NEMZETI FEJLESZTÉSI
MINISZTÉRIUM

NSA Annual Safety Report

Reporting year: 2016

Contents

A. Scope of the report

According to Article 18 of the Railway Safety Directive (RSD as follows) the National Safety Authorities (NSA as follows) have to prepare annually a report which covers the trend of the Common Safety Indicators (CSI as follows), the changes in the national legislation, the development of the safety certification and safety authorization system and the experiences of the related supervision activities.

With this report the Hungarian NSA intends to provide insight on the safety related processes of the Hungarian railway market and to communicate its activity in publicity and for the European Union Agency for Railways.

This Annual Report covers the country's railway safety performance in the light of the year 2016 with the application of the common structure that the European Union Agency for Railways (ERA as follows) proposed in its guidelines.

B. Introductory Section

1. Introduction to the report

This report presents an overview of the processes concerning the safety of railway transport, the condition of the safety of the Hungarian railway sector, the changes of the rules, and the activities of the Hungarian NSA. Also shows the CSI statistics of 2016 and gives an analysis of the trends on the safety performance of the country.

2. A brief introduction into the national legislation in the light of the EU legislation

The Hungarian railway transportation's basic principles are laid down in the Act no. CLXXXIII of 2005 on Railway Transportation (Railway Act as follows). This is in harmony – among others – with the RSD, the Directive 2008/57/EC of the European Parliament and Council, Directive 2007/59/EC of the European Parliament and Council, Commission Regulation No. 445/2011/EU, Commission Decision No. 2011/765/EU.

There are Government and Ministry Decrees which specify the details of the Railway Act's regulation. This includes the GKM Decree no. 40/2006 of the Ministry of Economy and Transport which corresponds with the RSD, the Commission Regulations no. 653/2007/EC, 1158/2010/EU and 1169/2010/EU; the NFM Decree no. 19/2011 (V.10.) of the Ministry of National Development which is identical to the RSD, the Directive 2007/59/EC of the European Parliament and Council; the Government Decree no. 203/2009 (IX.18.) which describes professionally and in details all the health requirements and the way of the examination procedure of people working in railway safety related jobs.

The latest part of the EU legislation related to the railway sector is applied in an 'as is' form. E.g. most of the TSIs don't have peculiar national rules.

3. The railway network

Based on the Railway Act, the elements of the railway infrastructure in Hungary are classified in five regional categories. These serve different purposes and various conditions must be fulfilled in order to operate and use them.

Open access railway infrastructure: The length of the Hungarian rail network is 7690 km. Annex A contains the map of the Hungarian railway network showing the major lines. There are two Infrastructure Managers in Hungary, the MÁV Hungarian State Railways Co. (MÁV Co.) and the GySEV Co. The major part (7251 km) of the network is managed by MÁV Co. There are no high-speed lines in Hungary. The national infrastructure includes 2830 kilometres of lines operating as part of the Trans-European freight corridors, as well as all other major nation-wide railway lines.

The Regional infrastructure is appointed for regional commercial railway activity; it expands over no more than three counties or up to the limit of 400 km. Nowadays, only narrow-gauge railway lines belong to this group. It includes altogether 480 km of railway lines, which primarily serves passenger transport for touristic purposes.

The Municipal railway network serves for public transport between a city and its suburbs. The length of this network is 210 km and consists of public rail network and other different transport means.

Local/City railway networks include tracks within the city borders and its surrounding areas, as well as rail service between a city and surrounding suburbs. The local network of Budapest, Debrecen, Miskolc and Szeged belongs to this group. In these cities their respective transportation companies are operating the railway, underground, tramway and trolley infrastructure and are also providing scheduled passenger service. That's why from the viewpoint of the railway regulatory environment the local railway network operating companies are 'integrated railway companies'. That means they are acting as RU and IM in the same time. It is a great challenge because they have to fulfil both the requirements of RUs and IMs.

Private railway networks are operated by the owner of the industrial sidings. These can be found at harbours, logistical complexes, mines (usually gravel), power-stations and large factories (i.e. car- or steel factory, oil refinery, chemical plant, paper factory).

The list of the Railway Undertakings and Infrastructure Managers operating in Hungary can be found in Annex A.

3. Summary – General Trend Analysis

The table below summarizes the key indicators of the railway safety performance since the beginning of the reporting regime.

	2009	2010	2011	2012	2013	2014	2015	2016
Total number of all accidents	180	142	147	152	186	190	156	162
Number of serious injuries	84	70	76	88	87	73	38	54
Number of fatalities	92	82	84	72	102	108	109	97
Number of precursors	18	754	391	602	352	518	783	370
Total precursors of accidents with signals passed at danger	7	10	18	21	18	18	11	4
Number of level crossing accidents	39	42	38	37	35	28	33	27
Number of valid Part B Safety Certificates	20	32	35	36	43	42	42	46
Number of ECM Certificates*	-	-	5	8	15	20	21	21
Number of Maintenance Functions Certificates**	-	-	0	0	4	6	15	20

*= Numbers show only the ECM Certificates issued by the Hungarian NSA as certification body

**= Numbers show only the Maintenance Functions Certificates issued by the Hungarian NSA as certification body

In 2016, the number of significant accidents increased sightly by 3,84 % compared to the previous year, which can be attributed to the significant increase of accidents involving serious injuries of unauthorised persons – caused by moving rail vehicles – increased from 38 to 54.

All the other indicators show improvement and the number of precursors has reduced by nearly half, decreased to the level between 2011 and 2013, which is considered as a very good result of the Hungarian railway sector. The trend of accidents occurred in level crossings – after last year's increase – turned again into descent.

Further analysis will follow in the 2nd paragraph of Chapter D. in this report, and detailed statistical data can be found in Annex C.1.

C. Organisation

1. Introduction to the organisation

In 2016, in the field of rail transport, the Railway Department of the National Transport Authority acted as the Hungarian NSA. From 1st of January 2017 the Department of Railway Authority of the Ministry of National Development took over its role as the legal successor. Its duty is carrying out authorization tasks in the field of rail transport, with national jurisdiction.

2. Organisational structure; relationship with other national bodies

The diagrams can be found in Annex B.

Railway Department (current staff: 47 people)

- Represents the Hungarian NSA at RISC, ILGGRI and ERA events
- Gives opinion on railway legislation, technical directives and regulations, makes suggestions to amend them
- Provides assistance to the ministry for the preparation of draft proposals for legislations, concerning the railway sector
- Deals with various tasks within the conventional, urban, narrow gauge and industrial rail networks nationally in the following fields:

- Railway Safety and Supervision Unit

  - Performs its task nationally within the conventional, private rail and urban transport network.
  - Issues safety certificates and authorizations, ECM certificates.
  - Assures the fulfilment of the interoperability in case of every subsystem.
  - Supervises the operational and maintenance activity, and checks the compliance with legal framework.
  - Supervises RUs, IMs, ECMs.
  - Informs the leaders of the relevant fields on the experiences of supervisions and prepares an annual report for the president of the NSA by 28th of February of each year, concerning the previous year.
  - Carries out legal action in the cases of offensive behaviour or when railway safety is put to risk.
  - Prepares the Annual report.
  - Deals with the tasks given by the ERA.
  - Represents the Hungarian NSA at the Transportation Safety Bureau of Hungary in case of accidents.

- Railway Mechanical Unit

  - Issues type licences and places conventional, urban, narrow gauge, etc. railway vehicles in service,
  - Carries out on-track tests of vehicles,
  - Authorises the construction, modification, demolition and placing in service of mechanical equipment (eg. scales, turntables, cranes, etc.) and operational facilities (eg. elevators, escalators), and further supervises the operational status of these items.
  - Deals with cases concerning special railway systems (eg. checking condition of vehicles for operational safety, type and modification authorisations etc.) and the placing in service of railway vehicles.

- Railway Infrastructure Unit

  - Authorises the establishment, placing in service, modification and the tearing of railway tracks and other infrastructure elements (eg. signalling, bridges, tunnels, etc.) nationally.
  - Authorises the establishment, placing in service, modification and the tearing of railway interlocking and train control systems.
  - Acts as specialized authority.
  - Contributes to regional development concepts, programs and town planning in terms of rail transport.
  - Manages the register of rail infrastructure.

- Examination and Training Supervision Unit

  - Supervises and controls the training and examinations of engine drivers and other employees related to railway safety.
  - Approves the corporate instructions of the railway undertakings related to railway staff training and development or activities affecting the safety of the railway operation.
  - Defines the strategy, directives and requirements of the examination and other materials of courses concerning railway professional staff training and development.
  - Registers professional tutors and examiners.
  - Issues driving licences and complementary certificates for engine drivers.
  - Appoints examiners.
  - Transposes foreign rail qualifications.

D. The development of railway safety

1. Initiatives to maintain/improve safety performances

Hungary fully implemented all essential requirements of the Railway Safety Directive 2004/49/EC in its national law.

In Hungary the Transportation Safety Bureau (TSB as follows) – independent from the NSA and other organizations in the railway sector – is responsible for the investigation of transport accidents, and from 1st September 2017 is also belongs to the organization of the Ministry of National Development. According to the act No. CLXXXIV of 2005 its main duty is the independent technical investigation of aviation, railway and shipping accidents and incidents. To increase the safety level of the transport system the TSB issues recommendations if necessary. The purpose of the independent investigation is to find the cause of the accident or incident to prevent similar future events, but not its duty to determine the liability.

The recommendations which were issued and addressed to the Hungarian NSA can be found in table D.1.1.

Please note that in the following table:

- Investigation Committee means the TSB's group of experts investigating the given accident,
- NSA refers to Hungarian NSA (National Transport Authority),
- For the explanation of other abbreviations please refer to Annex C.3.

