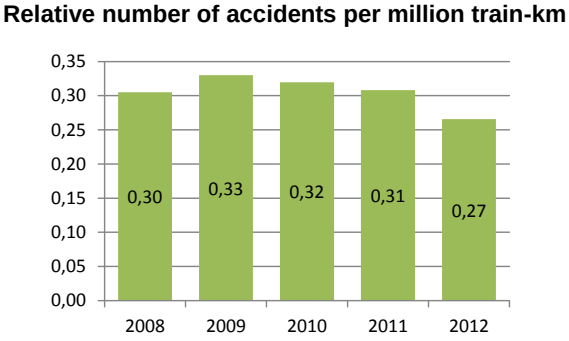
explicable by the significant reduction of accidents to people caused by moving railway rolling stock and accidents on level crossings;

- the reduction in passengers killed and seriously injured for the category of passengers which is now at a level roughly identical to 2010 which was a year that was historically low for this category;
- a big increase in the number of people killed in the category 'staff' due to several accidents during operations to do with infrastructure maintenance. This conclusion has led RFF and SNCF as delegated Infrastructure Manager to set up an action plan to avoid the return of this type of event.



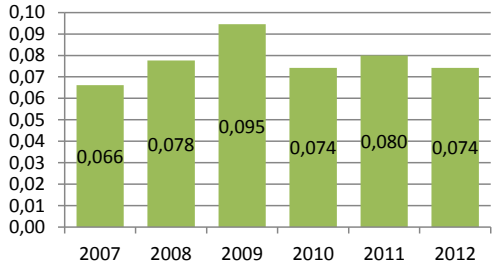
The relative numbers of people killed and seriously injured per million train-km are significantly lower than the figures for 2011. These positive results are essentially the result of this significant reduction in the two main categories of accidents which involve people killed or seriously injured, that is to say accidents to people caused by moving rolling stock and accidents at level crossings. The diagram above also shows the change since 2009 of the indicator of the '*Morts Blessés Graves Pondérés*' (MBGP) [deaths, serious injuries weighted] used to evaluate the CSOs. The national reference value 6 indicated corresponds to the national reference of social risk figure for France defined as $1.8.10^{-7}$ by the decision of the Commission of 23 April 2012 regarding the second series of CSOs. The 2012 value of the MBGP/train.km is situated well below this reference figure and it is also less than the Community objective for this risk category which is $25.9.10^{-7}$.

Significant accidents

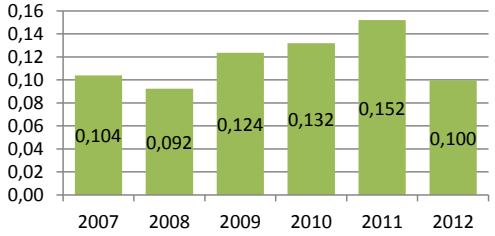


The relative number of significant accidents in 2012 is 0.27 accidents per million train-kilometres. This figure has been falling continuously since 2009 and is now under the figure of 0.3 for the first time. The two categories of events which represent the majority of events in number and of which the reduction in 2012 has an important impact on the reduction of significant accidents in 2012 were the events involving accidents at level crossings and accidents to people caused by moving rolling stock. The change of these indicators is shown in the diagrams below.

Relative number of accidents on level crossings per million train-km

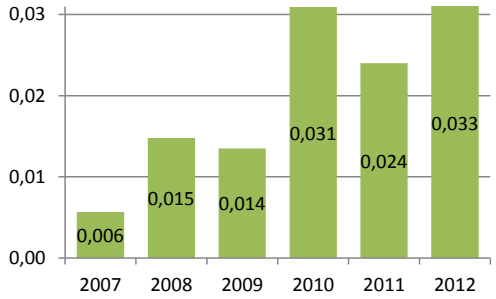


Relative number of accidents to persons caused by moving rolling stock per million train-km

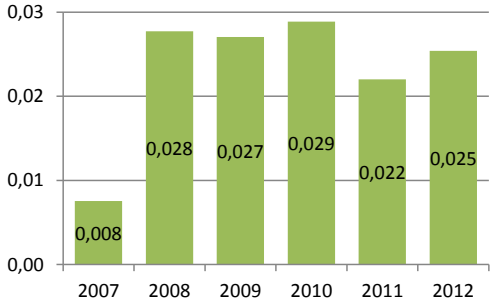


The significant reduction found can be explained by the effort made in 2012 by RFF on the prevention of individual accidents. These efforts involved specific investments to do with, in particular, the prevention of individual risks through the national safety programme for level crossings or the action plans connected to the crossings of tracks on the level by the public. They also involved, in the case of accidents to people caused by moving rolling stock, the tightening of security at railway premises to prevent intrusions.

