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ET DES INFRASTRUCTURES
Département des transports

Administration des chemins de fer

MINISTRY OF SUSTAINABLE
DEVELOPMENT AND
INFRASTRUCTURE (MIDDI)
Transport Department

Luxembourg Railway Authority

Annual Report 2011

of the Luxembourg Railway Authority

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CONTENTS

A.1 Object of the report.....	3
A.2 SUMMARY	3
B. Preliminary Section.....	5
1. <i>Introduction to the report</i>	5
2. <i>Information on the railway structure</i>	5
3. <i>Summary - General analysis of the trends (progress of railway safety, certification, etc.)</i> ...	6
C. Organisation	8
1. <i>Presentation of the organisation</i>	8
2. <i>Organisational charts</i>	11
3. <i>Activities</i>	11
D. The development of railway safety.....	15
1. <i>Initiatives aimed at maintaining/improving the safety performance</i>	15
2. <i>Detailed information on the analysis of the trends</i>	20
3. <i>Results of the safety recommendations</i>	21
E. Important changes made to the legislative, regulatory and administrative arrangements...	22
1. <i>Legislation</i>	22
2. <i>Regulations</i>	22
F. The development of safety certification and authorisation	23
1. <i>National legislation - dates of introduction - availability</i>	23
2. <i>Numerical data (Appendix E)</i>	24
3. <i>Procedural aspects</i>	24
G. Monitoring of the railway undertakings and infrastructure managers'.....	27
1. <i>Monitoring of the railway undertakings and Infrastructure Managers</i>	27
2. <i>Description of the treatment of the legal aspects in the annual reports of the Infrastructure Managers and railway undertakings – Availability of the annual reports before 30 June (in accordance with Article 9(4) Railway Safety Directive)</i>	27
3. <i>Number of inspections carried out at the IM and RUs in 2011</i>	28
4. <i>Number of audits carried out at IMs and RUs in 2011</i>	28
5. <i>Summary of the measures/corrective actions (amendment, withdrawal, suspension, serious warning, etc.) connected to safety aspects following these audits/inspections</i>	28
6. <i>Summary/brief description of the complaints of Infrastructure Managers on the subject of railway undertakings, to do with the conditions stipulated in their Part A/Part B certificates</i> ...	28
7. <i>Summary/brief description of the complaints of railway undertakings on the subject of infrastructure managers, to do with the conditions stipulated in their authorisation</i>	29

H. Report on the application of the CSMs to the risk assessment	29
I. Conclusions – Priorities.....	30
J. Sources of information	31
K. Annexes.....	31

A.1 OBJECT OF THE REPORT

This report covers the activities of the **ACF** (*Administration des Chemins de Fer*) [Luxembourg Railway Authority] in its capacity as **National Safety Authority (NSA)** during the year 2011.

The objectives of the report are defined in Article 5 of the amended law of 22 July 2009 on railway safety. The report must contain information on:

- a) progress with railway safety, including an inventory of the Common Safety Indicators (CSIs) defined in Annex 1 of Directive 2004/49/EC,
- b) important amendments made to the rules applicable to railway safety,
- c) changes in certification and authorisation as far as safety is concerned, and
- d) results of the monitoring of the Infrastructure Manager (IM) and railway undertakings (RUs) and the lessons that have been learnt,
- e) the dispensations which have been decided in accordance with Article 20c (see page 9, Article 20c(5)).

As the above-mentioned law requires the ACF to organise the allocation of the paths and the access charges, this report also gives a brief overview of the services provided by the ACF in this area.

A.2 SUMMARY

The National Safety Authority, called 'Administration des Chemins de Fer (**ACF**)' was set up by the amended law of 22 July 2009 on railway safety. This law is the transposition of Safety Directive 2004/49/EC into Luxembourg legislation.

2011 is the third annual safety report prepared by the ACF. Thus a meaningful analysis of trends is not yet possible.

The ACF annual safety report 2011 deals with the activities of the ACF and the Common Safety Indicators (CSI).

In 2011, Luxembourg issued one safety certificate type A and two type B according to the Safety Directive. Further, one request for safety certificate part B was registered. For this safety certificate, the evaluation process is on-going. The same applies to the request for a safety authorisation by the Infrastructure Manager.

Due to limited human resources, the ACF was only able to perform one safety inspection (on an RU holding a Luxembourg A and B certificate) during 2011.

The following major safety-related events were recorded:

Events	2011	2010
Accidents at level crossings, including accidents involving pedestrians	0	2
Train collisions	0	1
Accidents to unauthorized persons on railway premises hit by moving vehicles (suicide could not be reliably proven)	1	0
Employee died during work caused by rolling stock in motion	0	0
Suicides	7	3
Broken rails	2	1
Track buckles	1	1
Wrong-side signalling failures	1	3
Signal passed at danger	11	4

Hereafter some safety related infrastructure characteristics:

Infrastructure characteristics	2011	2010
Tracks equipped with the Automatic Train Protection System MEMOR II+	100%	100%
Main fixed signals and caution fixed signals equipped with the Automatic Train Protection System MEMOR II+	100%	100%
Tracks equipped with ETCS Level 1	88%	80%
Main fixed signals and caution fixed signals equipped with ETCS Level 1	87%	62%
Active level crossings	106	106
Passive level crossings	32	32

B. PRELIMINARY SECTION

1. Introduction to the report

The annual report has been prepared in accordance with Article 18 of Directive 2004/49/EC and Article 5 of the modified law of 22 July 2009 on railway safety. The structure of this report is in accordance with the recommendations (model and guide) of the European Railway Agency.

This safety report is the third prepared by the Grand-Duchy of Luxembourg.

It has been prepared firstly from information supplied by the railway undertakings (RUs) which had a safety certificate valid in Luxembourg for the year 2011, and by the Infrastructure Manager (IM) through their annual reports on safety, and secondly by adding some information produced by the ACF as part of its activities.

As the ACF was only established during the financial year 2009 it is still in the setting up phase (establishment of the internal organisation and recruitment of staff). It has carried out audits of the RUs as far as possible but not with the frequency necessary. Thus the report only contains limited data relating to the ACF regarding paragraph d) of Article 5 of the amended law of 22 July 2009 on railway safety.

Regarding the common safety indicators, the ACF has applied Commission Directive 2009/149/EC amending the common safety indicators and the common methods to calculate the costs of accidents of Directive 2004/49/EC of the European Parliament and of the Council.

In accordance with Article 5 of the amended law of 22 July 2009, the ACF has sent a report to the Ministry of Sustainable Development and Infrastructure on the work it has done and a copy to the European Railway Agency. The report can be consulted on its Internet site www.railinfra.lu

The ACF also supplied a paper version for a restricted distribution to national stakeholders and other interested people.

2. Information on the railway structure

- Map of the network (see point A.1 of Annex A)

The information in the Annex has been supplied by the CFL, (*Société Nationale des Chemins de Fer Luxembourgeois* – [Luxembourg National Railways] the manager of the Luxembourg railway infrastructure.

- For the list of the railway undertakings and Infrastructure Managers (see points A.2; A.2.1 and A2.2 of Annex A)

3. Summary - General analysis of the trends (progress of railway safety, certification, etc.)

As this is only the third safety report prepared by the Grand-Duchy of Luxembourg it is still not appropriate to give details of how railway safety has evolved.

The ERA has analysed the common safety indicators supplied in 2010. This analysis has not resulted in any recommendations for improvement. The 2011 safety indicators are of the same order of magnitude as the previous financial years, apart from signals passed at danger which have seen a net increase although no serious accident has been produced. Thus, overall railway safety has held steady at a good level.

There was one fatal accident to a person not authorised to be on railway premises who was struck by moving rolling stock. During the financial year 2011 seven suicides and eleven signals passed at danger without authorisation were recorded. Besides the individual measures taken against the drivers responsible for passing signals at danger, some general measures have been introduced into the basic training and the continuing training (to improve behaviour). The RU responsible for nine signals passed at danger has introduced a coaching plan for drivers by its instructors and the creation of a group of tutor drivers who supervise and instruct each trainee driver individually.

Several legal texts have been introduced into Luxembourg law, amending or completing the existing Luxembourg legislation, in particular by the transposition of the Directive 2008/110/EC and the publication of the regulations concerning the International Carriage of Dangerous Goods by Rail (RID), Annex C of the COTIF.

In 2011 Part A and Part B safety certificates in accordance with Directive 2004/49/EC have been issued to one RU (renewal) and another RU was granted a B certificate. At the end of 2011, two RUs were in possession of A and B certificates, and a third had a B certificate.

One Part A and two Part B safety certificates have been prepared on the basis of the files presented by the applicants and discussions carried out with them. As the request for a new Part B certificate had been lodged in 2010, the ACF has applied the assessment criteria given in the draft regulations of the European Commission for a common safety method for the assessment of conformity with the requirements for obtaining a safety certificate. The draft of this was prepared by the ERA.

For the renewal of a Part A and B certificate, the evaluation has been based on the criteria of Regulation (EU) No 1158/2010.

Another RU has requested a Part B certificate, and the evaluation procedure is in progress.

The assessment of the first application to obtain a safety authorisation has been recorded and the evaluation is in progress. For this request dating from 2010, the ACF is carrying out a double assessment, one based on the draft regulation (EU) prepared by the ERA and a second based on Regulation (EU) No 1169/2010. In effect, after the conclusion of the assessment and on the basis of the draft regulation, an approval with a duration of validity of one year should be

prepared. During this year the IM will have the opportunity to comply completely with the requirements of Regulation (EU) No 1169/2010.

C. ORGANISATION

1. Presentation of the organisation

ACE was created by Article 3 of the amended law of 22 July 2009 on railway safety. It is placed under the authority of the member of the government having the railway in his remit, at present the Ministry of Sustainable Development and Infrastructure (MDDI).

The remits of the ACF are defined in Articles 4.1, 4.2 and 20c of the law mentioned above.

Article 4.1. *The Administration is responsible for the maintenance and improvement of the level of safety in the railway industry in conformity with the national and international provisions applicable. For this purpose it must carry out the following tasks in an open, non-discriminatory and transparent manner:*

- a) ensure that the rolling stock is duly registered and that the information regarding safety given in the national register should be accurate and kept up to date;*
- b) examine the files with a view to the publication, renewal, re-examination, amendment, withdrawal and suspension by the Minister of safety certificates and authorisations in accordance with the provisions of the current law and the Grand-Ducal Regulations, as well as checking that the conditions of validity are fulfilled;*
- c) check the conformity with the interoperability components laid down by the legislation and the regulations in force;*
- d) authorise in application of the legislation and the regulations in force the introduction of the sub-systems of a structural nature that make up the railway system used or operated in Luxembourg and check that they are used and maintained in accordance with the essential requirements that concern them;*
- e) carry out the tasks which are delegated to it in accordance with the current law and the regulations of the Grand-Duchy for the introduction into service of the rolling stock used on the Luxembourg railway system, in particular the authorisation of the introduction of new or substantially modified rolling stock which is not yet covered by a TSI and check that it is operated and maintained in accordance with the essential requirements that relate to it;*
- f) carry out the tasks delegated to it in accordance with the current law and the regulations of the Grand-Duchy on the training and certification of the staff allocated to the tasks of safety on the Luxembourg railway system;*
- g) check, promote, apply, develop and publish the regulations regarding railway safety, including the system of national safety rules;*
- h) assist and advise the Minister in carrying out his duties regarding railway safety and interoperability;*
- i) provide support to studies and activities connected with railway safety;*
- j) cooperate with its opposite numbers, in particular with a view to the harmonisation of the certification criteria for railway safety;*
- k) Check, during audits regarding freight wagons, that the entity responsible for the maintenance is certified in accordance with the community and national law;*

- l) hold, revise and adapt the national register for vehicles ensuring that the vehicles are duly registered in the national vehicle register and that the information regarding safety given there is accurate and kept up to date.

Article 4.2. *The Administration has the task of ensuring equitable and non-discriminatory access to the railway infrastructure for all railway undertakings and avoidance of any abuse of the dominant position of one or several railway undertakings to the detriment of others. For this purpose it organises the allocation of paths and the system of tariffs for the railway infrastructure as laid down respectively in Articles 22 and 25 of the amended law of 11 June 1999 on the access to the infrastructure and its use.*

Art. 20c 1. *Before any vehicle is put into service or used on the Luxembourg railway system it should be allocated to a maintenance entity which is listed in the national vehicle register.*

2. *A railway undertaking, an Infrastructure Manager or a holder can be an entity responsible for the maintenance.*

3. *Without prejudice to the responsibility of the railway undertakings and Infrastructure Managers, for the safe operation of a train as specified in Article 12(3) the entity shall ensure, by means of a maintenance system that the vehicles for which it is responsible for the maintenance are in a running condition that enables them to operate safely. To this end the entity responsible for the maintenance shall ensure that the vehicles are maintained in accordance with:*

- a) the maintenance book of each vehicle;*
- b) the requirements in force including the rules for maintenance and the provisions regarding TSI.*

The entity responsible for maintenance carries out the maintenance itself or sub-contracts this to a maintenance workshop.