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

Accidents/precursors which triggered the measure			Safety measure decided
Date	**Place**	**Description of the trigger**	
2015.04.05.	Budapest, Keleti station	Passenger train No. 3059 was not able to stop and collided with a buffer stop at the end of the track. Three passengers of the train were slightly injured.	**BA2015-302-5-1:** The investigative commission of the TSB determined during the on-site investigation that the design of the buffer stop located at the end of the track No. 12 of Budapest, Keleti pu. station was not suitable to perform its function in case of collision with a vehicle equipped with coupling head or center buffer. The TSB recommends to the Hungarian NSA to initiate an overview of the buffers used in the national railway network to determine, that those can perform their function in case of multiple-unit train sets, then send the findings of the overview to the infrastructure managers. Accepting and implementing the recommendation the infrastructure managers can seek out and evolve – using the findings of the overview – technical solutions, which on the one hand meet the needs of the mixed vehicle fleet, and on the other hand can pick up the applied load symmetrically in case of collision with the vehicles equipped with coupling head. Applying the technical solutions mentioned above in course of renovations and reconstructions provides a higher level of security.
2015.06.29.	Between Komárom and Nagyigmánd-Bábolna stations	Load of the wagon No. 31 55 542 4623-3 running in the freight train No. 91869 caught fire between Komárom and Nagyigmánd-Bábolna stations. Nobody was injured.	**BA2015-0639-5-01:** The investigative commission of the TSB found during the technical investigation that from the 628 series diesel locomotives – which are in poor condition – during normal operation solid and gaseous hot materials can be discharged through the exhaust system, which are capable of igniting flammable materials in their environment. The TSB recommends to the Hungarian NSA to initiate an overview of the technical condition of the non-modernized 628 series diesel locomotives operated in Hungary, with special attention to the fire safety risk of the combustion product, and – if necessary – take the necessary measures. Accepting and implementing the recommendation in case of freight trains hauled by non-modernized diesel locomotives may reduce the risk of fire.

2015.08.16.	Between Acsa-Erdőkürt and Nógrádkövesd stations	Two passenger trains (No. 33512 and No. 33517) collided between Acsa-Erdőkürt and Nógrádkövesd stations. Five passenger on the trains suffered serious injuries.	**BA2015-0845-5-1:** The investigative commission of the TSB determined during the on-site investigation that in case of emergency situations, the content elements of the live communication between the train dispatcher and the train crew were not defined. Thus the basic information, instruction messages may be delay and their meaning may change during communication. The TSB proposes to the Hungarian NSA to initiate an overview of the applicable rules related to the formal and content elements of live communication between the train dispatcher and the train crew, defined in the safety management system of MÁV Co., and take the necessary measures. Accepting and implementing the recommendation the probability of incidents resulting from unclear verbal instructions can be reduced.
2015.11.06.	Between Tocóvölgy and Hajdúböszörmény stations	Passenger train No. 36628 collided with a car at a level crossing protected with warning lights and half-barriers between Tócóvölgy and Hajdúböszörmény station. In consequence of the occurrence the driver of the car died at the site of the accident.	**BA2015-1181-5-1:** The investigative commission of the TSB found during the technical investigation that the protecting lights of the level crossing darkened immediately when the level crossing reverted into "failure" state, at the time of the approach of the train. This mode of operation did not comply with the point No. 3.1.2.2.3. of the National Railway Regulation (Annex No. 4. of 103/2003. (XII. 27.) Decree of Ministry of Transport, Hungarian: Országos Vasúti Szabályzat, OVSZ). The legislation currently in force devolves the liability of passage exclusively to the driver of the road vehicle – although the road driver may not be able to ascertain the passage of dangers – when the first non-notified train passes at the level crossing in “failure” state. The TSB recommends to the Hungarian NSA to to require the installation of so-called „red extension” as a criterion for issuing a new commissioning license of a level crossing protected with warning lights, if the locomotive driver is not informed directly or indirectly about the state of the level crossing. Accepting and implementing the recommendation when the level crossing is in “failure” state, the 3 minute red extension gives enough time for the train to pass through the level crossing. In case of other failures it is more expected that the train can pass through the level crossing, and the train dispatchers would have an additional 3 minutes to inform the train approaching the level crossing. As a result, in case of failure of level crossings, the number of accidents can be significantly reduced.

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2. Detailed data trend analysis

The indicators are based on data provision "*Annual aggregated data on railway accidents and incidents*" – Annex No. 2. of the Railway Safety Certificate Decision – which was mandatory (with a deadline of 28 February 2017) for all the railway undertakings operating railway activities in Hungary. The total number of accidents increased by 3.84%, which – despite of the decrease in the number of accidents in level crossings – was raised by the increased number of accidents involving personal injury caused by moving railway vehicles.

2.a. Collision accidents

The collision-related accidents have decreased since last year, but due to the low volume this tendency is not relevant.

The locomotive and three passenger coaches of the train No. 5108 – arriving at Hatvan station – collided with the counterweight of a railway crane machine within the clearance gauge on 25th June 2016. The train was stopped immediately by emergency brake applied by the locomotive driver. The material damage was significant (564 800 €), nobody was injured. The subcontractor performed the replacement of a railway switch without permission, athough it was expected that the counterweight of the railway crane machine would extend into the clearance gauge.

One of the damaged passenger coaches after collision at Hatvan station on 25th June 2016 (Source: hatvanonline.hu)

2.b. Derailments

The derailment-related accidents decreased significantly compared to the year 2015, as their number decreased from 6 to 2, thanks to the more modern vehicles on the railway tracks and the implemented safety regulations of railway infrastructure managers.

One bogie of the electric multiple-unit No. 5736 derailed due to the failure of the railway switch No. 6. of Újszász station on 12th August 2016. The material damage was significant (more than 129 000 €), nobody was injured. Until the end of the technical rescue significant train delays occurred on the affected railway line: a total of 2796 minutes of delay in passenger and freight traffic.

Electric multiple-unit after derailment at Újszász station on 12th August 2016
(Source: iho.hu)

2.c. Accidents in level crossings

The number of serious accidents occurred in level crossings decreased compared to the previous year, as their number decreased from 33 to 27. Most of these accidents involved both personal injury and material damage, caused drivers who violated traffic rules related to railway level crossings. The most common cause of this accident type, that the driver does not start braking in proper time approaching the level crossing and collide with the train from some direction.

Two real example for this accident type:

The passenger train No. 8902 collided with a trailer truck between Babócsa and Barcs stations in the level crossing protected with warning lights No. AS695, on 25th July 2016. A result of the collision the fuel tank of the road vehicle was damaged and lit, the driver of the trailer truck lost his life during the accident. The locomotive driver and one passenger of the train suffered slight injury. In the locomotive and in the front passenger car the material damage was significant.

This accident was recorded by a nearby surveillance camera, from whitch an educational video was published by the Police on its website.

The locomotive of the freight train No. 93128 collided with a truck trailer between Győrszabadhely and Pannonhalma stations, at the unprotected level crossing of Nyúl station, on 25th July 2016. The two persons who were staying on the locomotive (locomotive driver and shunting operator) suffered serious, life-threatening injuries during the collision, one of them died after being transported to the hospital. The driver of the road vehicle was not injured.

As a result of the accident the locomotive and the first tank wagon of the train consisted of tanks with gasoil derailed. In the locomotive and in the railway track the material damage was significant.

Years ago a similar accident had already occurred in the same level crossing. By the reason of the heavy freight traffic on the affected road, the construction of a level crossing protected with warning lights and half-barriers is included by the transport development program.

Completely burn out trailer truck after the collision between Babócsa and Barcs stations on 25th July 2016.
(Source: MTI)

Damaged locomotive at Nyúl station on 28th Novembre 2016
(Source: MÁV Co.)

2.d. Accident to persons caused by rail vehicle in motion

The accidents involving serious injuries caused by moving rail vehicles increased by almost 12% compared to 2015. There is a significant increase in the number of seriously injured persons, but there is a slight decrease in the number of deaths. The number of suicides increased significantly, from 57 to 76 events in 2016 compared to 2015.

The most serious accident in this field occurred at Kapuvár station on 07th October 2016. Three elderly passengers were hit by the shunting locomotive of the train No. IC942. They wanted to leave the station through the railway tracks – and not through the designated pedestrian passage - after they had got off on the wrong side of the train. Two passengers lost their lives on the spot, while one passenger was slightly injured. According to the preliminary investigation, the event was caused by personal omission and work deviating from the instructions.

The site of the accident occurred at kapuvár station on 7th October 2016.
(Source: GYSEV Zrt.)

2.e. Accidents involving fire

In 2016 there was no accident involving personal injury caused by fire in rolling stock, alhough a fire broke out 9 times, which is a significant increase as in 2015 there were only 6 cases. In the mentioned fire accidents no passengers were affected.

Accidents involving fire typically leads less material damage, because as the train crew or the locomotive driver usually detects failure and smoke and can intervene with the fire extinguishers of the vehicle in time.

The number of precursors has decreased significantly. This is mainly due to a decrease in the number of rail-breake cases and stop signal passings.

Transport of dangerous goods: The safety level of the transportation of dangerous goods was favourable in 2016 as well, since no accidents occurred.

The cost of material damage caused by major accidents is increasing steadily, as a result of the significant increase in the value of used rolling stock and railway infrastructure. The cost of environmental damage in 2016 was neglibile for major accidents.

In summary, the picture of the CSIs is very colourful and shows many aspects. The slight increase of the total number of accidents is not a worrying result, because this is the only area where the indicator is not developing in the desired way. The situation has improved at the site of level-crossing accidents and number of passengers & employees involved in accidents, and the overall safety level of the Hungarian railway network was preserved.

3. Results of the Safety Recommendations

Accidents *(Details in Table D.1.1)*	**Result of the Safety Recommendations**
2015.04.05. Budapest, Keleti station	**BA2015-302-5-1:** The overview of the technical parameters of buffers used in the national railway network was not necessary, because during the accident the buffer was suitable to perform its function.
2015.06.29. Between Komárom and Nagyigmánd - Bábolna stations	**BA2015-0639-5-01:** Is not justified the modification of the diesel locomotive type in question, as the intervention is not economical in case of the old vehicles. The freight wagons were loaded oily metal splinters and scrap metal mixed with rubber and plastic, which largely contributed to the occurrence of the accident. During the transport of these types of loads the railway undertakings must proceed with caution to avoid further similar cases.
2015.08.16. Between Acsa-Erdőkürt and Nógrádkövesd stations	**BA2015-0845-5-1:** The review of the instructions and the recommendations were inspected under the annual surveillance audit of MÁV Zrt.
2015.11.06. Between Tocóvölgy and Hajdúböszörmény stations	**BA2015-1181-5-1:** The introduction of the recommendation to the licensing procedures is in progress.

E. Important changes in legislation and regulation

There was no significant legislative change affecting the national rail transport during the reporting period. The modifications in legislation contain only refinements.

F. The development of safety certification and authorisation

Safety Certification:

In 2016 three new Safety Certificate (Part A & Part B) were issued for Hungarian Railway Kft., Metrans Danubia Kft. and IntegRail Zrt.

Regarding the renewals of the safety certificates, 10 Part A & their accompanying Part B safety certificates were renewed in 2016.

Among the RUs located in other MSs, one new Safety Certificate of Part B was issued for Lokorail a.s. beside 3 renewals.

Safety Authorization:

In 2016 one safety authorisation (GYSEV Zrt.) was renewed by the Hungarian NSA.