Relative number of collisions per million train-km



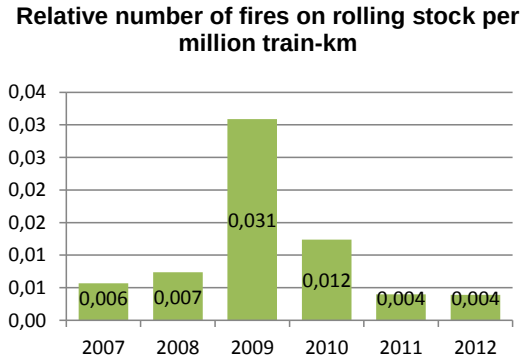
Relative number of derailments per million train-km



There has also been an increase in the number of derailments and collisions compared with 2011. The figures returned in both cases to levels roughly the same as those seen in 2010. The diagrams above show these changes where you can see the effect of a change of scope in the counting of these events.

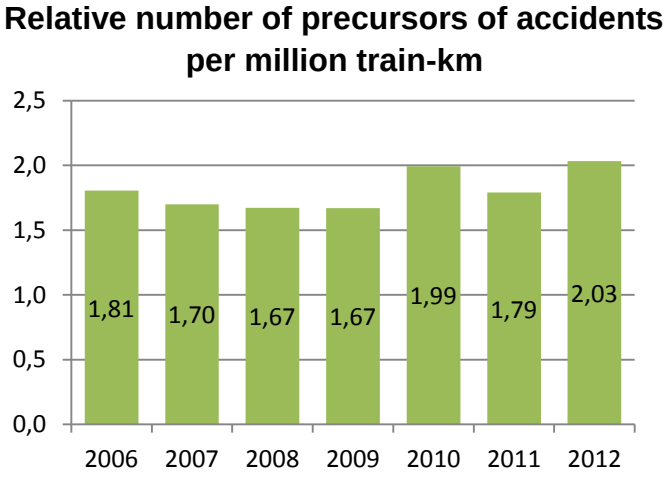
For collisions the change of scope took place in 2010, with the inclusion of collisions with animals. The increase between 2012 and 2011 is explained by the increase on these events as well as those connected to vandalism.

For derailments, the change of scope took place in 2008 and concerned the taking into account of the events that occurred on service lines. The increase on 2012 with respect to 2011 is explained in part by the increase in the number of derailments on main lines caused by the infrastructure. This conclusion confirms that it is necessary to be constantly vigilant on railway infrastructure as already mentioned in the paragraph on monitoring of activities.



The last two categories of significant accidents concerning fires on rolling stock and accidents called 'others' have not seen any great change compared with 2011. These events, have in both cases, seen a declining trend since 2008.

Precursors (warning signs of accidents)



As far as the category of precursors of accidents is concerned the figure observed in 2012 (2.03) is worse than that of 2011. This bad result is explained by the joint effect of an increase of rail fractures, track twists and signalling failures. The increase in broken rails (335 in 2012) compared with 2011 (274) remains below the figure in 2010 (376) and is concentrated in the period of bad weather from 1 to 10 February 2012. This period has seen almost a third of these events. The number of track twists has also increased (217 in 2012) compared to 2011 (171) and is a major concern which has resulted, as already seen previously, in a point of vigilance both during the inspections planned in 2013 or during the quarterly meetings organised by EPSF on the subject. Finally, the relative number of signalling failures has also increased in 2012 (366) compared with 2011 (321). The close analysis of these events by the delegated Infrastructure Manager in charge of the maintenance of the infrastructure has enabled the appropriate actions for these problems to be put into place.

3.5.2 Feedback on experience on serious accidents

The feedback of experience provided by BEA-TT on serious accidents in the field covered by this report has resulted in the publication of eight technical investigation reports on events that took place between May 2010 and February 2012. These reports are the following:

- Technical Investigation Report in January 2012 on the collision between a TER and a coach on 14 December 2010 at Auxerre;

- Final Report in March 2012 on the derailment of wagons carrying dangerous goods on 22 May 2010 at Neufchâteau;
- Technical Investigation Report in July 2012 on the collision between a TER and a road tractor and semi-trailer on 12 October 2011 at Saint-Médard-sur-Ille;
- Technical Investigation Report in July 2012 on the derailment on the main line of two wagons on 9 March 2011 at Artenay;
- Technical Investigation Report in July 2012 on the collision between a freight train and an out-of-gauge load on 25 January 2011 at Balbigny;
- Technical Investigation Report in October 2012 on the collision between a TER and an out-of-gauge load on 31 May 2011 at Mesvres;
- Technical Investigation Report in November 2012 on the collision of two freight trains after one caught the other up that occurred on 1 February 2012 at Maillé;
- Technical Investigation Report in December 2012 on the derailment of three wagons which were hit by a passing TGV on 20 October 2011 at Valence d'Agen.

In addition the collision at Maillé, in 2012 where one freight train caught up another has prompted some technical investigations by BEA-TT on the following accidents:

- the derailment of a TER following the collapse of a retaining wall on 22 May 2012 at Mercuès (46);
- the collision of an overhead line maintenance vehicle with a passenger train on 4 July 2012 at Lachapelle-Auzac (46);
- the collision between a train, a minibus and a light vehicle, on 27 October 2012 at Amilly (28).