4. *When it is a question of freight wagons, each entity responsible for maintenance must be certified by an accredited or recognised body. The process of accreditation and recognition is based on criteria of independence, competence and impartiality. The accreditation and the recognition are granted by the Minister after having asked the opinion of the Luxembourg Railway Authority.*

When the entity responsible for the maintenance is a railway undertaking or an Infrastructure Manager, the conformity with the requirements shall be checked by the Luxembourg Railway Authority in accordance with the procedures in force for the certification and agreement as far as safety is concerned. This certification is only applicable to the vehicles for which the railway undertaking or the Infrastructure Manager is the holder.

5. *The obligations of identification and certification of the entity responsible for the maintenance can be covered by other measures in the following cases:*

- a) vehicles registered in a third country and maintained in accordance with the legislation of this country;*
- b) vehicles used on the railways or lines where the track gauge is different from that of the main railways of the European Union and for which the conformity with the requirements referred to in paragraph 3 is ensured by international agreements concluded with third countries;*

- c) *Vehicles referred to in Articles 1(2) and 1(3,) as well as special consignments or military traffic requiring the issue of an ad-hoc permit by the Luxembourg Railway Authority before it was put into service. In this case the dispensations are granted for maximum periods of five years.*

These other measures are introduced through the dispensations granted by the Luxembourg Railway Authority:

- a) *during the registration of the vehicles to enable them to be identified and the entity responsible for their maintenance to be known;*
- b) *during the issuing of authorisations and safety certificates to railway undertakings and Infrastructure Managers, in accordance with the procedures in force for the certification and the approval, as far as safety is concerned, or the certification of the entity responsible for the maintenance.*

These dispensations are identified and justified in the annual report on safety referred to in Article 5.

As specified in Article 32 of the amended law of 22 July 2009, ACF was officially set up on 1 August 2009.

At 31 December 2011, ACF was made up of a Director and four divisions.

- **The General Affairs Division** which has one *member* of staff doing the job of secretariat and finance.
- **The Legal Affairs Division** with 1 lawyer;
- **The Interoperability and Safety Division** which has six members of staff:

Two are involved with the authorisation and introduction into service of railway rolling stock and associated subjects,

One ensures the coordination in matters of railway interoperability and safety between the European Commission (DG Move), the ERA, the MDDI and the ACF, as well as with other railway organisations,

One works on the preparation and revision of the various registers

One deals with the certification of railway undertakings, the Infrastructure Manager and the entities responsible for maintenance,

One is responsible for the management of matters relating to the sub-systems control-command and signalling;

- **The Paths Division** has 10 staff to deal with the allocation and charging for paths.

At the end of 2011 the number of staff had increased to 19.

The recruitment of other railway experts and the setting up of an organisation that meets all the national and international obligations continue to be among the principle objectives of ACF.

2. Organisational charts

Annex B

3. Activities

General Affairs Division

Management of administrative matters regarding staff, mail, purchase of office material, the telephone exchange, organisation of ACF staff travel arrangements, as well as the financial affairs of ACF.

Legal Affairs Division

Preparation and signature of the conditions of use of the Luxembourg railway infrastructure between on one hand the national safety authority and the Infrastructure Manager, and on the other hand the railway undertakings.

Contribution to the preparation of Luxembourg legal texts, in particular the transposition of European legal texts into Luxembourg law.

Interoperability and Safety Division

a) European organisations

Participation in the plenary meetings of the European national safety authorities with the ERA and in the related "workshops".

Participation in the meetings of the various working groups (TSI Wagons, TSI Locomotives and Passenger Vehicles, Mutual Acceptance of Rolling Stock, National Vehicle Register, National Safety Rules, Entity in Charge of Maintenance, ERTMS and Safety Performance) at the ERA at Lille. The decision of whether or not ACF should participate in the working groups depends on the importance of the subject compared with the availability of human resources.

Participation at the meetings to discuss the amendment of the BeNeFLuCh protocol for the numbering imposed by the ERA in application of the decision 2009/965/EC of the European Commission.

Participation in the meetings for the mutual recognition between Belgium, Luxembourg and Germany with finalisation of the technical document on 17 March 2011.

Participation in the meetings of the Railway Interoperability and Safety Committee (RISC Committee) at the European Commission on behalf of the MDDI. This committee, composed of representatives of Member States of the European Commission and the ERA, was set up by Directive 96/48 and deals with all the subjects concerned with railway interoperability and safety.

Active participation in different 'workshops' organised by the European Commission dealing with railway interoperability and safety and the 'Task Force' on the national safety rules.

Participation in plenary meetings and in meetings of the 'Regulatory Subgroup' of the ILGGRI (International Liaison Group of Government Railway Inspectorates).

b) National organisations

Participation in the MDDI working group for the transposition into Luxembourg law of Directive 2008/110/EC on the safety of the communities' railways; publication of the law of 14 December 2011 transposing Directive 2008/110/EC.

c) Authorisation of sub-systems

Consultation with the CFL IM on the subject of the construction of a new line linking the stations of Luxembourg and Bettembourg, as well as the application of different procedures, in particular, the adoption of a method of common safety regarding the assessment and the evaluation of the risks, in the area of new introductions to service of a redevelopment or renewal of sub-systems.

Setting up a national vehicle register with the registration of 4 806 vehicles, made up of 4 553 wagons, 133 coaches, 109 locomotives, 11 powered vehicles (works vehicles) and connection with the virtual register of the countries of the EU.

Preparation of a national register in view of the introduction of licences for drivers of powered vehicles.

Appointment of an industrial psychologist to assist in the certification of train drivers.

Management of the file and putting forward of opinions to the Minister on the approval of two competent bodies.

Management of the file related to the request by a builder for type approval to put a new class of locomotives into service built for the account of a railway undertaking.

Management of the file relating to the request by a builder for type approval for three car double deck railcars.

Management of the file relating to the equipment of railcars with a new ground to train bi-mode analogue/GSM-R radio, and preparation of two authorisations to put into service applicable to a fleet of 12 railcars.

Management of the file relating to making the equipment conform with the requirements of the IM imposed on the national railway infrastructure and the registration of locomotives.

Management of four files and taking a decision relating to the compatibility with the installations of the railway and the use on the national railway infrastructure of new versions of the software applied to different on-board equipment of ground to train radios.

Analysis of the files and taking decisions regarding requests for authorisation of rolling stock to run exceptionally on the Luxembourg railway system (127 cases dealt with).

Analysis of the file relating to operation of trains with a length greater than 750 m on the national railway infrastructure following a request presented by a railway undertaking.

Closure of the authorisation to introduce into service a second batch of railcars acquired by a railway undertaking.

Preparation of an authorisation to introduce into service new versions of the 'H6' software applicable to different railcars.

Preparation of an authorisation to introduce into service an initial batch of five machines acquired by the Infrastructure Manager to carry out various maintenance work on the railway network.

Preparation of an authorisation to introduce into service a levelling machine /ballast profiler purchased by the Infrastructure Manager.

Preparation of an authorisation to introduce into service a diesel locomotive leased by a railway undertaking.

Closure of the authorisation to introduce into service 70 flat bogie wagons of the Rens type and 540 flat bogie wagons of the Rbnps type.

Preparation of authorisations to introduce into service 18 flat bogie wagons of the Slps type.

Preparation of the authorisations for the registration of a total of 330 existing wagons and wagons of different types in the national vehicle register which are designed to work on the part of the NON-TEN railway such as intended by the law of 18 December 2006 (tertiary railway system).

Admission to traffic of 338 articulated flat bogie wagons of the Sdggmrss TWIN type, designed to carry swap bodies.

d) Certification regarding safety

Finalisation of the assessment of the files regarding the application for a certificate B and the renewal of the A and B certification of a railway undertaking.

Examination of the file for the application for a safety certificate B of a railway undertaking as well as the application regarding the safety authorisation of the Infrastructure Manager

Paths Division

Allocation for the 2011 timetable valid from 13 December 2010 to 12 December 2011, of 1 625 paths of which 1 165 were for passenger traffic and 237 for freight traffic. 223 paths were for running empty trains and no paths were for service trains. These 1 625 paths represent 362 080 trains planned to run 8 825 466 km.

30 timetable notices regarding 769 amendments, creations or cancellations of paths have been published during the monthly updates of the 2011 timetable.

Preparation of 702 traffic advices concerning 35 897 amendments, creations or cancellations of trains at short notice (request up to day five before train runs).

Publication of 10 397 traffic advices (short term) by post 24h/24h concerning last minute changes.

A total of 365 042 trains actually ran and covered 8 860 401 km in 2011.

Preparation of the 2012 timetable, beginning on 12 December 2011 and remaining in force until 8 December 2012. 1 553 paths have been allocated of which 1 147 are for passenger trains, 228 for freight trains, 174 for empty trains and four for service trains.

Amendment and publication of the network reference document (DRR) 2012.

Participation at two General Assemblies of RailNetEurope (RNE) at Bled and at Vienna, as well as in various working groups of RNE.

Support of railway undertakings at the meetings of the Forum Train Europe (FTE).

Consulting member of the meetings of the Management Committee Corridor C.

D. THE DEVELOPMENT OF RAILWAY SAFETY

1. Initiatives aimed at maintaining/improving the safety performance

Table D.1.1 – Safety measures triggered by accidents / precursors of accidents

Accidents/precursors that led to the measure			Safety measures decided
Date	Place	Description of the event	
18/01/2011	Luxembourg	Signal passed at danger	<ul style="list-style-type: none"> – Suspension of the driver Examination of medical aptitude Psychological assessment Checking of professional knowledge by a qualified instructor Practical test on the driving simulator – After resuming his driving duties: 1st shift accompanied by a qualified instructor Supervision increased by further turns accompanied by a qualified instructor during the next year – General measures introduced: Basic training and continuous training - action on behaviour Introduction of coaching of drivers by instructors of the railway undertaking Creation of a group of tutor drivers responsible for instructing a trainee driver on a personal basis
5/02/2011	Pétange	Signal passed at danger	– See measures above
3/06/ 2011	Esch-sur-Alzette	Signal passed at danger	– See measures above
14/06/2011	Belval-Usines	Signal passed at danger	– See measures above
18/07/2011	Rodange	Signal passed at danger	– See measures above
19/07/2011	Rodange	Signal passed at danger	– See measures above
9/09/2011	Berchem	Signal passed at danger	– See measures above
3/10/ 2011	Bettembourg	Signal passed at danger	– See measures above
23/11/2011	Noertzange	Signal passed at danger	– See measures above

Accidents/precursors that led to the measure			Safety measures decided
Date	Place	Description of the event	
14/11/2011	Luxembourg	Passing a main signal at danger although during the passing of the train the advance signal showed the home signal was clear.	<ul style="list-style-type: none"> – Driver suspended (after the investigation, see below the driver was not at fault) – Investigation was carried out by the IM and the supplier of the CCS equipment of the signal box. The signal went to danger automatically and unexpectedly at the moment when the train had already passed the distant signal. When the signal was put back to danger and the train passed there was no danger to the operation of the railway.
7/03/2011	Ettelbruck	A signal mobil d'arrêt (SMA) [<i>mobile stop signal</i>] that was intended to protect a gang working on the track was erroneously put in the wrong place	<ul style="list-style-type: none"> – The maintenance department was invited to remind its staff during its training sessions that it is important to ensure that SMAs are correctly positioned
5/05/2011	Luxembourg Station North Sector	A metallic plate from a road worksite fell on the overhead line of the Dm-L track (Elementary section 1070)	<ul style="list-style-type: none"> – Immediate measures taken: Lines blocked and work stopped – Measure taken following investigation by an inspector of private companies: Introduction under the slab to be demolished of a protective floor made of wood resting on the flanges of the principal beams
20/05/2011	Luxembourg Stadtgrund junction	Subsidence of track 311 following civil engineering work on the embankment	<ul style="list-style-type: none"> – Adaptations of inspection procedures
26/05/2011 22/06/2011 9/07/2011 29/07/2011	Luxembourg Station Satdtgrund sector	Clausen railway bridge struck by a lorry	<ul style="list-style-type: none"> – Fitting of fixed loading gauges on one side and the other of the structure to avoid road vehicles coming into contact with the floor slab supporting the rails of line 1.
20/06/2011	Kilometre post 45,850 on the Luxembourg-Troisvierges line Upper passage at Schieren	Mechanical shovel working around the tracks hit train 8641 L-Gy passing by with the arm of the shovel	<ul style="list-style-type: none"> – Preparation by the private companies of a training course entitled 'Railway risks' for its collaborators and its regular sub-contractors (finalisation of the documents by the private companies inspector of the Infrastructure Manager)