1. National legislation – starting dates – availability

   Legal materials are available for the applicants on CD. Also, on the homepage of the Hungarian NSA, there is a section dedicated for the legislation which relates to the railway sector. This contains even more information in connection with the certification processes and other important topics. After that for the applicants the formal requirements, the application form for Safety Certificates, ECM Certificates are provided.

   In addition, the Hungarian NSA successfully reworked the information materials for the applicants. A new set of documents are available with a cleaner structure and logic resulting the decrease of administrative burden for the applicants as they need to handle less documents during the process.

2. Numerical data

   See Annex E.

3. Procedural aspects

   3.1. Safety Certificates Part A

   Reasons for updating/amending Part A Safety Certificates

   The reasons of the amendments are typically the expansion of the companies' activities, as well as the changes in internal processes. This includes the increase of the quantity of the rolling stock and the staff.

   NSA Charging fee for issuing a Part A Certificate

   The amount of fees charged by the NSA is described in the Decree No. 72/2006. (IX. 29.) GKM of the Ministry of Economy and Transport. The fees were slightly reduced in October, 2012. In 2015 and also in 2016 there were no changes in the fees.

   The fee depends on the number of vehicles and the type of service. The fee can vary from 3 300 € to 6200 € for each activity.

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

No major problems were reported with application procedures for Part A certificates.

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

Usually, the formation of the Safety Management System according to Commission Regulation No 1158/2010/EU assign a workload for the Railway Undertakings. It needs several turns to provide a material which is in compliance with the regulation.

In case of submission of a new application or renewal of an existing certificate the transfer of changes through the safety management system also gives a workload for the experts.

The NSA helps with consultations and with providing a check-list in which the compliance of the submitted Safety Management System documentation can be checked in details, according to the regulation.

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

RUs can contact the NSA in person, via written letter or in urgent cases by phone and email as well.

3.2. Safety Certificates Part B

NSA Charging fee for issuing a Part B Certificate

The amount of fees charged by the NSA is described in the Decree No. 72/2006. (IX. 29.) GKM of the Ministry of Economy and Transport. The fees were slightly reduced in October, 2012. The fee depends on the number of vehicles and the type of service. The fee can vary from 3 300 € to 6 200 €. Since 2012, there were no changes in the application fee.

Summary of the common problems/difficulties for the NSA in application procedures for Part B Certificates

No major problems were reported with application procedures for Part B certificates.

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

There was no problem mentioned by Railway Undertakings when applying for a Part B Certificate.

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

Railway Undertakings can contact the NSA in person, via written letter or in urgent cases via phone and by email.

3.3. Safety Authorisations

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

Infrastructure Managers can contact the NSA in person, via written letter or in urgent cases by email.

NSA Charging fee for issuing a Safety Authorisation

The amount of fees charged by the NSA is also described in the Decree No. 72/2006. (IX. 29.) GKM. The fee can vary from 6.400 € to 11.625 €, depending on the length of the operated line. The fees were slightly reduced in October, 2012. Since then, there were no changes in the fees.

G. Supervision of Railway Undertakings and Infrastructure Managers

1. The Hungarian NSA supervises the operational- and traffic-safe state of the railway tracks, the technical conditions of the operational equipment, the rolling stock and the railway workers and whether the occasional examinations and necessary repairs are completed. The RUs and IMs are obligated to ensure all conditions of free supervision, especially access to the relevant documents and equipment under supervision. If the NSA during its supervision determines an omission, it obligates the operator to conduct the necessary examination or repair, and may impose a fine on the operator, or suspend its operations.

The new regulation that appeared at the end of 2014 provides the opportunity for the NSA as well to impose a fine on the lawbreaker RUs, IMs or railway workers.

The NSA also has to deal with the public and the trade union complaints concerning railway safety.

1.1. Audits/Inspections/Checklists

The content of the annual audit programme (supervision of the conditions of the issued safety certificates):

- supervision of processes according to documents
- supervision of the Safety Management System of the RU
- reviewing the effectiveness of the measures taken after the findings of previous supervision
- checking that the lessons learned from accidents and incidents of the given RU are taken into account
- on site supervision
- supervision of running trains.

Audits/inspections are carried out by the NSA. Only 7 people are available for audits. These people also deal with issuing the Safety Certificates, Safety Authorizations, issue ECM Certifications, Maintenance Function Certificates, deal with public complaints and also with the authorization of NoBos and DeBos. Experts of other units are also involved if necessary and are available.

Economic aspects: The cost of audits is included in the NSA's budget.

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

There can be mentioned two sensitive points:

- calling upon RUs or IMs to eliminate insufficiencies identified during the audit,

– examining the measures taken since the last audit/inspection.

In 2016, the NSA performed 34 audits. The audits did reveal serious discrepancies in some cases. These were the improper implementation of the SMS, failing to include the newly appeared EU and Hungarian regulations, breaching the allowed driving time and rest period rules set by national law. Also, severeal administrational shortcomings were identified. e.g.: incomplete preparation of route logs, the training report not complying with the rules. After the NSA issued the obligations, imposed fines and took other enforcement actions, the companies performed the necessary corrective measures.

INSPECTIONS		Issued Safety Certificates Part A	Issued Safety Certificates Part B	Issued Safety Authorisations	Other Activities (Issued ECM or Maintenance function certificates)
Number of audits of RUs/IMs for 2016	planned	*	38	2	6
	unplanned	*	6	0	3
	carried out	*	34	1	6

*= Audits for Part A Safety Certificates are included in the audits of the safety certificate Part B in the case of Hungarian RUs. Audits of RUs located in other MSs (and possessing a Part B Safety Certificate for the Hungarian railway network) are included in the number of audits of issued Safety Certificate Part B.

AUDITS		Issued Safety Certificates Part A	Issued Safety Certificates Part B	Issued Safety Authorisations	Other Activities (Issued ECM or Maintenance function certificates
Number of inspections of RUs/IMs for 2016	planned	*	40	2	3
	unplanned	*	0	0	0
	carried out	*	34	1	3

*= Inspections for Part A Safety Certificates are included in the inspections of the Safety Certificate Part B in the case of Hungarian RUs. Inspections of RUs located in other MSs (and possessing a Part B Safety Certificate for the Hungarian railway network) are included in the number of audits of issued Safety Certificate Part B. This is because systematically the content and also the conditions of Part A and Part B Safety Certificates are interconnected.

2. Summary of the relevant corrective measures in 2016:
   – registering the real knowledge of routes of the engine drivers in supplementary cartificates;
   – enforcing the regulations authorised by the NSA;
   – enforcing the operational rules of RUs;

- enforcing the loading rules of freight transport;
- enforcing RUs and maintenance workshops to properly identify and improve the technical requirements for repairing rail vehicles;
- promoting the importance of safety culture and the improvement of the RUs SMS into a more applicable way – if needed.

The observations of the audits are recorded in writing. Based on these records, the NSA decides about the further tasks.

The RUs and IMs have to make an action plan to eliminate the deficiencies and inform the NSA about the stage of implementation of their plan. The NSA could check the implementation of the plan during the next inspection or immediately and continuously depending on the nature of the case. The NSA's activity is based on the risk analysis of the processes.

3. There were no complaints from IM('s) concerning RU('s) related to conditions in their Part A/Part B Certificate.

4. There were no complaints from RU('s) concerning IM('s) related to conditions in their authorisation.

H. Reporting on the application of the CSM on risk evaluation and assessment

Applying the Regulation No. 402/2013/EU, the NSA started to draw the RU's and IM's attention on the requirements of the regulation. Also, these companies were informed to revise the risk-management procedures in their SMS.

There were several cases when NSA HU proposed an RU to carry out its risk-management procedure and send in the documentation of the decision.

I. NSA Conclusions on the reporting year – Priorities

The main objective of the NSA is to improve railway safety, in accordance with the EU and national objectives.

As an important task, the accreditation of NoBos and DeBos is delegated to NSA HU as well. This needs significant resources. In 2016, regarding these accreditation activities, the necessary audits also have to be carried out after the certification.

Some other tasks needed to be postponed to 2016 because of the lack of staff. With the number of tasks increasing year-by-year, more professional staff is required.

Taking a bigger part in international activities, our NSA considers it very important to deal with the introduction of the 4th Railway Package and participate in most ERA workshops and working groups, provide the necessary information and improve the already good partnership with ERA and the other NSAs. This also results in a notable increase of workload.

J. Alternative measures through derogations regarding ECM certification scheme

According to article 14a (8) of Directive 2008/110/EC alternative measures are no longer allowed to be implemented, so Hungary does not apply such measures.

K. Sources of information

The source of the data in the report:

- Accident, incident reports and the annual reports submitted by the railway undertakings and infrastructure managers
- IM's daily accident reports
- IM's investigation reports on accidents
- Final reports and the included safety recommendations of the investigations carried out by the Transportation Safety Bureau (NIB of Hungary), and the organisation's website (www.kbsz.hu)
- The NSA's internal background data about the RU's Safety Certificates and IM's Safety Authorizations, inspections, audits, procedures
- Complex Law Library
- ERADIS
- ERAIL database of accidents and Common Safety Indicators

L. Annexes

ANNEX A: Railway Structure Information

ANNEX B: Organisation chart(s) of the Department of Railway Authority

ANNEX C: CSIs data – Definitions applied

ANNEX D: Important changes in legislation and regulation

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

ANNEX A: Railway Structure Information

A.1. Network map

A.2. List of Railway Undertakings and Infrastructure Managers

A.2.1. Infrastructure Manager(s) in 2016

	Name	Address	Website/Network Statement Link	Safety Authorisation (Number/Date)	Start date commercial activity	Total Track Length	Total Track Length HSL	Number of LC
1.	GySEV Zrt.	9400 Sopron, Mátyás király u. 19.	www.gysev.hu	HU 01 2011 0001 2011.12.15.	2008.10.02.	439 km	-	298
2.	MÁV Zrt.	1087 Budapest Könyves Kálmán krt. 54-60.	www.mav.hu	HU 21 2015 0001 2015.06.29.	2010.07.01.	7251 km	-	5743