3.5.3 Feedback of experience from the system

The EPSF has continued to organise the feedback from the 'System' in 2011. Four meetings have been held of representatives of all the RUs authorised to run on the RFN, the IMs as well as the representatives of MEDDE and BEA-TT.

The discussions at these feed-back meetings have, in particular, covered:

- the sharing of good practices that have been identified;
- the sharing of the feedback following the presentation of incidents or accidents;
- debates on common problems.

In addition to the triggering of the alerts and the feedback meetings the monitoring was made up of:

- four quarterly safety meetings between the IM, the delegated IM and the DST;
- The distribution of 12 monthly letters giving information on the most significant 'safety' incidents.

In 2012, 11 items from the feedback experience system have been initiated on the local level. The object of these meetings has certainly been achieved as they have enabled, by a shared determination of the causes, the introduction by the operators concerned of the necessary actions to avoid the return of the incidents.

4 Conclusion

In conclusion, 2012 was marked by:

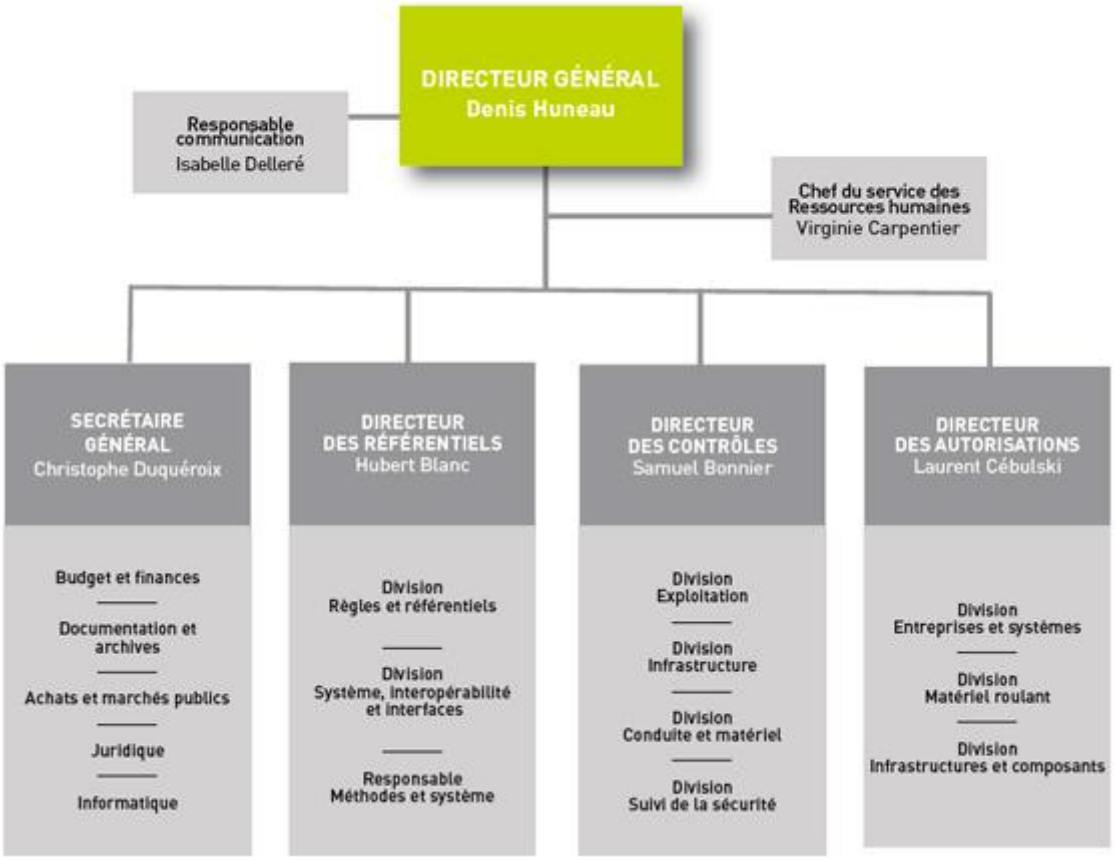
- a positive report in terms of accidents, people killed and seriously injured, which is explained basically by the reduction of the two categories of events connected to accidents on level crossings and accidents to people caused by moving rolling stock. These good 2012 figures obviously require us to remain humble in view of the recent serious accidents at the date of publication of this report;
- the start of the major long-term work for the improvement of railway safety, preparation and revision of the regulations following the appearance of the Order of 19 March 2012.