Accidents/precursors that led to the measure			Safety measures decided
Date	Place	Description of the event	
			<ul style="list-style-type: none"> – Preparation by the private company of a welcome leaflet to inform the sub-contractors and the intermediaries when they arrive on site

Table D.1.2 – Safety measures resulting from other reasons

Description of the cause	Description of the field concerned	Safety measures taken
Problem of communication on the operational plan between French and German speakers	Communication	<ul style="list-style-type: none"> – Creation of a teaching DVD 'e-Learning tool' to help solve the linguistic communication problems
Feedback of experience from IM	Work of level crossing keepers	<ul style="list-style-type: none"> – Production of a documentary film on the procedure for managing level crossings on site – This material is used as the teaching material for training courses and revision courses for crossing keepers
Request for the delegation of Fixed installations (IM) staff	Circulation of works trains of the IM	<ul style="list-style-type: none"> – Creation of a single form for the request for paths to ACF for the requirements of the Infrastructure Manager
Safety of the staff engaged on the work site (including passengers)	Work sites created by the IM	<ul style="list-style-type: none"> – Introduction of a note regulating the closure of work sites
Feedback of experience from IM	Private siding at Betrange-Strassen Presence of return current on the private siding	<ul style="list-style-type: none"> – Creation of a neutral zone – Isolation of the reception sidings of the private siding from the earth during the rail movements
Feedback of experience from IM	Schematic diagrams of the blue instructions	<ul style="list-style-type: none"> – Introduction of service instruction No 63 defining the conventional signs referring to the blue instructions
Installation of electric traction in 2 x 25 000V / 50 Hz~	Installation of electric traction	<ul style="list-style-type: none"> – Introduction of Part 1/5 defining the general principles of supply, shutting off the power and operation

Description of the cause	Description of the field concerned	Safety measures taken
Feedback of experience from IM	Work sites created by the IM	<ul style="list-style-type: none"> – Introduction of a note defining the loading gauge for removal of ferrous materials close to axle counters when work is done on the track
Various transitional arrangements of the Grand Ducal Regulation of 16 August 2010 regarding the certification of train drivers	Part No 9 of the General Regulations for Technical Operation (GRO)	<ul style="list-style-type: none"> – Note cancelling the provisions of GRO 09.03.04 in case of trains running on written order where the driver does not have knowledge of the line
Feedback of experience from IM	Frontier instructions	<ul style="list-style-type: none"> – Adaptation of Annex No 1 and revision of Annex No 3 of the frontier instruction CFL/DB Network – introduced on 1 August 2011

2. Detailed information on the analysis of the trends

Salient facts	2011	2010
Accidents at level crossings including accidents involving pedestrians	0	2
Train collisions, including those with obstacles within the loading gauge	0	1
Fatal accidents to unauthorised persons on railway premises struck by moving rolling stock	1	0
Fatal accidents to staff	0	0
Suicides	7	3
Broken rails	2	1
Cases of track buckling	1	1
Signalling failures that affected safety	1	3
Signals passed at danger without authorisation	11	4

Infrastructure characteristics	2011	2010
Lines fitted with the MEMORII+ automatic train protection system	100%	100%
Main fixed signals and advance fixed signals fitted with MEMORII+	100%	100%
Lines fitted with ETCS level 1	88%	80%
Main fixed signals and advanced fixed signals fitted with ETCS level 1	87%	62%
Level crossings with active equipment	106	106
Level crossings with passive equipment	32	32

In 2011 a person who was not authorised to be on railway premises was seriously injured and seven suicides have been recorded. This is an increase compared with 2010. Regarding the warning signs for accidents/incidents broken rails and track twists have remained practically unchanged. Signalling failures have reduced, while signals passed at danger have significantly increased.

No signals passed at danger have caused an accident. Apart from measures against the train drivers concerned, the railway undertaking most affected by this has taken action to improve driver training and supervision (see Chapter D Table D.1.1).

The implementation of ETCS level 1 on the infrastructure side is making steady progress.

Thus, the overall level of safety can be considered as stable and at a good level. However, the medium or long term trend of the common safety indicators cannot yet be supplied because this is only the third report of the Luxembourg Railway Authority.

3. Results of the safety recommendations

L'Administration des Enquêtes Techniques (AET) [Administration for Technical Investigations] was set up by the law of 19 May 2008. In 2009 it published its first safety recommendations together with the *Bureau d'Enquêtes sur les Accidents de Transport Terrestre* (BEA-TT France) [Land Transport Accident Investigation Bureau], as part of the technical report on the railway accident at Zoufftgen. This accident which occurred in 2006 resulted in the death of 6 people.

Following this accident 21 recommendations were made of which 15 have been implemented or are in the course of being implemented, 5 have been rejected and 1 did not concern the staff of Luxembourg State Railways. All these recommendations were given in the report for 2009. Below there is some **additional information** on the progress with recommendation R8:

Recommendation R8 (CFL, SNCF, RFF): examine the feasibility of extending SAAT (*Système d'Annonce Automatique des Trains SNCF*) [the SNCF Automatic Train Announcing System ATAS] to Bettembourg, by displaying the first train announced on the VCP (Visual Control Panel).

The automatic train announcement systems such as the ZNL 800 [*Zugnummernmeldeanlage* – train number announcement system] of the CFL or the ATAS of SNCF are only aids to operation and never affect the safety of train running. They can only contribute indirectly to the improvement of safety.

The CFL and SNCF have taken the decision to develop an interface to connect the ZNL 800 and ATAS systems. This interface is in the trial phase between Longwy (SNCF) and Rodange (CFL).

Following various technical problems met during the test phase of the connection interface of the ZNL 800 CFL and SAAT SNCF between Longwy and Pétange, the introduction of this installation has had to be put back to the start of the 2013 financial year.

E. IMPORTANT CHANGES MADE TO THE LEGISLATIVE, REGULATORY AND ADMINISTRATIVE ARRANGEMENTS

1. Legislation

- Law of 2 June 2011 on

1. transposition of Directive 2005/47/EC of the Council of 18 July 2005 regarding the agreement between the *Communauté européenne du rail* (CER) [Community of European Railway and Infrastructure Companies] and the *Fédération européenne des travailleurs des transports* (ETF) [European Transport Workers Federation] on certain aspects of the conditions of employment of mobile workers who work on interoperable services that cross frontiers in the railway sector;
2. modification of the *Code du travail* [Labour Code]

(Publication in Mémorial A No 119 of 10 June 2011)

- Law of 14 December 2011 dealing with the transposition of Directive 2008/110/EC of the European Parliament and the Council of 16 December 2008 amending the Directive 2004/49/EC regarding the safety of the Community railways (Directive on the safety of the railways) and amending

1. The law of 22 July 2009 on railway safety
2. The amended law of 11 June 1999 on access to the railway infrastructure and its utilisation;

(Publication in Mémorial A No 273 of 27 December 2011)

- Coordinated text of the amended law of 22 July 2009 the object of which is

- A) to transpose into national law the Directive 2004/49/EC of the European Parliament and the Council of 29 April 2004 on the safety of the railways of the communities;
- B) to create a regulatory framework in the field of railway safety;
- C) to set up a Railway Administration and
- D) to amend
 - a) the amended law of 11 June 1999 regarding access to the railway infrastructure and its utilisation and
 - b) the amended law of 29 June 2004 on public transport.

(Publication in Mémorial A No 273 of 10 November 2011)

- Grand-Ducal Decree of 23 October 2011 dealing with the publication of the regulations regarding the international transport of dangerous goods by rail (RID), Annex C to the Convention regarding international transport of goods by rail (COTIF), signed at Vilnius, on 3 June 1999 and approved by the law of 15 June 2006.

(Publication in Mémorial A No 230 of 12 August 2010)

2. Regulations

- Amendments No 5 and No 6 of the Annex I to the General Regulations for Technical operation (GRO) by the Infrastructure Manager

This document contains additional information and details for application of the provisions of the General Regulations for Technical Operation (GRO).

- **Adaptation of the frontier instruction CFL - DB Netz**
Adaptation of Annex No 1 (Regulation of the local details on the frontier section Igel - Wasserbillig) and revision of Annex No 3 (Common interfaces for RUs)
- **Note CFL 96 – 11/11 GR/I**
Cancellation of the provisions in RGO 9 March 2004 (Running on a written order with speed reduced to 40 km/h if a driver does not have knowledge of the line) following the expiry date of various Grand-Ducal provisions of 16 August 2010.

F. THE DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

1. National legislation - dates of introduction - availability

1.1. Issue of safety certificates pursuant to Article 10 of Directive 2004/49/EC

Chapter IV of the amended law of 22 July 2009 on railway safety contains the general provisions for obtaining a safety certificate Part A and Part B. The law was published on 27 July 2009 in The Memorial (The Official Journal of the Grand-Duchy of Luxembourg). This law came into force on 1st August 2009. The amended Grand-Ducal Regulation of 21 September 2009 on the certification of the safety of railway undertakings specifies the conditions for obtaining safety certificates and their validity, as well as the procedures for their preparation. It also lays down the conditions and the procedure for renewing, re-examining and withdrawal of the certificates. The Regulation in question came into force on 5 October 2009, the date of its publication in The Memorial.

1.2. Date from which safety authorisations were issued pursuant to Article 11 of Directive 2004/49/EC

Chapter V of the amended law of 22 July 2009 on railway safety contains the general provisions for obtaining a safety authorisation. This law came into force on 1 August 2009.

The amended Grand-Ducal Regulation of 21 September 2009 on the certification of the railway Infrastructure Manager specifies the conditions for obtaining safety authorisations and their validity as well as the procedures for their preparation. It also lays down the conditions and procedure for renewing, re-examining and withdrawal of the authorisations. The Regulation in question came into force on 5 October 2009, the date of its publication in The Memorial.

1.3. Existence of national safety rules or other national legislation relating to railway undertakings and Infrastructure Managers.

The Luxembourg legal texts are officially published in The Memorial (The Official Journal of the Grand-Duchy of Luxembourg). They can also be consulted at any time on the Legilux website (<http://legilux.public.lu/>).

The national safety rules relative to Annex II of Directive 2004/49/EC are distributed on request to interested parties by ACF. The manager of the CFL infrastructure supplies its documents containing the operating rules to railway undertakings that have a safety certificate for the Luxembourg railway infrastructure.

The technical rules regarding the authorisation to introduce rolling stock into service are published on www.railinfra.lu.

2. Numerical data (Appendix E)

3. Procedural aspects

3.1. Part A safety certificates

- 3.1.1. Reasons for which a revision/amendment of Part A certificates has been requested (for example, for a change of the type of service, an extension of the traffic or the size of the company).

No request for revision/amendment was registered in 2011.

- 3.1.2. Principal reasons in the case where the average time to issue Part A safety certificates has exceeded the four months laid down in Article 12(1) of the Directive on railway safety.

No case in 2011.

- 3.1.3. Details of requests by foreign national safety authorities to check or access information regarding the Part A certificate of a railway undertaking that has been certified in Luxembourg, but which requests a Part B certificate in another Member State.

No request was recorded in 2011.

- 3.1.4. Summary of the problems regarding the mutual acceptance of the Part A safety certificate valid throughout the Community.

No problem in 2011.

- 3.1.5. Charge made by the national safety authority to issue a part A safety certificate.

At present no charge is made for the issue of a Part A certificate, a preliminary draft of the legal text is now being prepared.

- 3.1.6. Summary of the problems in the use of standardised formats for Part A safety certificates, in particular regarding the categories relative to the type and extent of the service.

No problem in 2011.

- 3.1.7. Summary of the current problems/difficulties met by the National Safety Authority in the procedures for application for Part A certificates.

The evaluation of whether the application meets the criteria given in Commission Regulation (EC) No 1158/2010, for a common safety method to assess if the application conforms with the requirements to obtain a railway safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

- 3.1.8. Summary of the problems mentioned by the railway undertakings when they request a Part A safety certificate.

No problem reported in 2011.

- 3.1.9. Procedure for the feedback of information (for example by questionnaire) that enables the railway undertakings to give their opinion on the procedures/practices for granting certificates or complaining.

There is no feed-back procedure; any railway undertaking can contact ACF to make their views known. No feed-back was received in 2011.

3.2. Part B safety certificates

- 3.2.1. Reasons for which a revision/modification of Part B safety certificates was requested (for example, for a change regarding the types of services, the amount of traffic, the lines to be operated, the type of rolling stock, the category of staff, etc.).