A.2.2. Railway Undertaking(s) in 2016

	Company Name	Address	Homapage	EIN* of Safety Certificate	Service is to begin	Activity
1.	AWT Rail HU Zrt.	1134 Budapest, Róbert Károly krt. 64-66.	www.awt.eu	HU 11 2015 0012	16.11. 2010	traction freight forwarding
2.	BoBo Kft.	3528 Miskolc, Csele utca 10.	www.bobokft.hu	HU 11 2016 0008	02.04. 2008	traction freight forwarding
3.	boxXpress.de GmbH	21129 Hamburg, Köhlfleetdamm 5.	www.boxxpress.de	HU 12 2014 0005	16.04. 2009	traction freight forwarding
4.	BSS 2000 Kft.	2700 Cegléd, Alkotmány út 59.	www.bss2000.hu	HU 11 2016 0011	30.11. 2011	traction freight forwarding
5.	Central Railways, s.r.o.	040 01 Szlovákia, Košice, Kriva 21.	www.crw.sk	HU 12 2012 0001	01.02. 2012	traction freight forwarding
6.	CER Zrt.	1097 Budapest Könyves Kálmán krt. 16.	www.cer.hu	HU 11 2016 0009	28.11. 2011	traction freight forwarding
7.	Continental Railway Solution Kft.	1143 Budapest, Hungária krt. 80/a II/3.	www.continentaltrain.com	HU 11 2015 0006	15.05. 2015	traction, passenger transport, freight forwarding
8.	DB Cargo Hungária Kft.	9027 Győr, Hűtőház út 23.	hu.dbcargo.com	HU 11 2016 0012	15.12. 2011	traction
9.	DRT Danubius Rail Transport Kft.	1064 Budapest, Podmaniczky utca 57.	www.danubius railtransport.hu	HU 11 2013 0001	10.04. 2013	traction
10.	DS VASÚT Kft.	4400 Nyíregyháza, Derkovits utca 74.	www.dsvasut.uniweb.hu	HU 11 2015 0003	10.05. 2015	traction and freight forwarding

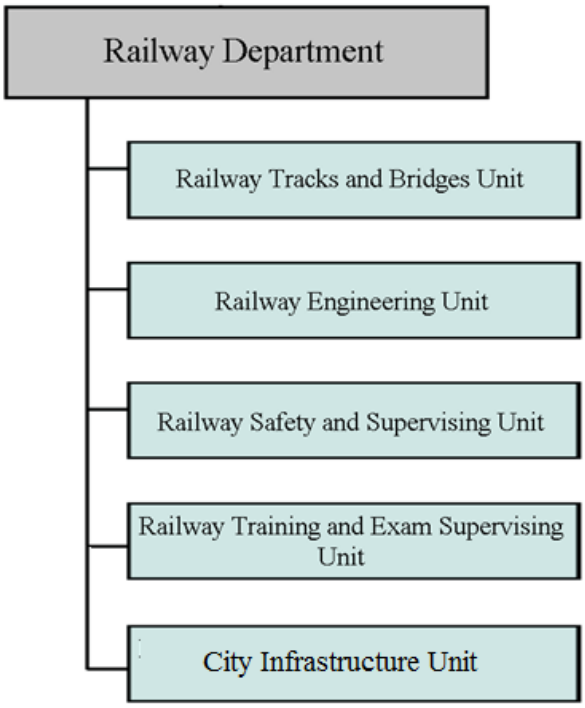
11.	DUNAGÉP Szolgáltató Zrt.	2316 Tököl, Csépi út 221.	www.dunagep.hu	HU 11 2013 0005	16.06. 2013	traction
12.	Express Group a.s.	82109 Bratislava, Plynárenská 7/B.	www.expressgroup.sk	HU 12 2015 0012	01.07. 2015.	traction freight forwarding
13.	Floyd Zrt.	1138 Budapest, Madarász u.47-49.	www.floyd.hu	HU 11 2014 0008	01.09. 2008	traction freight forwarding
14.	FOX Rail Zrt.	1042 Budapest, Árpád út 56, II. em. 4.	www.foxrail.hu	HU 11 2013 0009	10.10. 2013	traction freight forwarding
15.	G & G Kft.	6726 Szeged Torockói u. 3/b	www.gesgkft.hu	HU 11 2014 0008	16.12. 2008	freight forwarding
16.	GySEV Cargo Zrt.	9400 Sopron, Mátyás király u. 19.	www.gysevcargo.hu	HU 11 2015 0007	01.06. 2010	traction freight forwarding
17.	GySEV Zrt.	9400 Sopron Mátyás Király u. 19.	www.gysev.hu	HU 11 2011 0007	28.06. 2007	passenger transport traction
18.	Hungarian Railway Kft.	1053 Budapest Magyar u. 29.	www.hungarian-railway.hu	HU 11 2016 0007	01.06. 2016.	passenger transport traction
19.	IntegRail Zrt.	1138 Budapest, Révész u. 27.	www.integrail.hu	HU 11 2016 0006	01.06. 2016.	passenger transport traction
20.	Kárpát Vasút Kft.	2737 Ceglédbercel, Virág utca 9.	www.karpatvasut.hu	HU 11 2015 0004	01.05. 2010	traction freight forwarding
21.	LTE Hungária Vasúti Árufuvarozó és Logisztikai Kft.	1117 Budapest, Október 23. utca 8-10.	www.lte-group.eu	HU 11 2015 0013	24.02. 2015	traction freight forwarding
22.	LTE Logistik- und Transport GmbH	Karlauer Gürtel 1 A-8020 Graz Austria	www.lte-group.eu	HU 12 2015 0016	12.02. 2010	traction freight forwarding
23.	Magyar Vasúti Áruszállító Kft.	4028 Debrecen, Jósika utca 9.	www.mvakft.hu	HU 11 2015 0008	15.08. 2011	freight forwarding
24.	MÁV FKG Kft.	5137 Jászkisér Jászladányi u. 10.	www.fkg.hu	HU 11 2013 0010	16.11. 2008	traction freight forwarding
25.	MÁV NOSZTALGIA KFT.	1142 Budapest, Tatai út 95.	www.mavnosztalgia.hu	HU 11 2014 0011	01.06. 2009	passenger transport traction freight forwarding
26.	MÁV-START Zrt	1087 Budapest Könyves Kálmán krt. 54-60.	www.mav-start.hu	HU 11 2014 0003	01.07. 2010	passenger transport traction, maintenance services

27.	METRANS /Danubia/ a.s.	92901 Szlovákia, Dunajska Streda, Povodska cesta 18.	www.metrans.cz	HU 12 2012 0003	01.07. 2012	traction freight forwarding
28.	METRANS /Danubia/ Kft.	9024 Győr, Somogyi Béla utca 22. B. ép. 2. em. 7.	www.metrans.hu	HU 11 2016 0005	01.05. 2016.	traction freight forwarding
29.	MMV Zrt.	1035 Budapest, Kerék u. 80.	www.mmv.hu	HU 11 2012 0004	01.10. 2007	traction freight forwarding
30.	MOL Nyrt.	1117. Budapest, Október huszonharmadika u. 18.	www.mol.hu	HU 11 2012 0001	01.04. 2012	freight forwarding
31.	MTMG Zrt.	1012 Budapest, Logodi u. 34/A	mtmgzrt.com	HU 11 2014 0009	16.11. 2009	traction freight forwarding
32.	PETROLSPED s.r.o.	98401 Lučenec, L. Svobodu 2839/1 Szlovákia	www.petrolsped.sk	HU 12 2012 0002	16.05. 2012	traction freight forwarding
33.	PKP Cargo Spółka Akcyjna	Grójecka 17., PL-02-021 Warszawa	www.pkp-cargo.pl	HU 12 2014 0009	10.05. 2013	traction freight forwarding
34.	Prvá Slovenská Železničá, a.s.	934 01 Levice, Ku Bratke 5. Szlovákia	www.psz.sk	HU 12 2014 0004	16.05. 2008	traction freight forwarding
35.	Rail Cargo Hungaria Zrt.	1033 Budapest, Váci u. 92.	www.railcargo.hu	HU 11 2013 0004	01.03. 2011	traction freight forwarding
36.	Rail Cargo Carrier Zrt.	1033 Budapest, Váci u. 92.	www.rcc.hu	HU 11 2014 0010	01.04. 2013.	traction freight forwarding
37.	RTS Rail Transport GmbH	A-8055 Graz, Puchstraße 184	www.rts-rail.com	HU 12 2011 0003	13.10. 2011	traction freight forwarding
38.	SŽDS a.s.	960 01 Zvolen, Na Štepnici 1379/1., Szlovákia	www.szds.sk	HU 12 2013 0011	16.10. 2008	traction freight forwarding
39.	STRABAG Vasútépítő Kft.	1117 Budapest, Gábor Dénes utca 2.	www.strabag.com	HU 11 2015 0011	01.10. 2015.	traction freight forwarding
40.	Swietelsky Vasúttechnika Kft.	9500 Celldömölk, Nagy Sándor tér 14.	www.vasuttechnika.hu	HU 11 2013 0007	16.08. 2013	traction freight forwarding
41.	Szentesi Vasútépítő Kft.	6000 Szentes, Baross G. u. 2.	-	HU 11 2014 0002	16.05. 2008	traction freight forwarding
42.	Train Hungary Kft.	4028 Debrecen, Szoboszlói u. 50.	www.trainhungary.hu	HU 11 2014 0004	01.09. 2007	traction freight forwarding