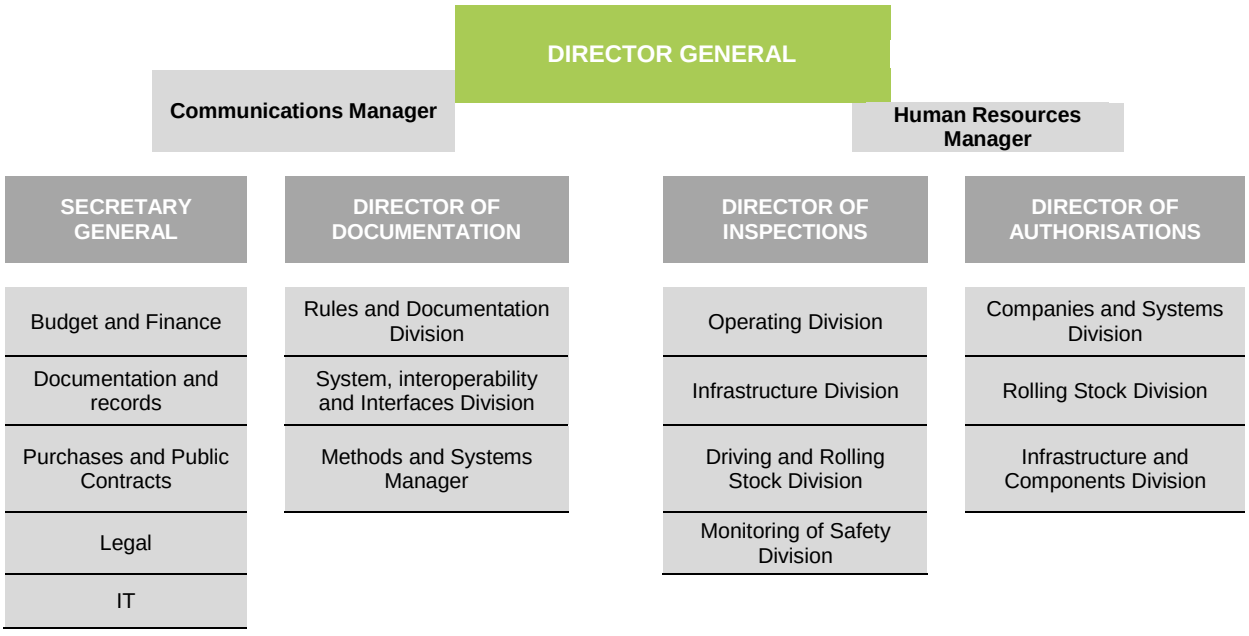
The weak points marked in the monitoring of activities as well as the serious accidents that occurred in 2012, such as the collision caused by the catching up of one train by another at Maillé, the derailment of a TER following the collapse of a retaining wall at Mercuès or the crash of a maintenance rail vehicle into a passenger train at Lachapelle-Auzac must lead the people concerned to remain vigilant. This must result in a strengthening of the inspection at all levels of the system by the railway operators themselves and by EPSF for its part.

The priorities for 2013 have been prepared on the basis of these facts, in particular, for the determination of the programme to monitor the activities. These have dealt with topics of rolling stock and maintenance of the infrastructure. Moreover the changes in organisation and regulations noted in 2012 have resulted in the addition to the 2013 monitoring programme of the checking of the new authorised operators and the verification of compliance of the operators who carry out safety functions.

Annex 1

Organisation of EPSF





Annex 2

List of holders of authorisations issued by EPSF

List of railway undertakings holding safety certificates at 31 December 2012 on the RFN

RAILWAY UNDERTAKINGS	DATE OF ISSUE OF THE SAFETY CERTIFICATE IN PROGRESS	PART A	PART B	DATE OF LAUNCH OF COMMERCIAL SERVICE
TSO	4 July 2013	FR 11 2013 0005	FR 12 2013 0006	29 July 2009
TRENITALIA	31 March 2010		FR 12 2013 0008	22 February 2011
TPCF	19 May 2010	FR 11 2012 0001	FR 12 2013 0001	22 July 2010
CFR	21 July 2010	FR 11 2010 0009	FR 12 2011 0008	19 November 2010
EUROSTAR INTERNATIONAL LIMITED	30 August 2010		FR 12 2012 0020	1 September 2010
ECR	30 September 2010	FR 11 2012 0003	FR 12 2012 0004	13 May 2006
EUROPORT CHANNEL	29 October 2010	FR 11 2010 0020	FR 12 2010 0021	26 November 2007
OSR FRANCE	18 November 2010	FR 11 2010 0022	FR 12 2011 0004	13 December 2010
CROSSRAIL BENELUX	25 November 2010		FR 12 2010 0024	16 November 2011
SNCB LOGISTICS	14 April 2011		FR 12 2011 0003	14 April 2011
EUROPORTE FRANCE	19 October 2011	FR 11 2011 0018	FR 12 2011 0019	13 June 2005
RENFE	27 June 2011		FR 12 2013 0007	21 December 2010