No request for revision/amendment was registered in 2011.

- 3.2.2. Principal reasons in the case where the average time to issue Part B safety certificates exceeded the four months laid down in Article 12(1) of the Directive on railway safety.

No case in 2011.

- 3.2.3. Charge made by the national safety authority to issue a Part B safety certificate.

At present no charge is made for the issue of a Part B certificate, a draft of the legal text is now being prepared.

- 3.2.4. Summary of the problems in the use of standardised formats for Part B certificates, in particular regarding the categories relative to the type and extent of the service.

No problem in 2011.

- 3.2.5. Summary of the current problems/difficulties met by the National Safety Authority in the procedures for application for Part B certificates.

The evaluation of whether the application meets the criteria given in Commission Regulation (EC) No 1158/2010, for a common safety method to assess if the application conforms with the requirements to obtain a railway safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

- 3.2.6. Summary of the problems mentioned by the railway undertakings when they request a Part B safety certificate.

No problem reported in 2011.

- 3.2.7. Procedure for the feedback of information (for example, by questionnaire) that enables the railway undertakings to give their opinion on the procedures/practices for granting certificates or complaining.

There is no feed-back procedure; any railway undertaking can contact ACF to make their views known. No feed-back was received in 2011.

3.3. Safety authorisations

- 3.3.1. Reasons for the revision/amendment of the safety authorisations.

No request for revision/amendment was registered in 2011.

- 3.3.2. Principal reasons in the case where the average time to issue safety authorisations has exceeded the four months laid down in Article 12(1) of the Directive on railway safety.

No case in 2011.

- 3.3.3. Summary of the problems/difficulties frequently met by the National Safety Authority in the procedures for requesting safety authorisations.

The evaluation of whether the application meets the criteria given in Commission Regulation (EC) No 1169/2010, for a common safety method to assess if the application conforms with the requirements to obtain a railway safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

- 3.3.4. Summary of the problems reported by the Infrastructure Managers during their request for a safety authorisation.

No problem reported in 2010.

- 3.3.5. Procedure for the feedback of information (for example, by questionnaire) that enables Infrastructure Managers to give their opinion on the procedures/practices for granting authorisations or complaining.

There is no feed-back procedure; the Infrastructure Manager can contact ACF to make his views known.

- 3.3.6. Charge made by the national safety authority to issue a safety authorisation.

At present no charge is made for the issue of a safety authorisation, a draft of the legal text is now being prepared.

G. MONITORING OF THE RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS'

As ACF was only set up in August 2009 and its human resources are very limited it has only carried out one safety audit on an RU that has a Luxembourg A and B certificate.

1. Monitoring of the railway undertakings and Infrastructure Managers

1.1. Audits/Inspections/Lists of inspections

Due to the lack of staff in the Interoperability and Safety Division, the monitoring of the RUs and the IM was limited to one audit carried out on one of the RUs which was holder of A and B certificates issued by the Luxembourg Ministry of Sustainable Development and Infrastructure. The audit was mainly concerned with the service condition of the hauled rolling stock.

1.2. Aspects connected with the vigilance/sensitive points to be monitored by the NSA

/

2. Description of the treatment of the legal aspects in the annual reports of the Infrastructure Managers and railway undertakings – Availability of the annual reports before 30 June (in accordance with Article 9(4) Railway Safety Directive)

ACF has received the annual reports of the CFL as manager of the infrastructure and all the railway undertakings that have a safety certificate for the Luxembourg railway infrastructure, i.e.

- CFL - Infrastructure Manager (5 June 2011)
- CFL - Railway Undertaking (5 June 2011)
- CFL Cargo (5 June 2011)
- SNCF - SNCF Fret (4 June 2011)

3. Number of inspections carried out at the IM and RUs in 2011

AUDITS	At RUs that have a Part A safety certificate	At RUs that have a Part B safety certificate	At IMs that have a safety authorisation	At RUs that have a safety certificate 2001/14
Planned	1	1	0	0
Un-planned	0	0	0	0
Carried out	1	0	0	0

4. Number of audits carried out at IMs and RUs in 2011

AUDITS	At RUs that have a Part A safety certificate	At RUs that have a Part B safety certificate	At IMs that have a safety authorisation	At RUs that have a safety certificate 2001/14
Planned	0	0	0	0
Un-planned	0	0	0	0
Carried out	0	0	0	0

5. Summary of the measures/corrective actions (amendment, withdrawal, suspension, serious warning, etc.) connected to safety aspects following these audits/inspections

In general the series of wagons examined during the audit was in a satisfactory condition. However the RU has been invited to regularly examine the underframes of these vehicles for the presence of cracks, to initiate adequate measures for the series of identical wagons and to clarify the situation of the compressed air reservoirs which had defects in their marking.

6. Summary/brief description of the complaints of Infrastructure Managers on the subject of railway undertakings, to do with the conditions stipulated in their Part A/Part B certificates

No complaint recorded in 2011.

7. Summary/brief description of the complaints of railway undertakings on the subject of infrastructure managers, to do with the conditions stipulated in their authorisation

No complaint recorded in 2011.

H. REPORT ON THE APPLICATION OF THE CSMs TO THE RISK ASSESSMENT

Regulation (EC) No 352/2009 of the Commission of 24 April 2009 on the adoption of a common safety method (CSM) for the risk assessment will only apply from 1 July 2012.

However, it applies from 19 July 2010;

- a) to all significant technical modifications to vehicles, such as are defined in Article 2(c), of Directive 2008/57/EC.
- b) to all significant modifications to the structural sub-systems, when Article 15(1) of Directive 2008/57/CE or a TSI requires it.

However ACF has drawn attention in several e-mails and meetings to the fact that this Regulation applies to any significant change concerning the structural sub-systems of the European railway system.

One RU has applied the common safety method for the changing of sand ejectors on one class of locomotives. After the evaluation this modification was considered as not significant.

I. CONCLUSIONS – PRIORITIES

Due to its recent creation, ACF is not able to plot the progress of the level of safety on the Luxembourg railway infrastructure in accordance with Directive 2004/49/EC and is, thus, not yet able to draw conclusions regarding its development.

However, in view of the accidents (one person seriously injured in the financial year 2011) and numbers of precursors of accidents or incidents which were produced the level of safety is considered as high, and this in spite of the significant increase in the number of signals passed at danger. The railway undertaking mainly responsible for these signals passed at danger has taken steps to improve the training and supervision of drivers.

The progressive installation of ETCS on the whole of the Luxembourg railway system and on the tractive units will considerably increase the level of safety, and will progressively reduce the risk of passing signals at danger. In order for this to become a reality a high percentage of the rolling stock running on the Luxembourg Railway system must also be fitted with ETCS. The percentage, which is still mediocre at present, will progressively increase during the years to come. The implementation of the infrastructure side (currently 87% of the signals) will be achieved, according to the plans of the IM, in 2013

It is very likely that the IM will be allocated a safety authorisation in 2012, thus all the railway stakeholders will comply with the European and Luxembourg legal arrangements and will have a safety management system.

The principle objective of ACF is to maintain at least this level, and indeed to improve it in conjunction with all the people concerned.

A major task for ACF is the development of an organisation which enables it to better meet its national and international obligations. The introduction of a formal method of operation and administration, that is to say a modelling of the principle processes, followed by the preparation of the procedures that are relative to it is another (implementation of a management system).

The limited number of people who have the necessary experience and ability to carry out the tasks of monitoring, auditing and advising in the railway sector is a major problem for recruiting suitable people. With the employment of a lawyer and an engineer in 2011 the situation has improved but still remains worrying.

J. SOURCES OF INFORMATION

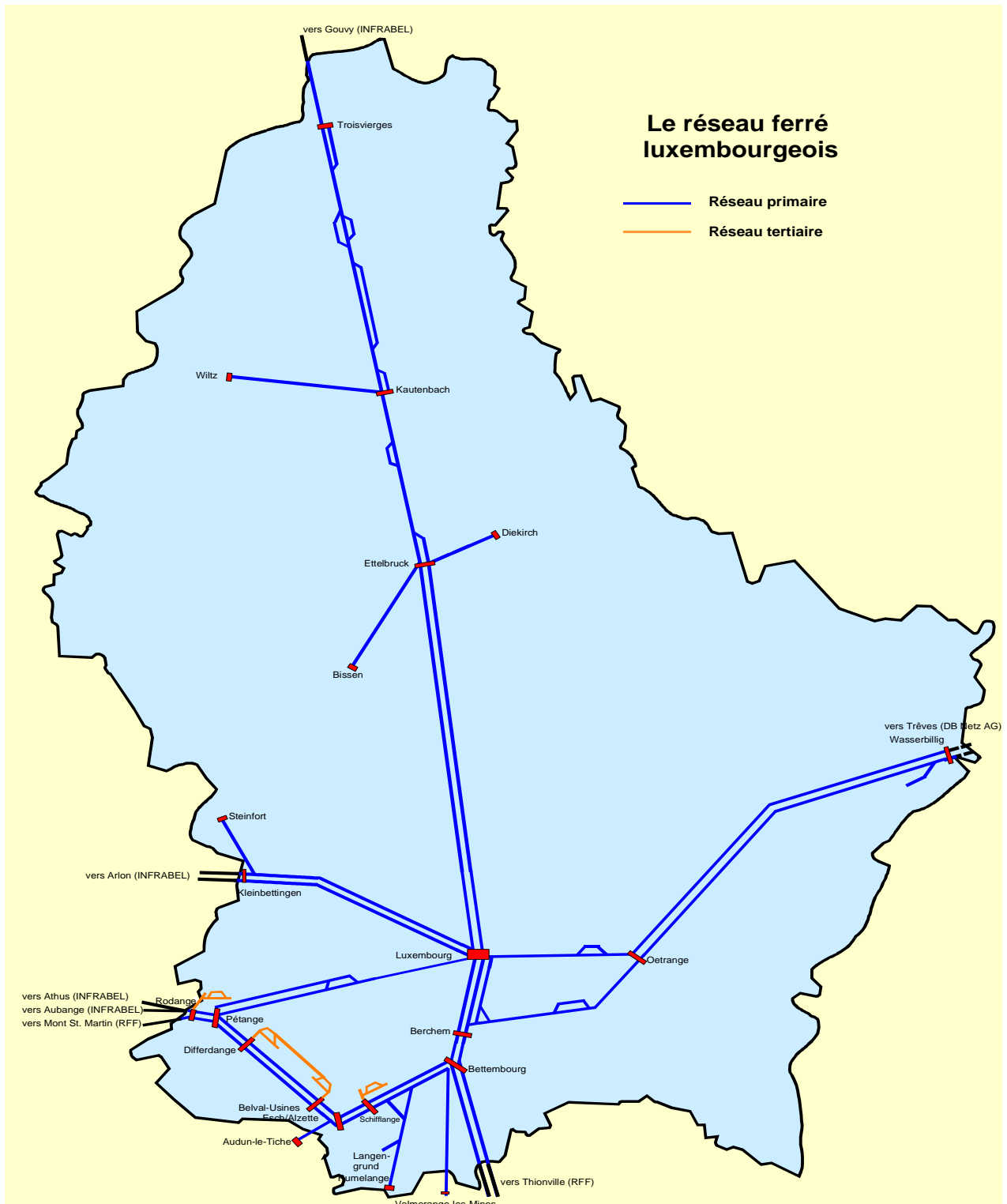
- Publications in the MEMORIAL (The Official Journal of the Grand-Duchy of Luxembourg) for details see Chapter E.1
- ACF internal information
- Annual reports for 2011 received from the Infrastructure Manager and railway undertakings
- The reports of the Administration for Technical Investigations (AET)

K. ANNEXES

Annex A:	Information on the railway structure
Annex B:	Organisation charts of the National Safety Authority
Annex C:	Information on Common Safety Indicators CSI – Definitions used
Annex D:	Important amendments to the legislation and the regulations
Annex E:	Changes in the certification and safety authorisation – Numerical information

Annex A: Information on the railway structure

A.1 Map of the system



The Luxembourg rail network			
Primary network (blue)		Tertiary network (red)	

Tertiary network ' NON-TEL part of the network such as is referred to in the law of 18 December 2006
Map supplied by the CFL

A.2 List of railway undertakings and Infrastructure Managers

Infrastructure Manager (at 31 December 2011)

Name: CFL
Address: 9, place de la Gare, L-1616 Luxembourg
Web site: www.cfl.lu

Railway Undertakings (at 31 December 2010)

a. Carriage of passengers and freight

In 2011 no RU had a certificate to carry passengers and freight.