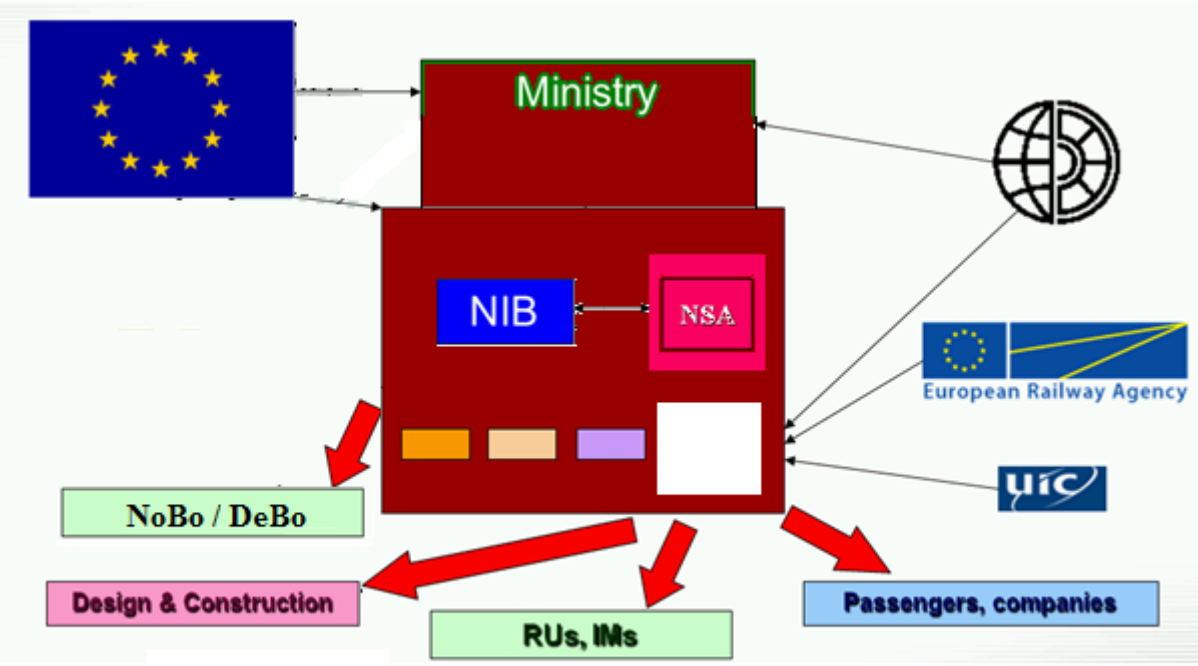
43.	Vasútépítők Kft.	9031 Győr, Csaba utca 9.	www.vasutepitok.hu	HU 11 2015 0014	22.12. 2015	traction freight forwarding
44.	Vasútvillamosító Kft.	1106 Budapest, Jászberényi út 90.	www.vasutvill.hu	HU 11 2011 0005	15.11. 2011	traction freight forwarding
45.	Záhony-Port Zrt.	4625 Záhony, Európa tér 12.	www.zahony-port.hu	HU 11 2013 0008	16.09. 2008	traction freight forwarding
46.	ŽSSK CARGO a.s.	Bratislava, Drieňová u. 24. 820 09 Slovakia	www.zscargo.sk	HU 12 2010 0012	16.10. 2010	traction freight forwarding

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

B.1. Chart: Internal organization



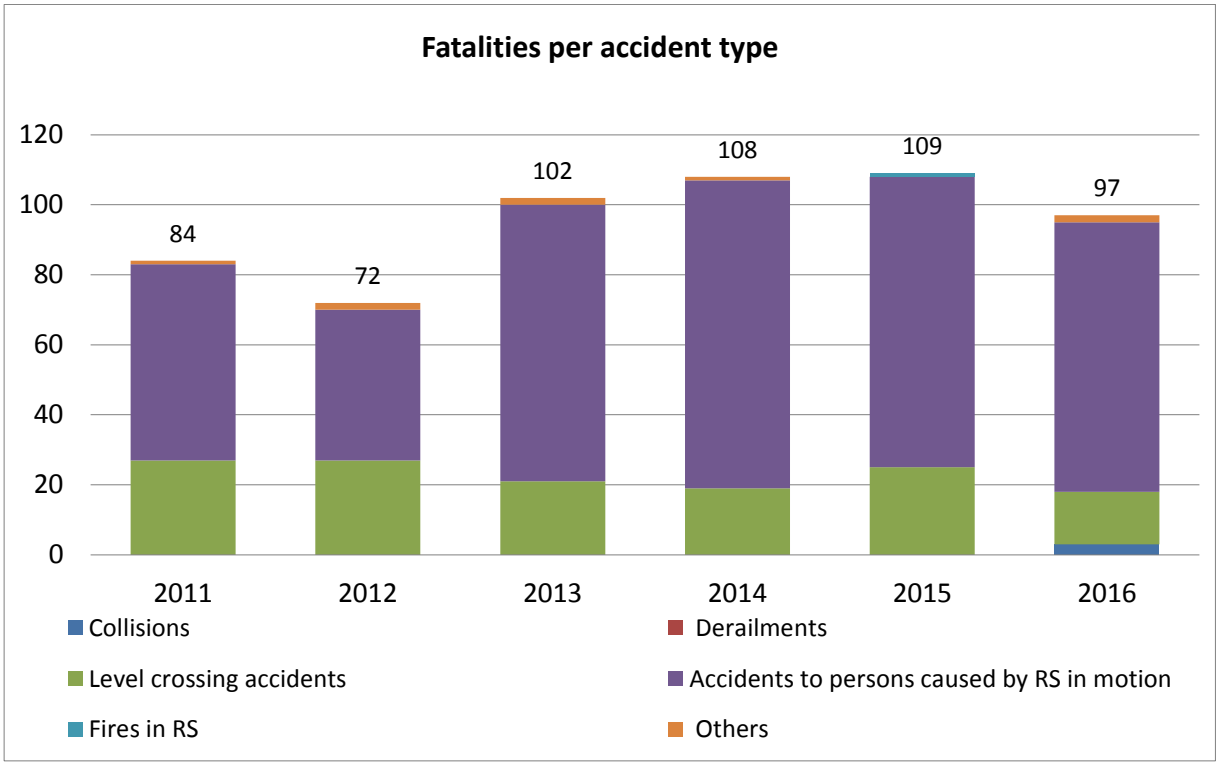
B.2. Chart: Relationship with other National Bodies

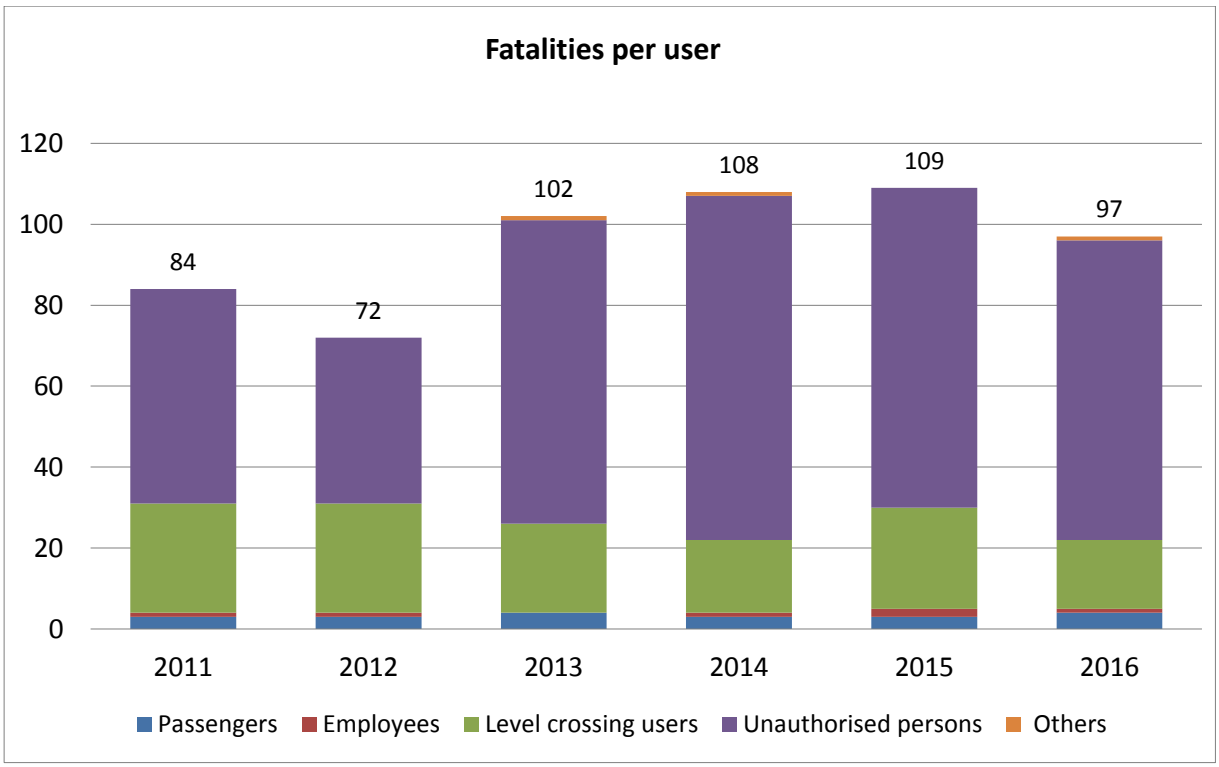


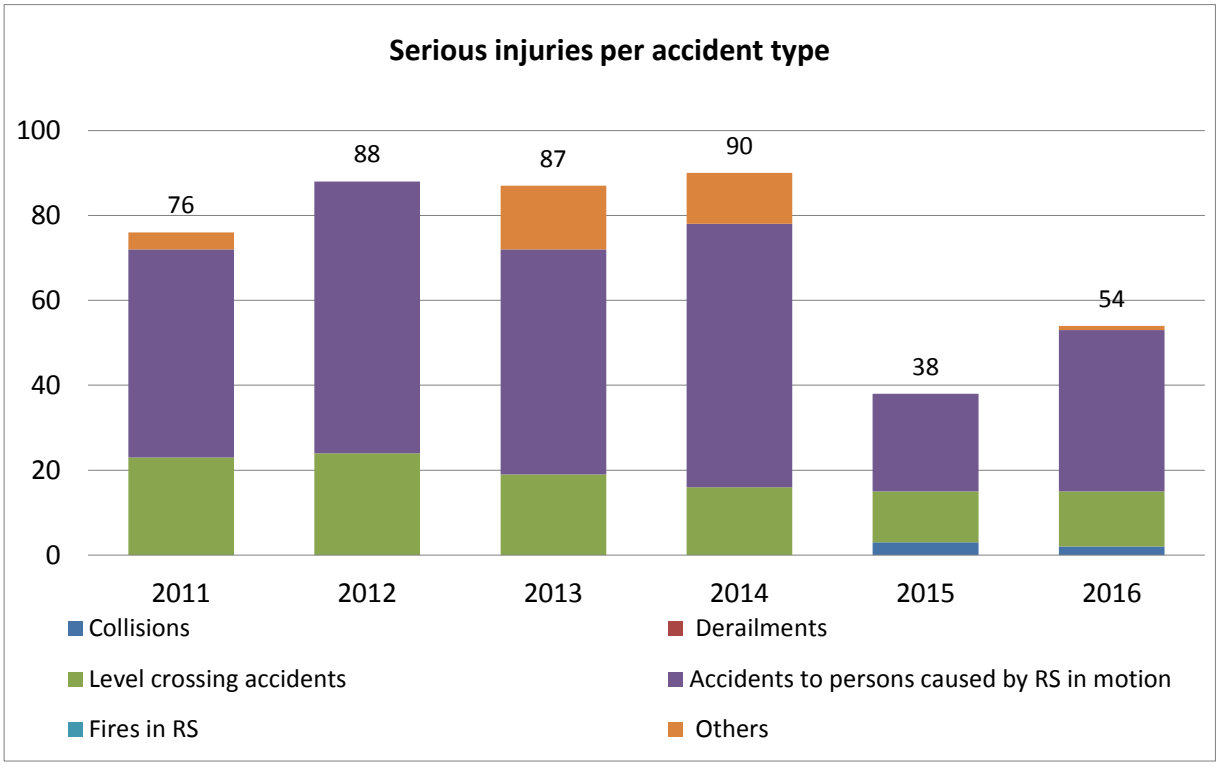
ANNEX C: CSIs data – Definitions applied