ETF SERVICES	27 June 2011	FR 11 2011 0006	FR 12 2011 0007	5 July 2011
COMSA RAIL TRANSPORT	11 July 2011		FR 12 2011 0005	15 June 2012
THELLO	5 April 2013	FR 11 2013 0003	FR 12 2013 0004	11 December 2011 (under the name TVT)
TX LOGISTIK	18 October 2011		FR 12 2011 0017	21 September 2012
RDT 13	17 November 2011	FR 11 2011 0022	FR 12 2011 0023	11 June 2012
COLAS RAIL	29 November 2011	FR 11 2011 0025	FR 12 2011 0026	8 January 2007
SVI	25 April 2012		FR 12 2013 0002	25 April 2012
NORDCARGO	16 May 2012		FR 12 2012 0022	Launch planned during 2013
SNCF	24 May 2012	FR 11 2012 0007	FR 12 2012 0008	1938 Before the obligation to hold a safety certificate
EGENIE	18 July 2012	FR 11 2012 0013	FR 12 2012 0014	Launch planned during 2013
ETMF	13 August 2012	FR 11 2012 0015	FR 12 2012 0016	20 August 2012
VFLI	16 August 2012	FR 11 2012 0017	FR 12 2012 0018	4 October 2007
CFL CARGO	26 November 2012		FR 12 2012 0023	4 February 2008
NORMANDIE RAIL SERVICES	21 December 2012	FR 11 2012 0024	FR 12 2012 0025	Launch planned during 2013

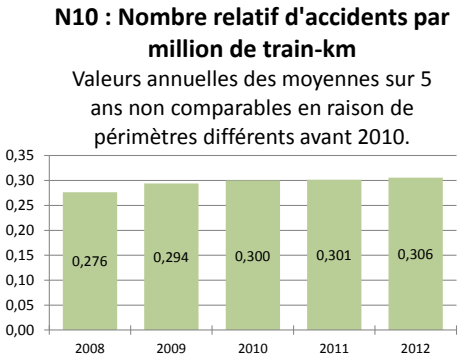
List of Infrastructure Managers who held a safety authorisation in 2012 on the RFN

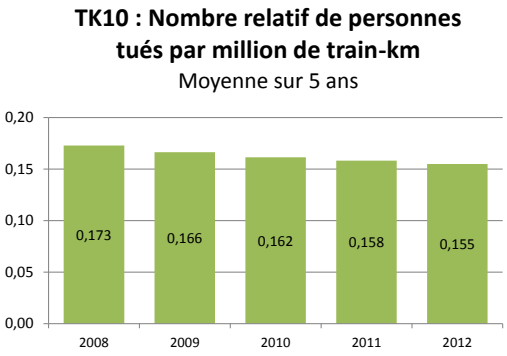
NAMES	DATE OF ISSUE
Réseau ferré de France [French railway system] RFF	27 February 2008 renewed on 14 February 2013
SNCF acting as delegated Infrastructure Manager	27 February 2008 renewed on 14 February 2013
TP FERRO	15 December 2010

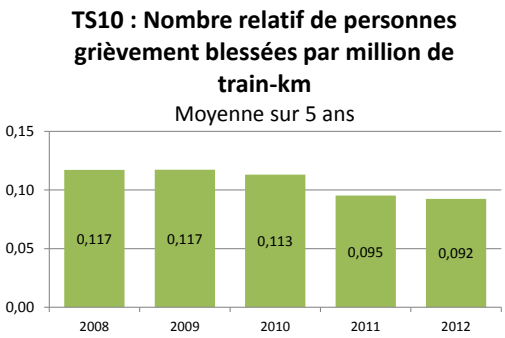
Annex 3

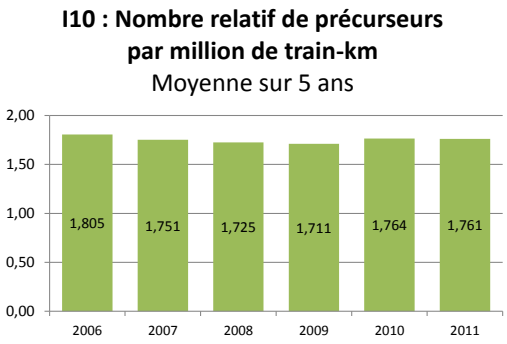
Common safety indicators (CSIs)

The definitions used for these indicators are those defined in Annex VI of the Order of 19 March 2012.









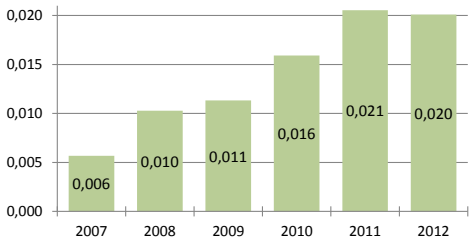
Key:

N10: Relative number of accidents per million train-km Annual values of the averages over 5 years not comparable because the scope was different before 2010	TK10: Relative number of persons killed per million train-km Average over 5 years
TS10: Relative number of people seriously injured per million train-km Average over 5 years	I10: Relative number of warning signs of accidents per million train-km Average over 5 years.
Total costs in million EUR per million train-km	
Not available	

Accidents broken down by type

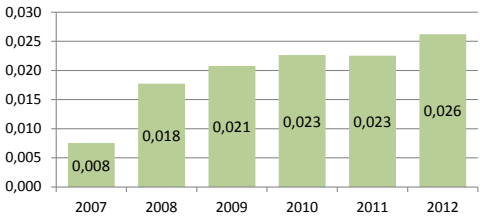
N11 : Nombre relatif de collisions par million de train-km

Valeurs annuelles des moyennes sur 5 ans non comparables en raison de périmètres différents avant 2010.