b. Carriage of passengers

Name: CFL
Address: 9, place de la Gare, L-1616 Luxembourg
Web site: www.cfl.lu
Safety Certificate Part A: LU 11 2009 0001
valid until: 16 September 2014
Safety Certificates Part B: LU 12 2009 0001
valid until: 16 September 2014

c. Carriage of freight

Name: SNCF
Address: 34, rue du Commandant Mouchotte, F-75699 Paris Cedex 14
Web site: www.sncf.com
Safety Certificate Part A: No FR 11 2009 0021
valid until: 28 June 2012
Safety Certificate Part B: No LU12 2011 0002
valid until: 8 July 2016

Name: CFL cargo SA
Address: 11, boulevard J.F. Kennedy, L-4170 Esch-sur-Alzette
Web site: www.cfl.lu (espace CFL cargo)
Safety Certificate Part A: LU 11 2010 0001
valid until: 5 December 2011
Safety Certificate Part B: LU 12 2010 0001
valid until: 5 December 2011
replaced by the A and B certificates below

Safety Certificate Part A: LU 11 2011 0001
valid until: 4 December 2016
Safety Certificates Part B: LU 12 2011 0003
valid until: 4 December 2016

A.2.1. Infrastructure Manager

Name	<i>Société Nationale des Chemins de Fer Luxembourgeois</i> [Luxembourg National Railways] (CFL)
Address:	9, place de la Gare L-1616 Luxembourg
Web site:	www.cfl.lu
Link to the system reference document	www.railinfra.lu
Safety authorisation (number/date)	Application in progress
Date of start of commercial activity	Law of 10 May 1995 regarding the management of the infrastructure
Total length of the railway/gauge	614 km / 1.435 mm
Length of the railway electrified/voltage	43.5 km / 3kV 539.5 km / 25kV
Total length of double track/single track	147 km / 128 km
Total length of the high speed lines	0 km
ATP equipment used	MEMOR II+ / ETCS level 1
Number of level crossings	138
Number of main colour light signals	533

Abbreviations:

- LGV = *Lignes à Grande Vitesse* [High speed lines] (in the sense of Directive 96/48/CE)
- ATP = Automatic Train Protection
- PN = *Passage à niveau* [level crossing]

A.2.2. Railway undertakings

A.2.2.1. CFL

Name	<i>Société Nationale des Chemins de Fer Luxembourgeois</i> [Luxembourg National Railways] (CFL)
Address:	9, place de la Gare L-1616 Luxembourg
Web site:	www.cfl.lu
Safety certificate as specified in 2001/14/CE (number/date)	
Date of start of commercial activity	Law of 16 June 1947
Safety Certificate Part A - B as specified in 2004/49/EC (number/date)	A - No LU11 2009 0001 / 20/12/2009 B - No LU11 2009 0001 / 20/12/2009
Type of carriage (freight, etc.)	Passengers excluding high speed services
Number of locomotives	57
Number of electric multiple units/diesel railcars	46 railcars
Number of coaches	76 coaches 20 driving trailers
Number of wagons	
Number of train drivers	277
Number of staff on board trains carrying out safety tasks (excluding drivers)	230 (train crew)
Volume of passenger traffic	353.95 millions passenger 7.88 million passenger train kilometres
Volume of freight traffic	

A.2.2. Railway undertakings

A.2.2.2. SNCF

Name	SNCF
Address	34, rue du Commandant Mouchotte F-75699 Paris Cedex 14
Web site:	www.sncf.com
Safety certificate as specified in 2001/14/CE (number/date)	
Date of start of commercial activity	In Luxembourg: 8 November 2005
Safety Certificate Part A - B as specified in 2004/49/EC (number/date)	A - No FR11 2009 0021 / 4 December 2009 B - No LU12 2011 0002 / 8 July 2011
Type of carriage (freight, etc.)	Freight
Number of locomotives	27 plus 446 limited Bettembourg Annex 5.1.1 safety certificate Part B Luxembourg
Number of electric multiple units/diesel railcars	
Number of coaches	
Number of wagons	15.600 Annex 5.1.2 safety certificate Part B Luxembourg
Number of train drivers	121
Number of staff on board trains carrying out safety tasks (excluding drivers)	
Volume of passenger traffic	
Volume of freight traffic	70 000 tonnes

A.2.2. Railway undertakings

A.2.2.3. CFL cargo SA

Name	CFL cargo SA
Address	11, boulevard J.F. Kennedy L-4170 Esch-sur-Alzette
Web site:	www.cfl.lu (espace CFL cargo)
<i>Safety certificate as specified in 2001/14/CE (number/date)</i>	
<i>Date of start of commercial activity</i>	5 December 2006
<i>Safety Certificate Part A - B as specified in 2004/49/EC (number/date)</i>	<p>A - No LU11 2010 0001 / 8 October 2010 out of date</p> <p>B - No LU11 2010 0001 / 8 October 2010 out of date</p> <p>A - No LU11 2011 0001 / 5 December 2011</p> <p>B - No LU11 2011 0003 / 5 December 2011</p>
<i>Type of carriage (freight, etc.)</i>	Freight
<i>Number of locomotives</i>	68 of which 39 for the national railway
<i>Number of electric multiple units/diesel railcars</i>	0
<i>Number of coaches</i>	0
<i>Number of wagons</i>	4 279
<i>Number of train drivers</i>	70
<i>Number of staff on board trains carrying out safety tasks (excluding drivers)</i>	0
<i>Volume of passenger traffic</i>	0
<i>Volume of freight traffic</i>	626 million tonne-km

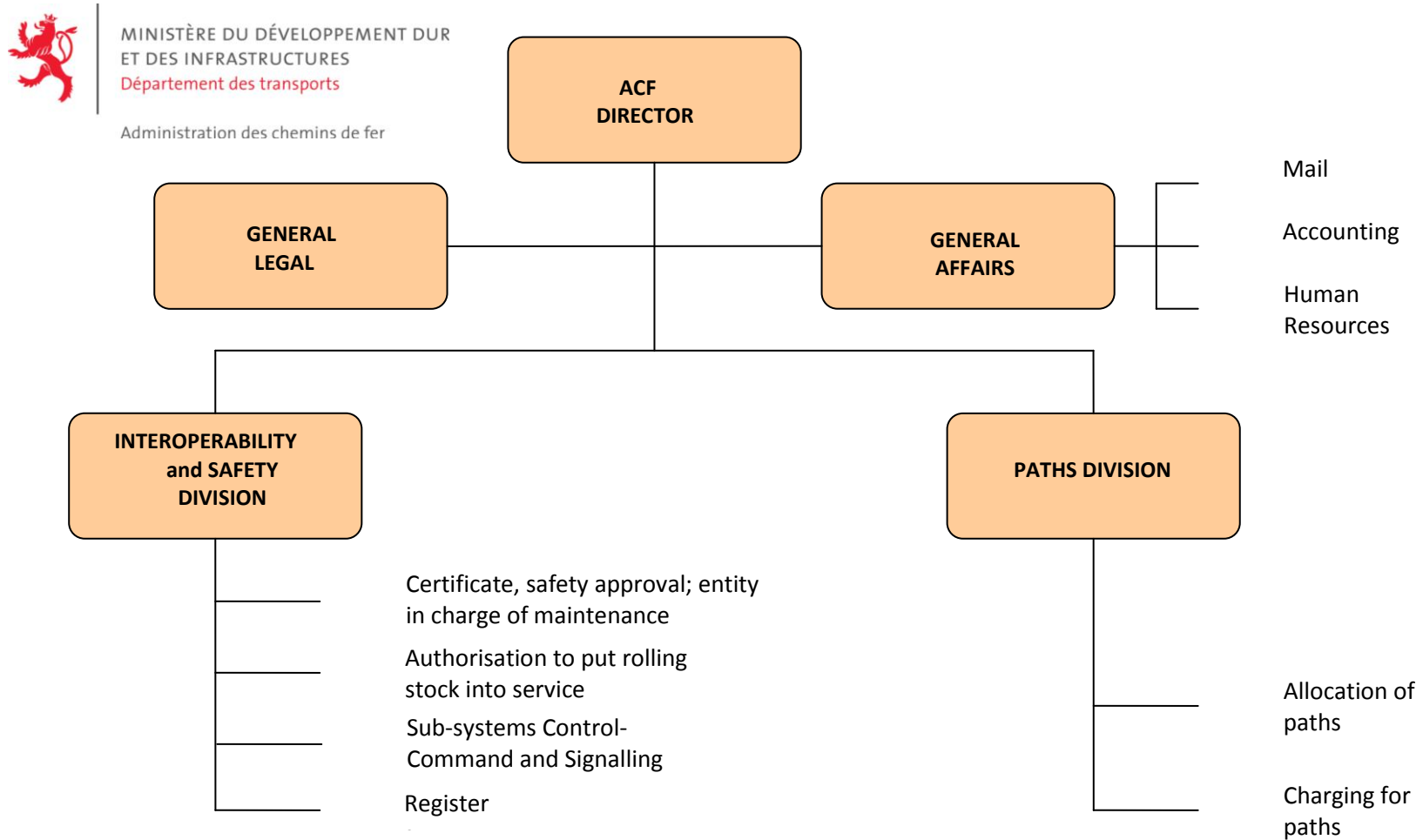
ANNEX B: Organisation chart of the National Safety Authority

B.1. Internal organisation

B.2. Relations with other national authorities

ANNEX B: Organisation chart of the National Safety Authority

B.1. Internal organisation at 31 December 2009

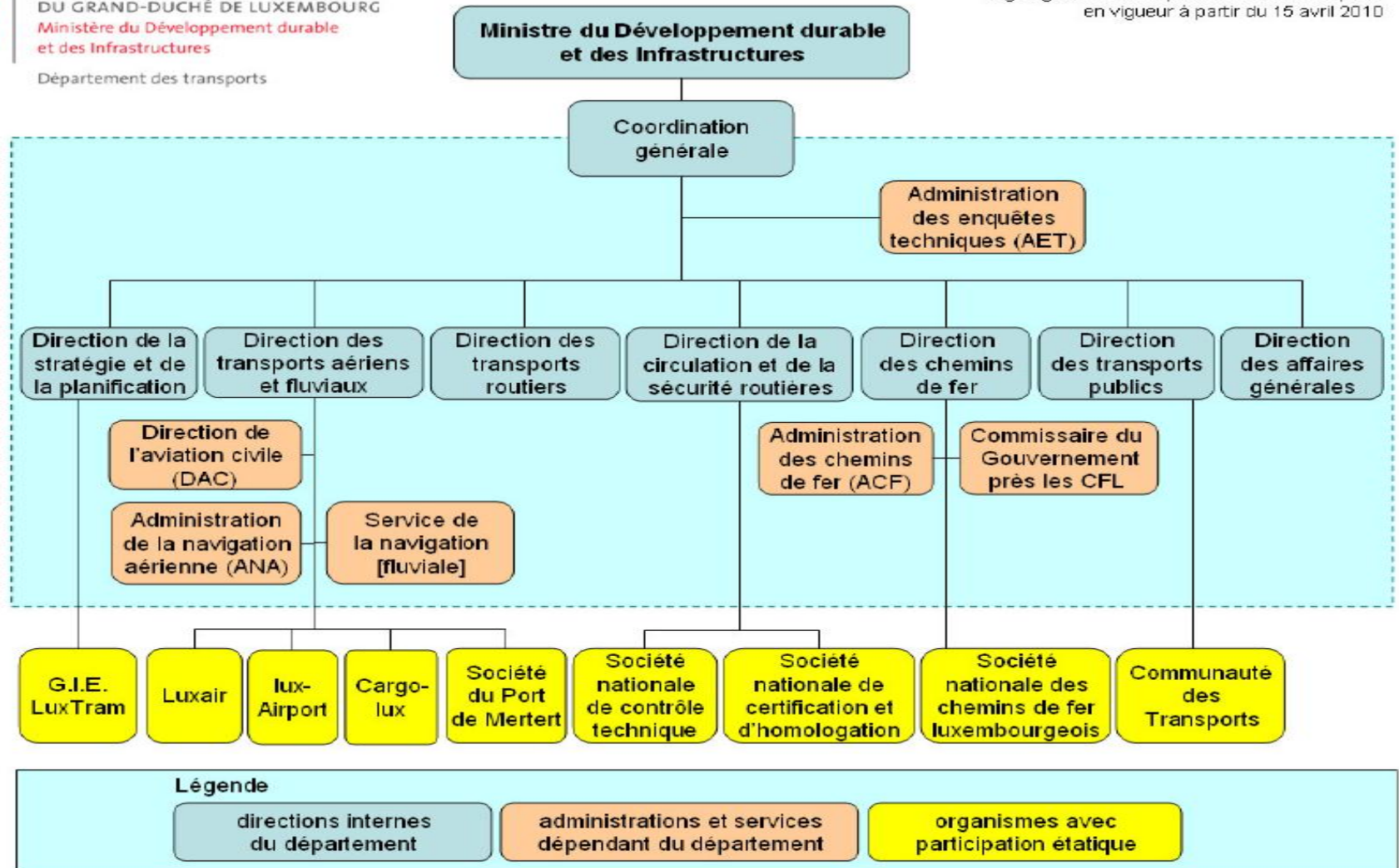


B2. Relations with other national authorities



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère du Développement durable
et des Infrastructures
Département des transports