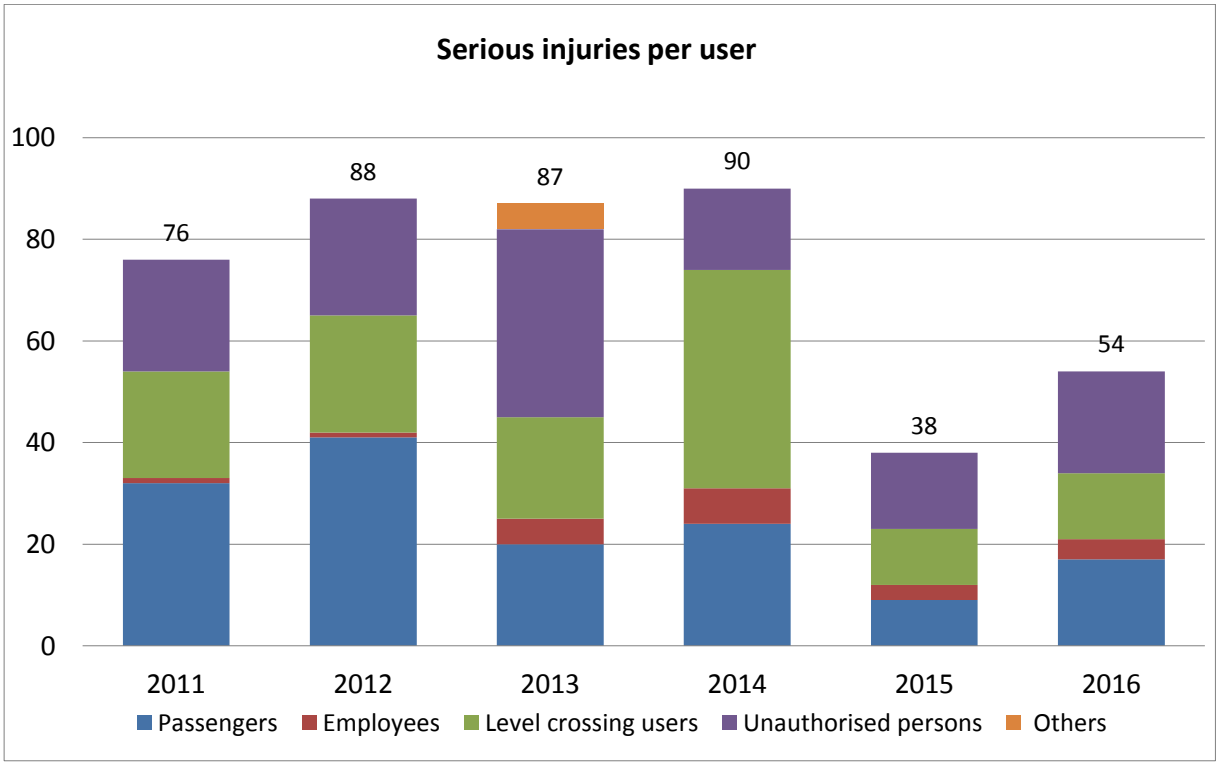
C.1. CSIs data

Outcomes

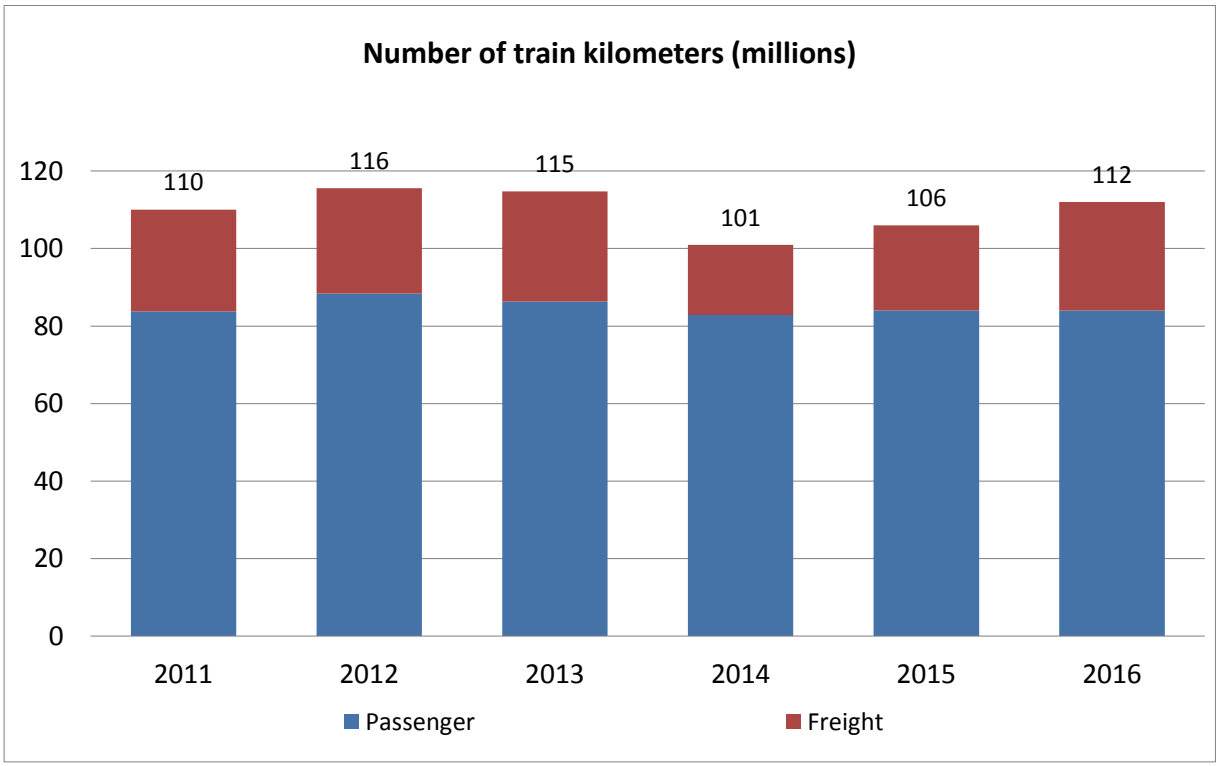


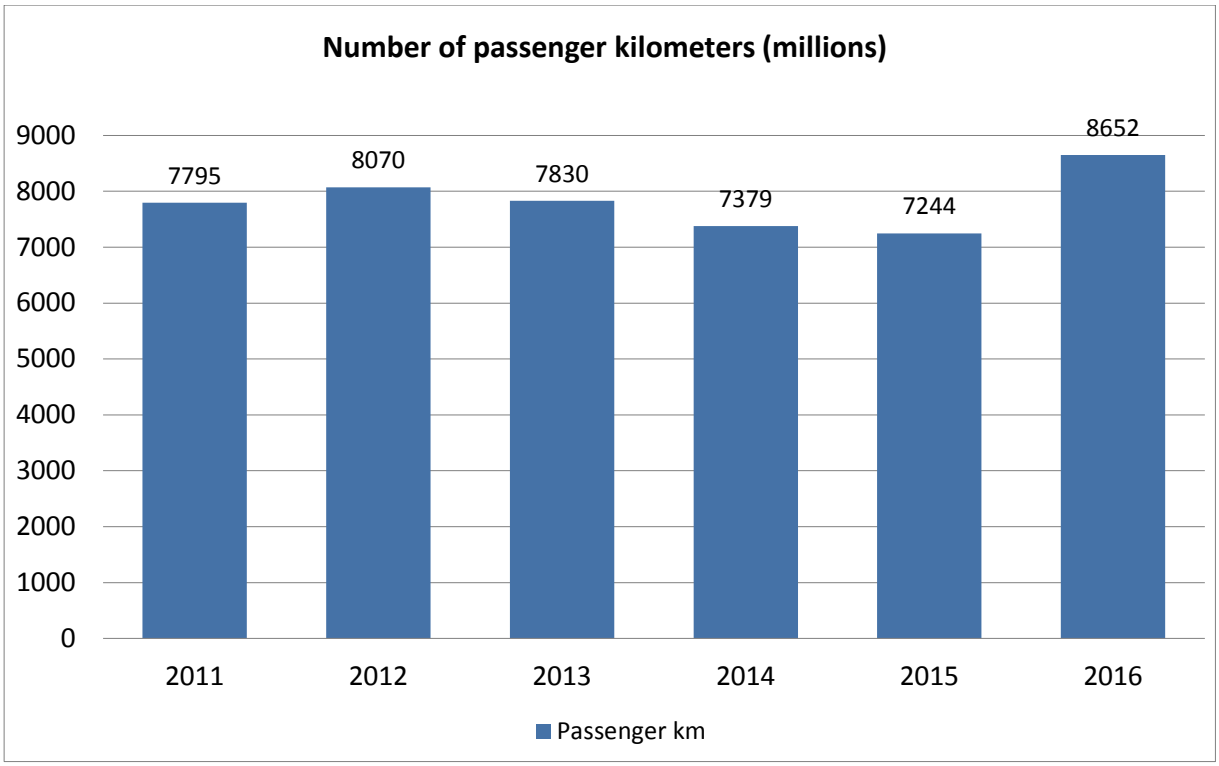


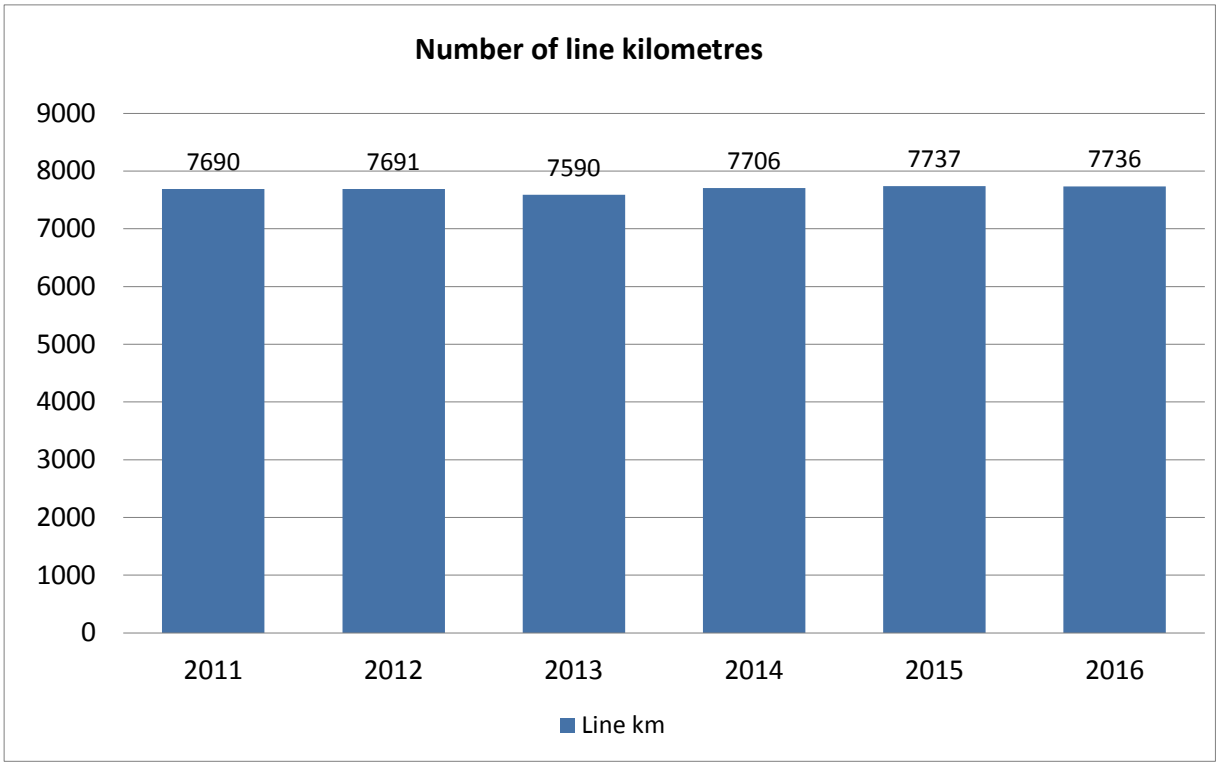

Serious injuries per accident type
100
80
60
40
20
0
76
88
87
90
38
54
2011
2012
2013
2014
2015
2016
Collisions
Derailments
Level crossing accidents
Accidents to persons caused by RS in motion
Fires in RS
Others

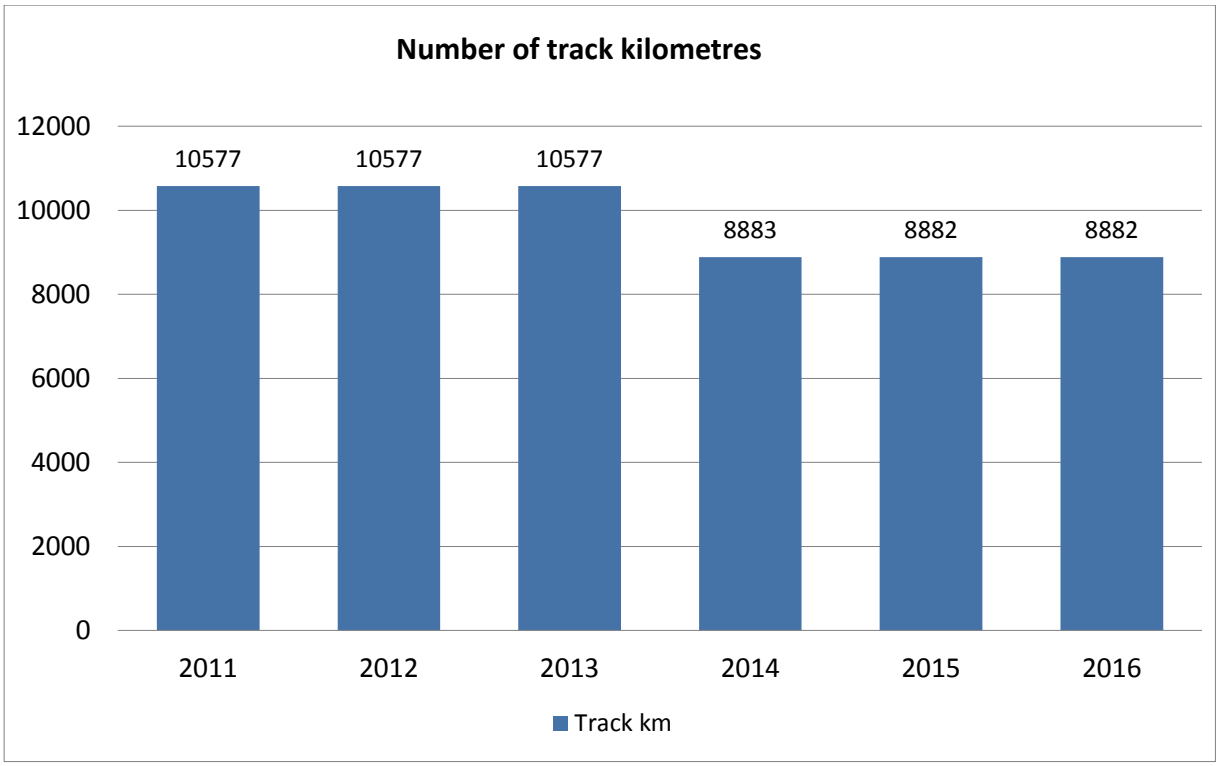