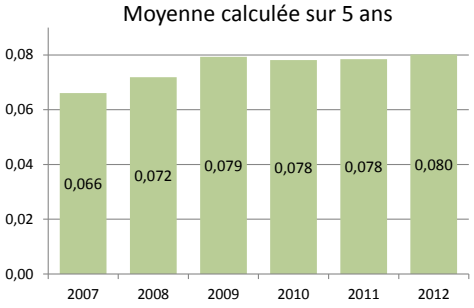
N12 : Nombre relatif de déraillements par million de train-km

Valeurs annuelles des moyennes sur 5 ans non comparables en raison de périmètres différents avant 2008.



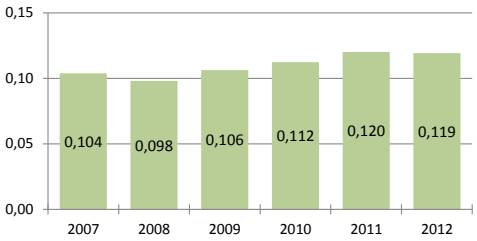
N13 : Nombre relatif d'accidents de passage à niveau par million de train-km

Moyenne calculée sur 5 ans



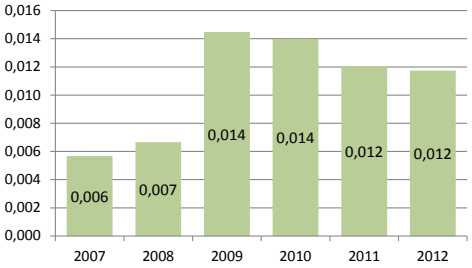
N14 : Nombre relatif d'accidents de personnes causés par le matériel roulant en mouvement par million de train-km

Moyenne calculée sur 5 ans



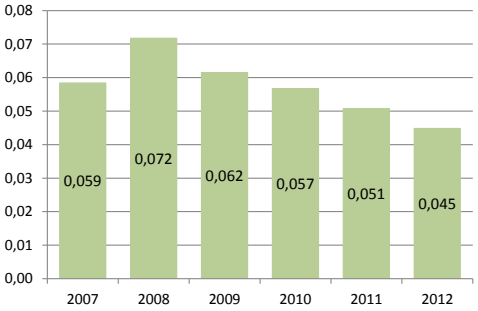
N15 : Nombre relatif d'incendies de matériel roulant par million de train-km

Moyenne calculée sur 5 ans



N16 : Nombre relatif d'accidents autres par million de train-km

Moyenne calculée sur 5 ans



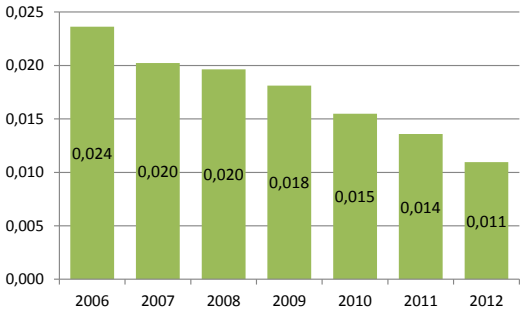
Key:

N11: Relative number of collisions per million train-km Annual values of the averages over 5 years non-comparable because the scope was different before 2010.	N14: Relative number of accidents to persons caused by moving rolling stock/(million km-train) Average over 5 years
N12: Relative number of derailments per million train-km Annual values of the averages over 5 years not comparable because the scope was different before 2008.	N15: Relative number of accidents to persons caused by moving rolling stock/(million km-train) Average over 5 years
N13: Relative number of accidents on level crossings per million train-km Average over 5 years	N16: Relative number of other accidents per million train-km Average over 5 years

Deaths broken down by type of person involved

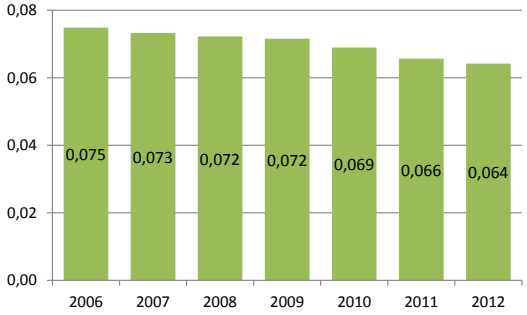
PK10 : Nombre relatif de voyageurs tués par million de train-km