Organigramme du Département des transports
en vigueur à partir du 15 avril 2010



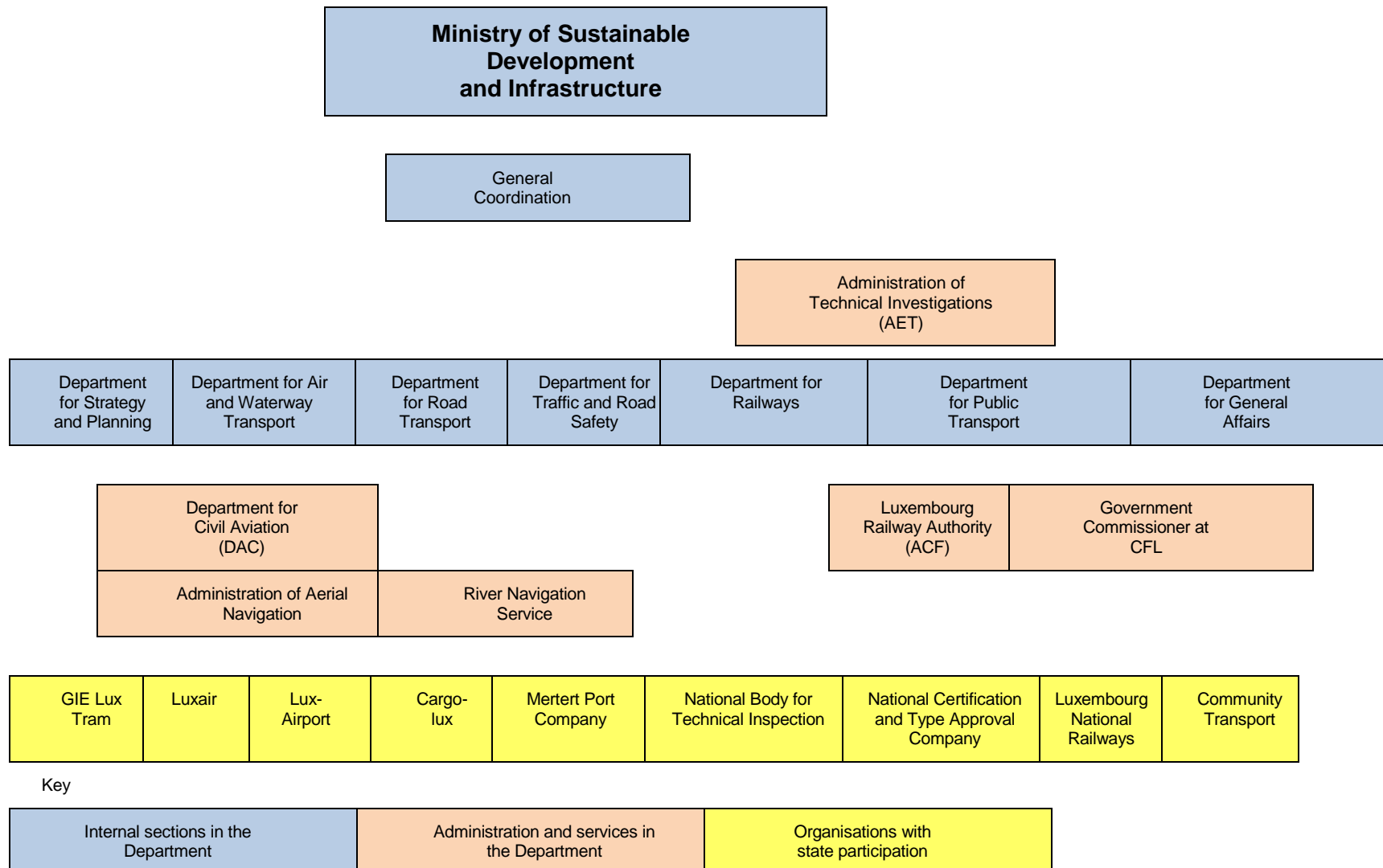
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B2 Relations with other national authorities

THE GOVERNMENT OF THE
GRAND-DUCHY OF LUXEMBOURG
Ministry of Sustainable Development
and Infrastructure

Transport Department

Organisational chart of the Transport Department
from 15 April 2010

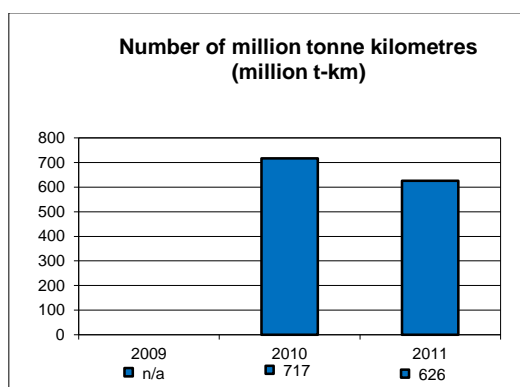
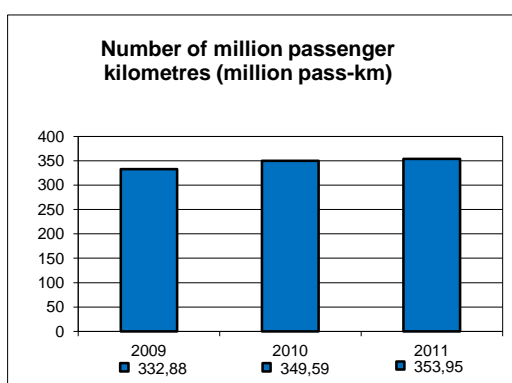
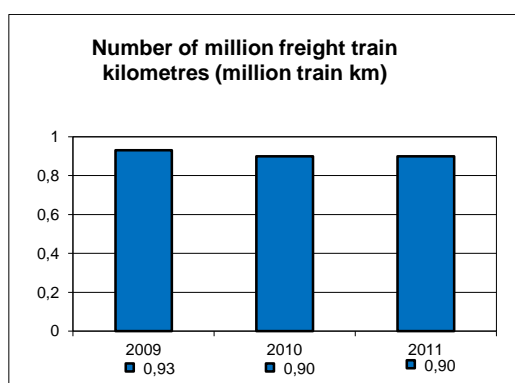
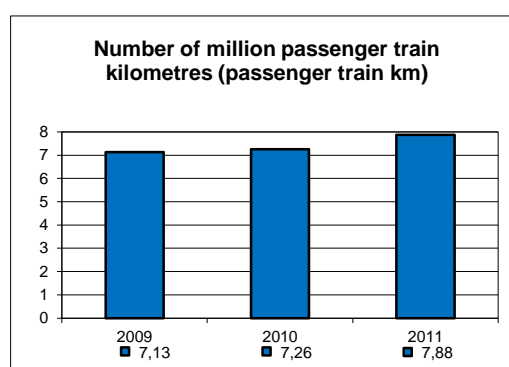
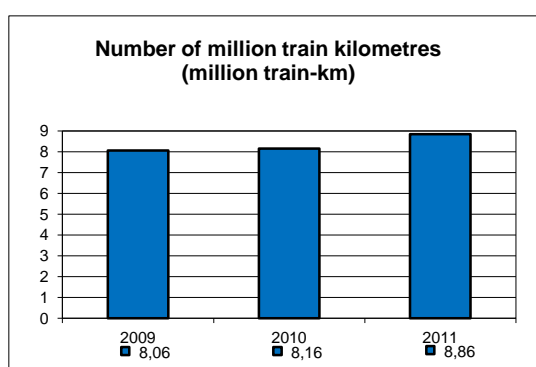


Annex C: ISC Information - Definitions used (ISC Common Safety Indicators)

C.1. ISC Information

Reference information

REFERENCE DOCUMENTS	2011
Number of million train kilometres (million train-km)	8.86
Number of million passenger train kilometres (million pass-train km)	7.88
Number of million freight train kilometres (million fr train km)	0.90
Number of million other train kilometres (million other-train km)	0.08
Number of million passenger kilometres (million pass-km)	353.95
Number of million tonne kilometres (million t-km)	626

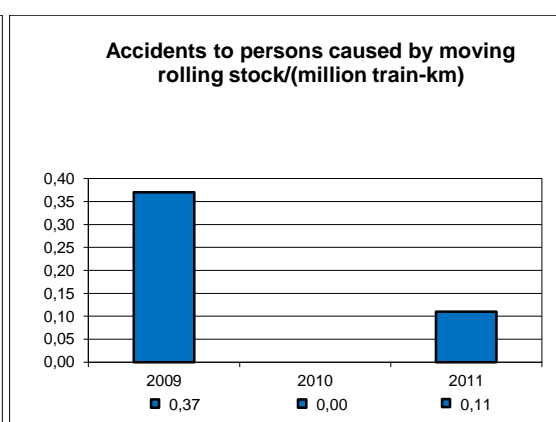
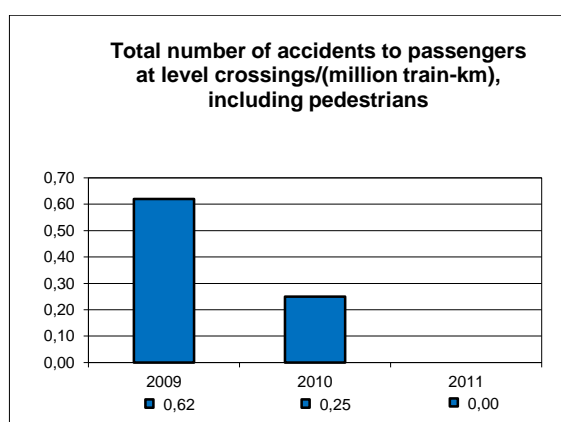
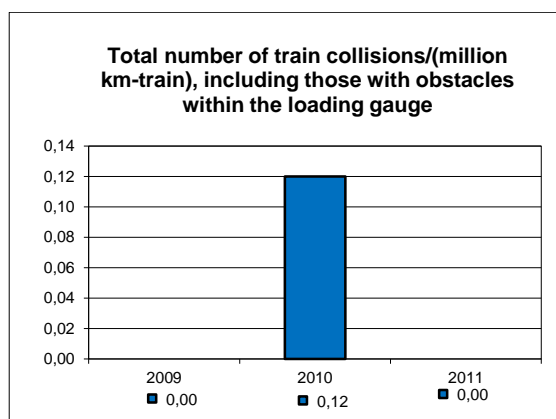
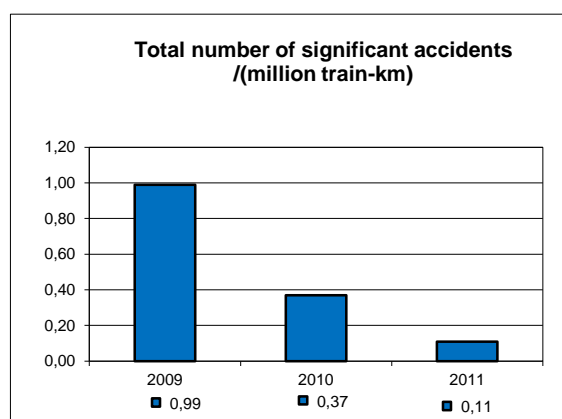


* For 2009, the number of tonne kilometres has not been advised to ACF.

C.1.1 Indicators regarding accidents

C.1.1.1 Total and number per million train kilometres (million t-km) of significant accidents and breakdown according to the types of accidents

Types of accident 2011	Number	Number per million train-km
Train collisions, including those with obstacles within the loading gauge	0	0.00
Derailments of trains	0	0.00
Accidents at level crossings, including pedestrians	0	0.00
Accidents to persons caused by moving rolling stock	1	0.11
Fires in rolling stock	0	0.00
Others	0	0.00
Total	1	0.11



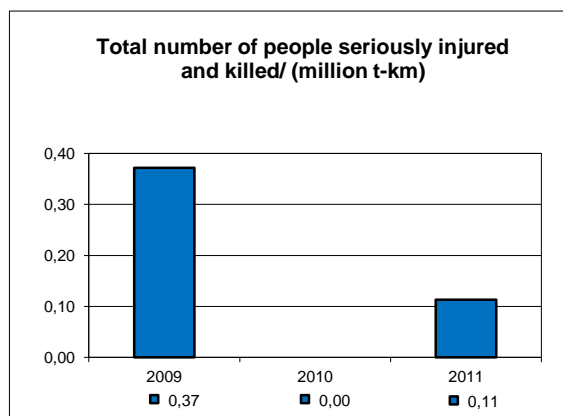
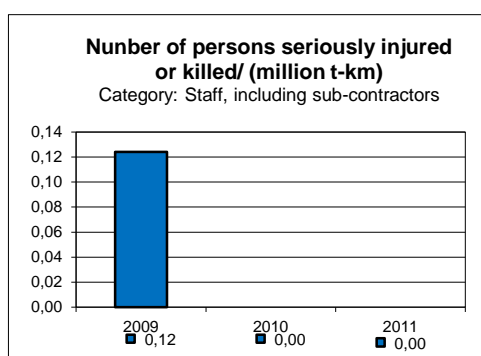
In 2009, 2010 and 2011 there was no significant accident in the categories 'Derailment of trains' 'Fires on rolling stock' and 'Others'.