Serious injuries per user
100
80
60
40
20
0
76
88
87
90
38
54
2011
2012
2013
2014
2015
2016
Passengers
Employees
Level crossing users
Unauthorised persons
Others

Exposure data

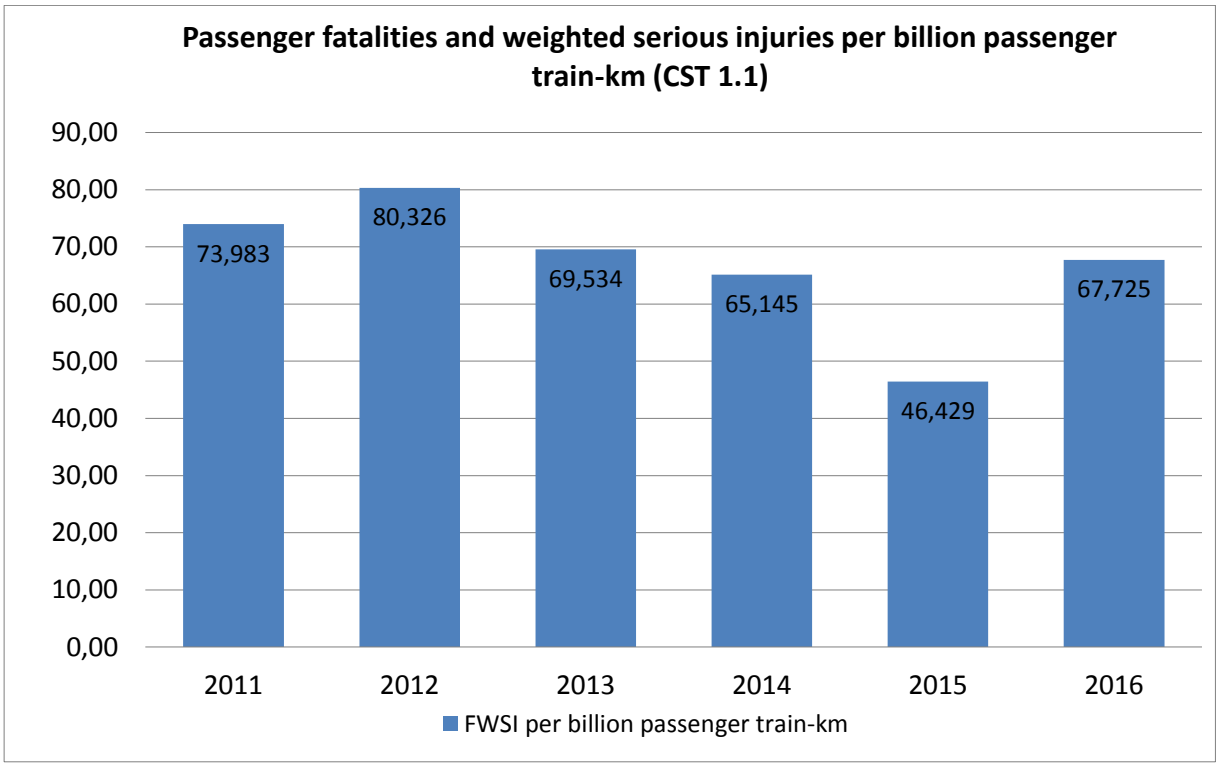


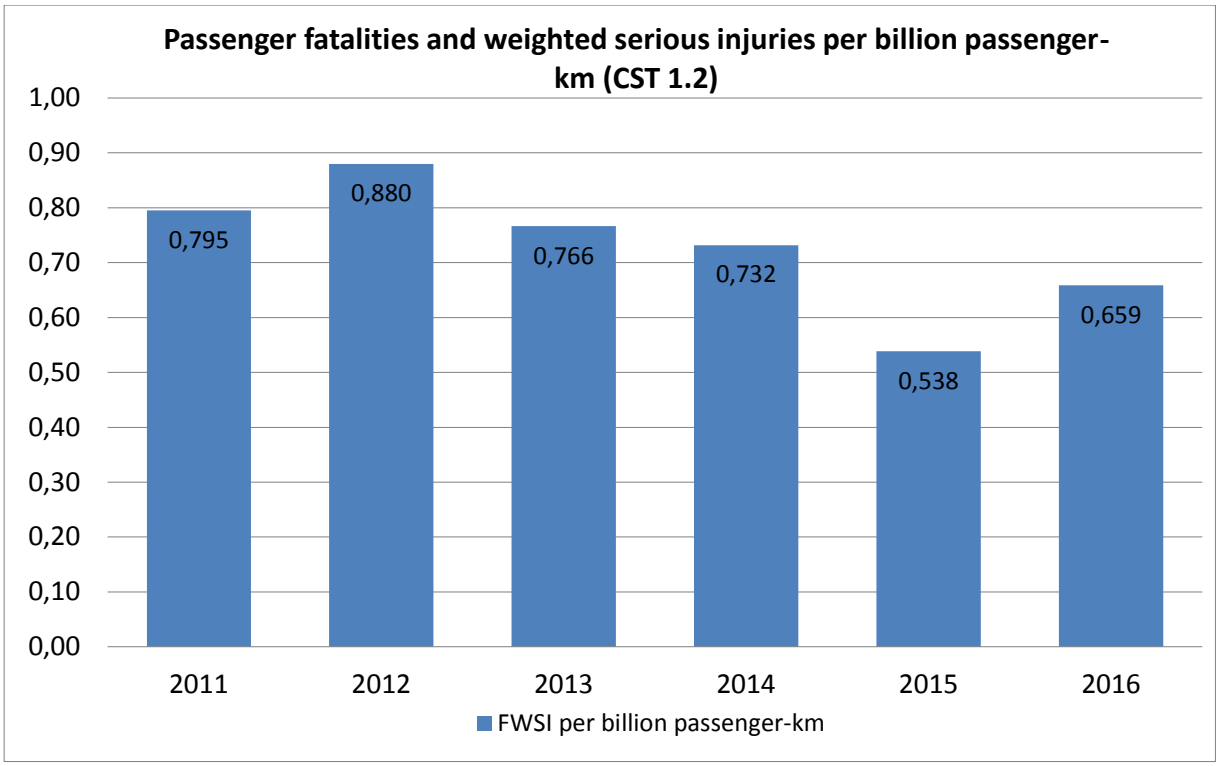

Number of passenger kilometers (millions)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
7795
8070
7830
7379
7244
8652
2011
2012
2013
2014
2015
2016
Passenger km