Moyenne calculée sur 5 ans



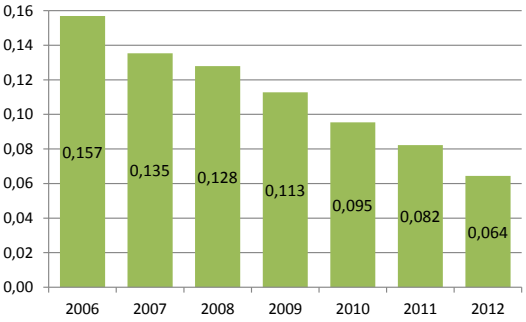
LK10 : Nombre relatif d'usagers de PN tués par million de train-km

Moyenne calculée sur 5 ans



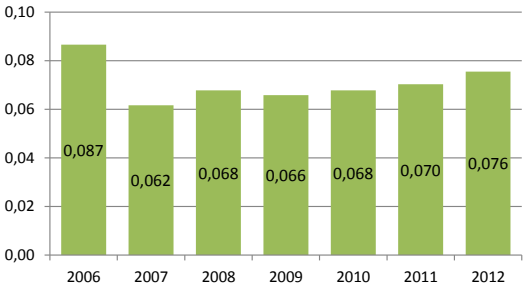
PK20 : Nombre relatif de voyageurs tués par million de voyageur-km

Moyenne calculée sur 5 ans



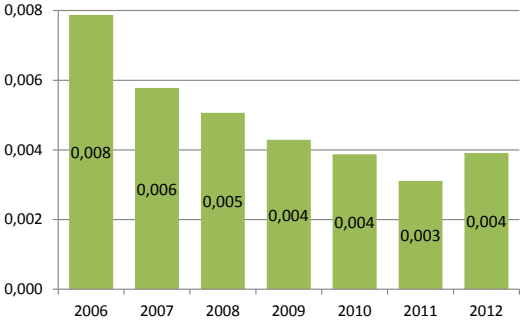
UK10 : Nombre relatif de personnes non autorisées tuées par million de train-km

Moyenne calculée sur 5 ans



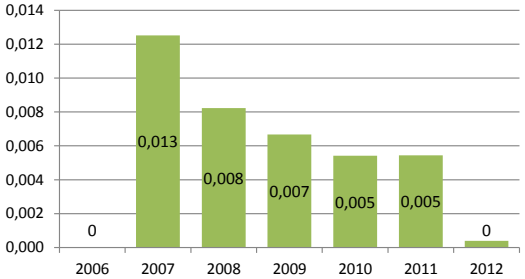
SK10 : Nombre relatif d'employés tués par million de train-km

Moyenne calculée sur 5 ans



OK10 : Nombre relatifs de personnes autres tuées par million de train-km

Moyenne calculée sur 5 ans



Key:

PK10: Relative number of passenger deaths per million train-km	LK10: Relative number of level crossing users killed per million train-km
PK20: Relative number of passenger deaths per million train-km	UK10: Relative number of non-authorised persons killed per million train-km
SK10: Relative number of employees killed per million train-km	OK10: Relative number of other persons killed per million train-km
Average over 5 years	

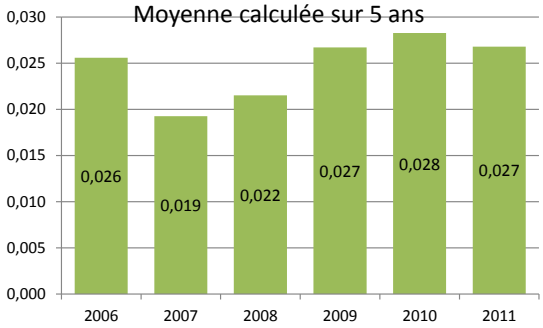
Serious injuries broken down by type of person involved

PS10 : Nombre relatif de voyageurs grièvement blessés par million de train-km

Moyenne calculée sur 5 ans

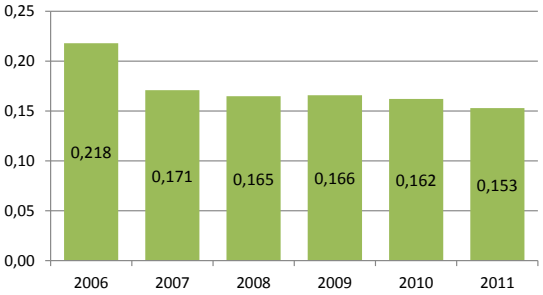
LS10 : Nombre relatif d'usagers de PN grièvement blessés par million de train-km

Moyenne calculée sur 5 ans



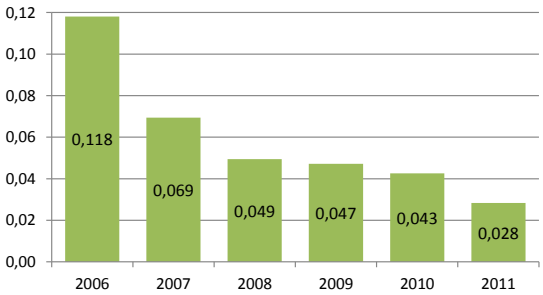
PS20 : Nombre relatif de voyageurs grièvement blessés par million de voyageur-km