C.1.1.2 Total and number per million train kilometres (million train-km) of persons seriously injured and persons killed by types of person and by type of accident

Types of people 2011	Number	Number per million train-km	Number per million pass-km	Number per million pass-train-km
Passengers	0	0.00	0.00	0.00
Staff, including sub-contractors	0	0.00		
Users of level crossings	0	0.00		
Unauthorised persons found on railway premises	1	0.11		
Others	0	0.00		
Total	0	0.00		

Nombre per million pass-km = number per million passenger-km

Nombre per million train-km = number per million passenger train-km



In 2011, no person was reported to be seriously injured or killed in the categories 'passengers', 'users of level crossings' and 'others'. However one person who was not authorised to be on railway premises was seriously injured by moving rolling stock.

C.1.2 Indicators relating to dangerous goods

Total and number per million train kilometres (million train-km) of accidents during the carriage of dangerous goods

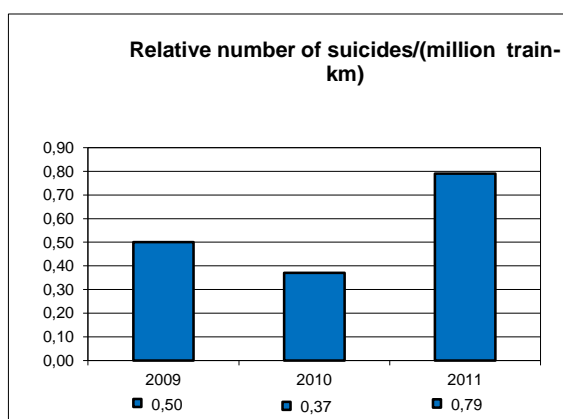
Accidents with dangerous goods 2011	Number	Number per million train-km
Accidents implicating at least one railway vehicle carrying dangerous goods	0	0.00
Accidents of this type involving the release of dangerous substances	0	0.00
Total	0	0.00

In 2009, 2010 and 2011 no accident was reported during the transport of dangerous goods.

C.1.3 Indicators regarding suicides

Total and number of suicides per million train kilometres (million train-km)

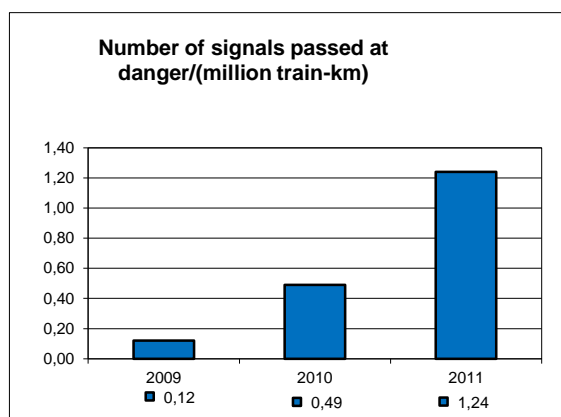
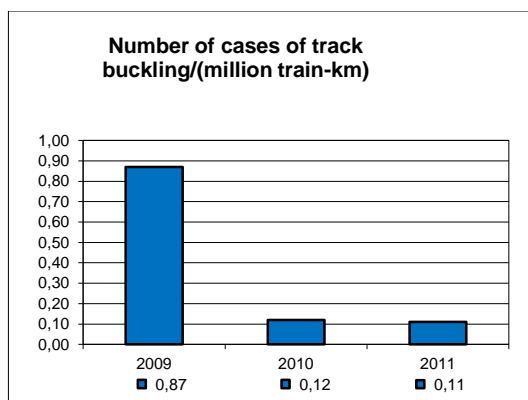
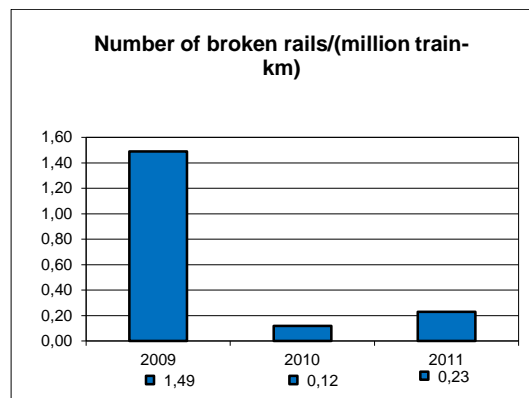
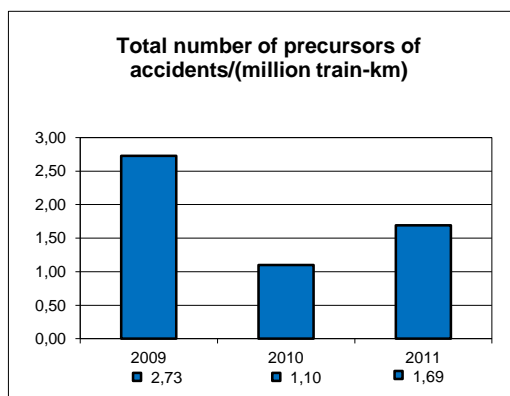
Suicides 2011	Number	Number per million train-km
Total	7	0.79



C.1.4 Indicators regarding the precursors of accidents

Total and number of precursors per million train kilometres (million train-km) and by type of precursor

Types of precursor	Number	Number per million train-km
Broken rails	2	0.23
Cases of track buckling	1	0.11
Signalling failures that affected safety	1	0.11
Signals at danger passed without authorisation	11	1.24
Broken wheels and axles of rolling stock in service	0	0.00
Total	15	1.69

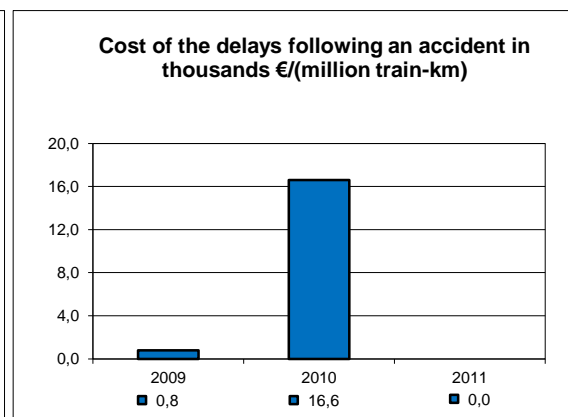
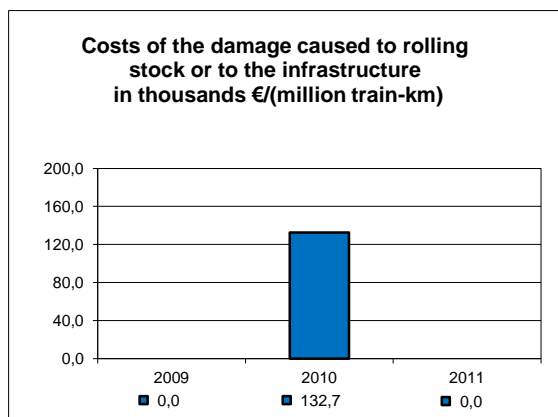
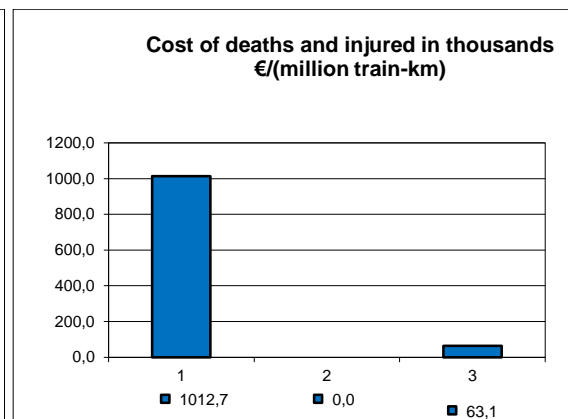
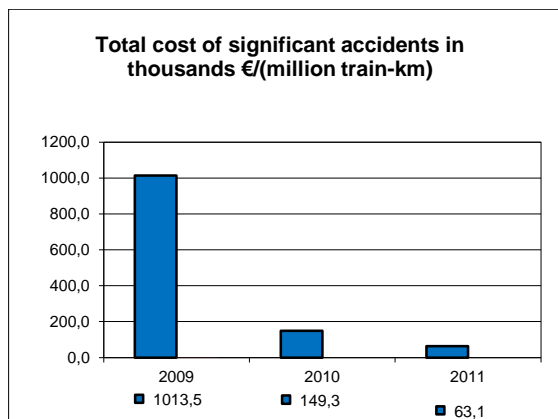


In 2009, 2010 and 2011 no fractured wheels and wheelsets were found on rolling stock in service. There was a significant increase in the number of signals passed at danger in 2010 and 2011 compared with 2009.

C.1.5 Indicators regarding the economic aspects of accidents

Total and cost per million train kilometres (million train-km) in euros and by type of cost. Only the economic impact of **significant accidents** (only one in 2011) is taken into account in the table below.

Types of cost	€ thousands	€ thousands per million train-km
Number of deaths and serious injuries multiplied by the value of prevention of a death or serious injury.	559.1	63.1
Costs and damage caused to the environment	0.0	0.0
Costs of the damage caused to rolling stock or to the infrastructure	0.0	0.0
Signals at danger passed without authorisation	0.0	0.0
Costs of delays following accidents	0.0	0.0
Total	559.1	63.1

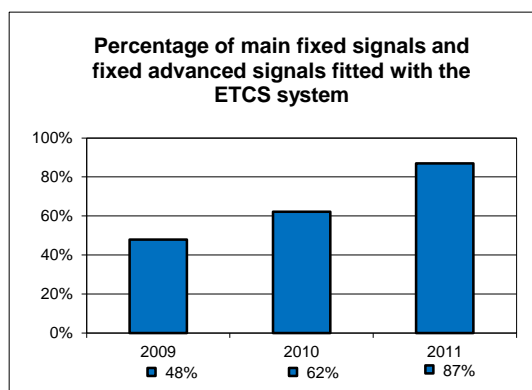
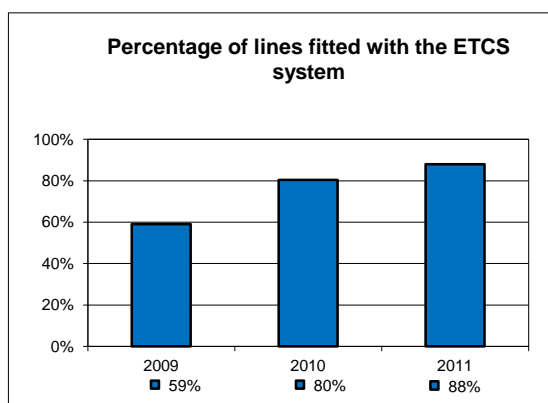


Remark: In 2009 the part for workers was chosen at 10% and that for non-workers at 90% for the timetable periods in which the accidents occurred. Now, by analogy with the rules of the Association d'Assurance Accidents (AAA) [Association of Accident Insurers] on Health and Safety at Work, people returning from their work are subject to the legislation for accidents during a journey and should therefore also be considered as workers. Consequently the division has been taken over the whole day by applying the rule laid down by AAA which applies a rate of 70% of workers and 30% of non-workers. Students travelling by rail have been counted as workers.