Moyenne calculée sur 5 ans



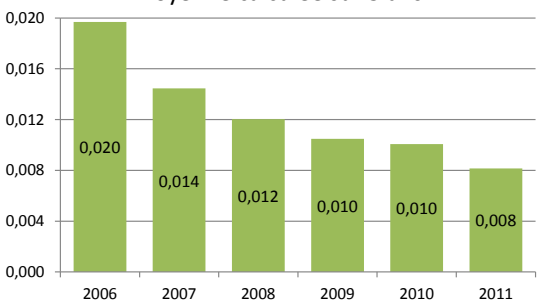
US10 : Nombre relatif de personnes non autorisées grièvement blessées par million de train-km

Moyenne calculée sur 5 ans



SS10 : Nombre relatif d'employés grièvement blessés par million de train-km

Moyenne calculée sur 5 ans



OS10 : Nombre relatif de personnes autres grièvement blessées par million de train-km

Moyenne calculée sur 5 ans

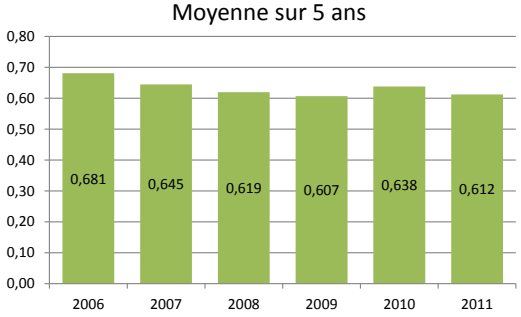
Key:

PS10: Relative number of passengers seriously injured per million train-km	LS10: Relative number of level crossing users seriously injured per million train-km
PS20: Relative number of passengers seriously injured per million passenger-km	US10: Relative number of non-authorised persons seriously injured per million train-km
SS10: Relative number of employees seriously injured per million train-km	0S10: Relative number of people seriously injured per million train-km
Average over 5 years	

Accident precursors

N11 : Nombre relatif de rails cassés par million de train-km

Moyenne sur 5 ans

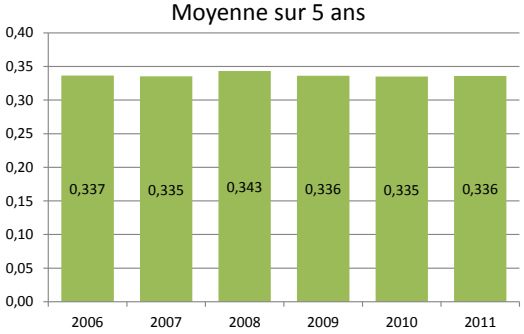


N14 : Nombre relatif de franchissements de signaux franchis fermés par million de train-km

Moyenne sur 5 ans

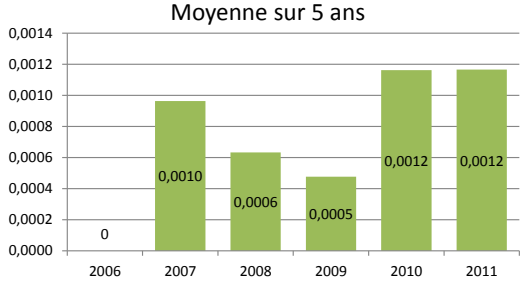
N12 : Nombre relatif de gauches de voie par million de train-km

Moyenne sur 5 ans



N15 : Nombre relatif de roues cassés sur du matériel roulant en service par million de train-km

Moyenne sur 5 ans

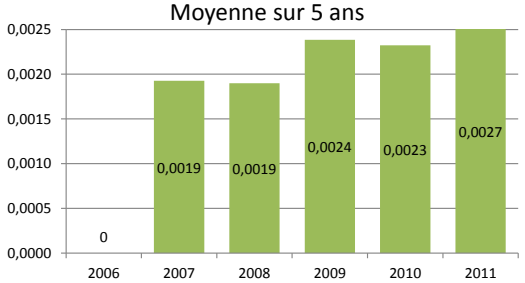


N13 : Nombre relatif de pannes de signalisation par million de train-km

Moyenne sur 5 ans

N16 : Nombre relatif d'essieux cassés sur du matériel roulant en service par million de train-km

Moyenne sur 5 ans



Key:

N11: Relative number of broken rails per million train-km	N14: Relative number of signals passed at danger per million train-km
N12: Relative number of track twists per million train-km	N15: Relative number of wheels fractured on rolling stock in service per million train-km
N13: Relative number of signalling failures per million train-km	N16: Relative number of axles fractured on rolling stock in service per million train-km
Average over 5 years	