C.1.6 Indicators relative to technical safety of the infrastructure and its implementation

C.1.6.1 System of Automatic Train Protection (ATP)

2011 indicators	MEMOR II+	ETCS
Percentage of tracks fitted with an ATP system in service	100%	88%
Percentage of main fixed signals and fixed advanced signals fitted with an ATP system in service	100%	87%
Percentage of train-kilometres run with operational ATP systems (estimate)	90%	10%

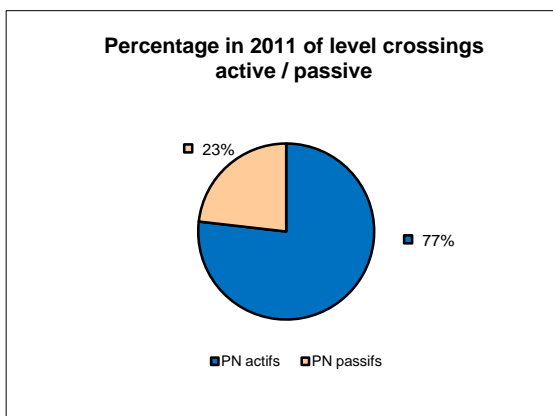
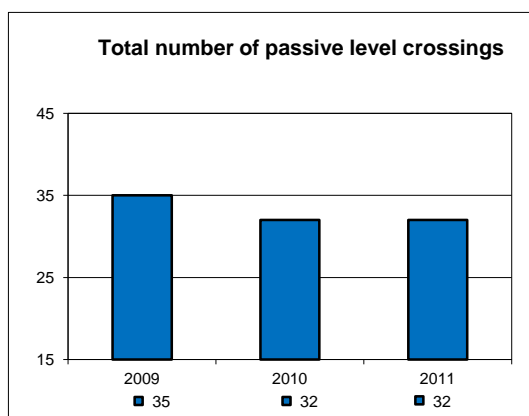
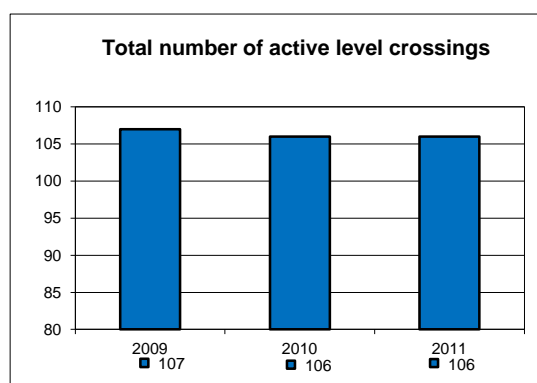
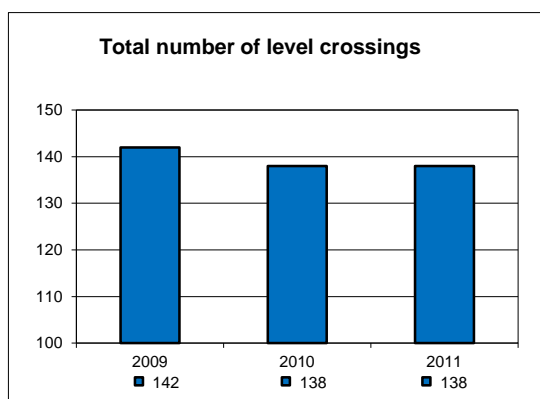


C.1.6.2 Number of level crossings (total, per line-kilometre and track kilometre) and by types of level crossing

a) Active level crossings by type	Number	by km of line (275 km)	by km of track (614 km)
i) Automatic warning on the users' side	3	0.0109	0.0049
ii) Automatic protection on the users' side	0	0.0000	0.0000
iii) Automatic protection and warning on the users' side	82	0.2982	0.1336
iv) Automatic protection and warning on the users' side and protection on the rail side	0	0.0000	0.0000
v) Manual warning on the users' side	18	0.0655	0.0293
vi) Manual protection on the users' side	2	0.0073	0.0033
vii) Manual protection and warning on the users' side	1	0.0036	0.0016
Total	106	0.3855	0.1726

b) Passive level crossings	Number	by km of line (275 km)	by km of track (614 km)
Total	32	0.1164	0.0521

c) Active and passive level crossings	Number	by km of line (275 km)	by km of track (619 km)
Total	138	0.5018	0.2264



C.1.7 Indicators regarding safety management

Internal audits carried out by the Infrastructure Managers and railway undertakings such as are defined in the documentation of the system of safety management. Total number of audits carried out and percentage of the audits required (and/or planned).

Internal audits 2011	CFL/IM	CFL/RU	CFL Cargo	SNCF*	Total
Number planned	101	152	311	0	564
Number carried out	93	141	235	0	469
Percentage of those planned carried out	92%	93%	76%		83%

*SNCF has only operated trains on the Luxembourg Railway system since 11 December 2011.

C.2. Definitions used in the annual report

The common safety indicators supplied and the definitions used in this report are as given in Annex 1 and the Annex to Directive 2004/49/EC as amended by Directive 2009/149/EC of 27 November 2009.

C.3. Abbreviations

ACF	Luxembourg Railway Administration
AET	Administration for Technical Investigations
ANS	National Safety Authority
OM	Operations Manager
CDs	<i>Contrôle de Dégagement simple</i> [Simple check of release]
BEA-TT	Land Transport Accident Investigation Bureau (France)
EF	Railway undertaking (RU)
ERA	European Railway Agency (Agence ferroviaire européenne)
ETCS	European Train Control System
IM	Infrastructure Manager
IPCS	<i>Installations Permanentes de ContreSens</i> [Permanent reverse running installations]
CSI	Common Safety Indicator
MDDI	Ministry of Sustainable Development and Infrastructure
MEMOR II+	System to assist drivers, improvement of the crocodile system
Mémorial	The Official Journal of the Grand-Duchy
ATP	System of Automatic Train Protection
PD	<i>Poste Directeur</i> [Major signal box]
PDC	<i>Poste Directeur Centralisé</i> [Centralised traffic control centre]
LC	Level crossing
GDR	Grand-Ducal Regulation
GRO	General Regulations for Technical Operation
RNE	RailNetEurope
SAAT	<i>Système d'Annonce Automatique des Trains</i> [SNCF Automatic Train Announcement System]
SNCB	<i>Société Nationale des Chemins de fer Belge</i> [Belgian National Railways]
SNCF	<i>Société Nationale des Chemins de fer Français</i> [French National Railways]
SFP	<i>Signal Fixe Principal</i> [Fixed main signal]
TSI	Technical Specification for Interoperability
TCO	<i>Tableau de Contrôle Optique</i> [Optical control panel]

Annex D: Important amendments to the legislation and the regulations

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
General national legislation on the safety of the railways				
Legislation on railway safety and railway infrastructure	Law of 2 June 2011	26 June 2011	<p>New law</p> <p>The object of this law is:</p> <p>1. transposition of the Directive 2005/47/EC of the Council of 18 July 2005 regarding the agreement between the <i>Communauté européenne du rail</i> (CER) [Community of European Railway and Infrastructure Companies] and the <i>Fédération européenne des travailleurs des transports</i> (ETF) [European Transport Workers Federation] on certain aspects of the service conditions of mobile workers who work on the interoperable services that cross frontiers in the railway sector;</p> <p>2. modification of the <i>Code du travail</i> [Labour Code]</p>	The law specifies the duration of shifts for wage earners who drive tractive units on railways or are members of train crew.
	<p>Law of 14 December 2011</p> <p>In addition, a coordinated text of the amended law of 22 July 2009 giving the amendments contained in the law of 14 December 2011 has been published</p>	27 December 2011	<p>New law</p> <p>2011 law dealing with the transposition of Directive 2008/110/EC of the European Parliament and the Council of 16 December 2008 amending Directive 2004/49/EC regarding the safety of the Community railways (Directive on the safety of the railways) and amending</p> <p>1. The law of 22 July 2009 on railway</p>	<p>The law:</p> <p>amends the conditions under which, preserved, museum and tourist rolling stock, can run on special occasions (law of 11 June 1999)</p> <p>amends the field of exclusion of the law of 22 July 2009</p> <p>and introduces a Chapter VII bis dealing with the maintenance of</p>

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
			safety 2. The amended law of 11 June 1999 on access to the railway infrastructure and its utilisation;	vehicles
Legislation on railway safety and railway infrastructure (continued)	Grand-Ducal Decree of 23 October 2011	10 November 2011	New Grand-Ducal Decree dealing with the publication of the regulations regarding the international transport of dangerous goods (RID), Annex C to the Convention regarding international transport of goods by rail (COTIF), signed at Vilnius, on 3 June 1999 and approved by the law of 15 June 2006.	Regulations concerning the carriage by rail of dangerous goods (RID);
Legislation on railway interoperability	No new legal text			
Legislation on certification of train drivers	No new legal text			
Regulations				
Rules regarding the objectives and methods of existing national safety	No new rule			

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
Rules regarding the requirements applicable to the management systems for safety and the safety certification of the railway undertakings	No new rule			
Common rules of railway operation which are not yet covered by TSIs, including rules regarding the signalling system and traffic management.	CFL-DB Netz frontier instructions	1 August 2011	Amendment of the frontier instructions	Amendment of Annex No 1 (Regulation of the local details on the frontier section Igel - Wasserbillig) and revision of Annex No 3 (Common interfaces for RUs)
	General Regulations for Technical Operation (GRO) Annex 1 edition 2009 – Additional information and application statements regarding the arrangements of the GRO	21 February 2011 19 September 2011	Correction No 5 Correction No 6	Various small rectifying amendments
	Note No 96-11/11 GR/I regarding RGO of 9 March 2004	9 November 2011	RGO 9 March 2004 Running with a case B written order at 40 km/h for a driver who does not have knowledge of the line	Cancellation of the arrangements in RGO of 9 March 2004 following the expiry date for various transitional arrangements of the Grand-Ducal Regulation of 16 August 2010

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
Rules defining the requirements applicable to additional internal rules (statutes of the company) which must be prepared by the Infrastructure Managers and the railway undertakings	No new rule			
Rules concerning the requirements applicable to the staff who carry out critical safety tasks, including the selection criteria, the state of health, the professional training and the certification, if they are not yet covered by a TSI.	No new rule			
Rules relating to the investigations into accidents and incidents	No new rule			

Annex E: Changes in the certification and safety authorisation – Numerical information

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

Number of certificates held in 2011 by railway undertakings that had a licence issued	by the Grand-Duchy of Luxembourg	4 (LU 2A + 2B)
	by another Member State	1 (LU 1B)

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

		New	Updated / amended	Renewed
E.2.1. Number of valid Part A certificates held in 2011 by railway undertakings registered	in the Grand-Duchy of Luxembourg		0	2 (LU)
	by another Member State		0	0

		New	Updated / amended	Renewed
E.2.2. Number of valid Part B certificates held in 2011 by railway undertakings registered	in the Grand-Duchy of Luxembourg		0	2 (LU)
	by another Member State		1 (LU)	0

			A	R	P
E.2.3. Number of applications for Part A certificates submitted in 2011 by railway undertakings registered	in the Grand-Duchy of Luxembourg	New certificates	0	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	1	0	0
	by another Member State	New certificates	0	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	0	0	0

			A	R	P
E.2.4. Number of applications for Part B certificates submitted in 2011 by railway undertakings registered	in the Grand-Duchy of Luxembourg	New certificates	0	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	1	0	0
	by another Member State	New certificates	0	0	1
		Certificates revised / amended	1	0	0
		Certificates renewed	0	0	0

A = Request accepted, the certificate is already issued.

R = Request refused no certificate has been issued.

P = The matter is still pending, no certificate has yet been issued.

E.2.5. List of countries where RUs applying for a Part B certificate in your Member State have already obtained their safety certificate Part A.
Luxembourg France Belgium

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

	New	Updated / amended	Renewed
E.3.1. Number of valid safety authorisations held in 2011 by Infrastructure Managers registered in the Grand-Duchy of Luxembourg	0	0	0

		A	R	P
E.3.2. Number of requests for safety authorisations submitted in 2011 by Infrastructure Managers registered in the Grand-Duchy of Luxembourg	New authorisations	0	0	1
	Authorisation revised / amended	0	0	0
	Authorisations renewed	0	0	0

A = Request accepted, the authorisation is already issued.

R = Request refused, no authorisation has been issued.

P = The matter is still pending, no authorisation has yet been issued.

E.4. Procedural aspects – Part A safety certificates

		New	Updated / amended	Renewed
Mean time between receipt of the application (after receipt of all the necessary information) and the final issue of a Part A safety certificate in 2011 for RUs holding a	licence issued by the Grand-Duchy of Luxembourg			80 working days
	licence issued by another Member State			

E.5. Procedural aspects – Part B safety certificates

		New	Updated / amended	Renewed
Mean time between receipt of an application (after receipt of all the necessary information) and the final issue of a Part B safety certificate in 2011 for RUs holding a	licence issued by the Grand-Duchy of Luxembourg			80 working days
	licence issued by another Member State		80 working days	

E.6. Procedural aspects - Safety authorisations

		New	Updated / amended	Renewed
Mean time between receipt of an application (after receipt of all the necessary information) and the final issue of a safety authorisation in 2011 for the Infrastructure Managers	registered in the Grand-Duchy of Luxembourg			
	registered in another Member State			