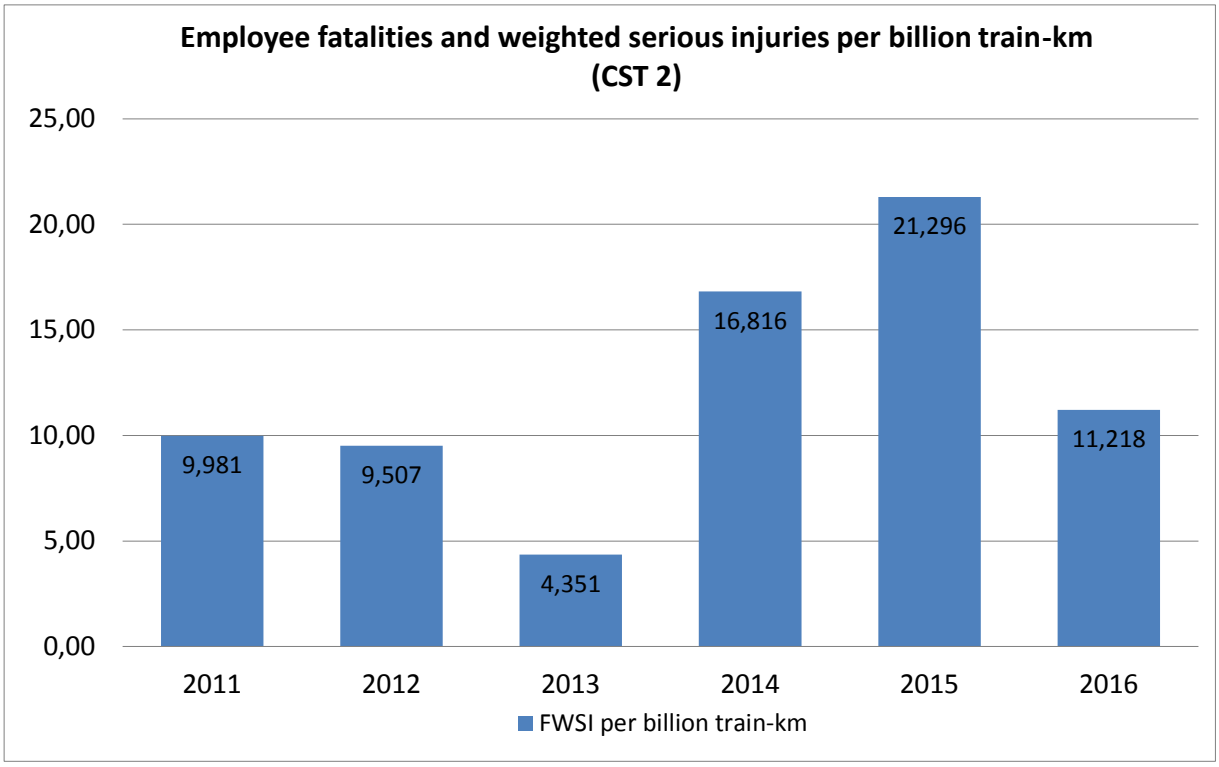

Number of line kilometres
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
7690
7691
7590
7706
7737
7736
2011
2012
2013
2014
2015
2016
Line km

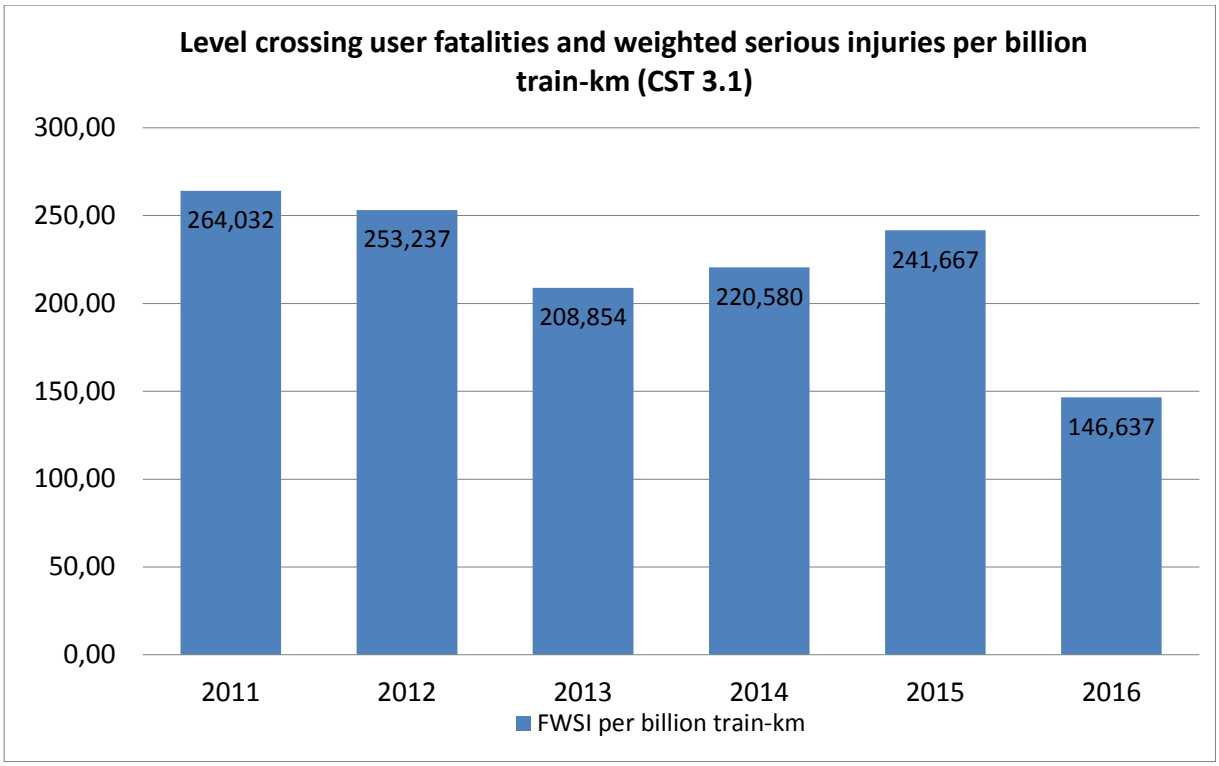


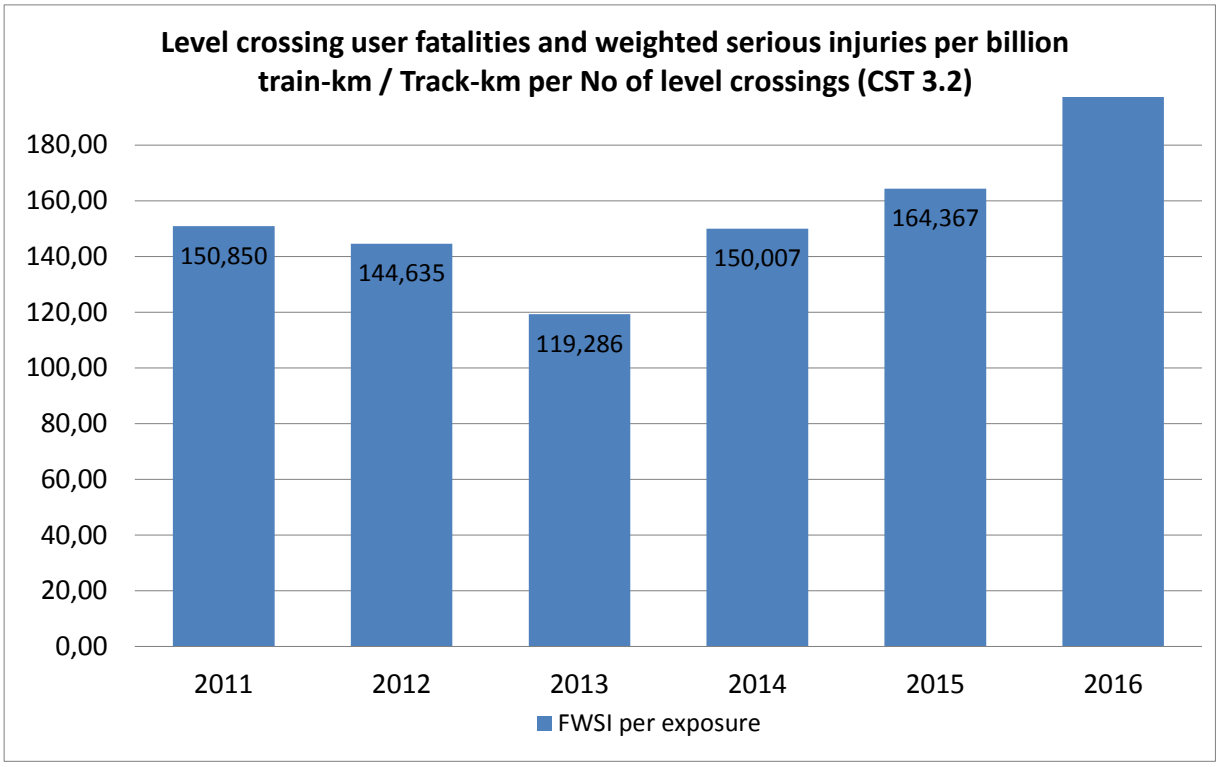
Risk indicators

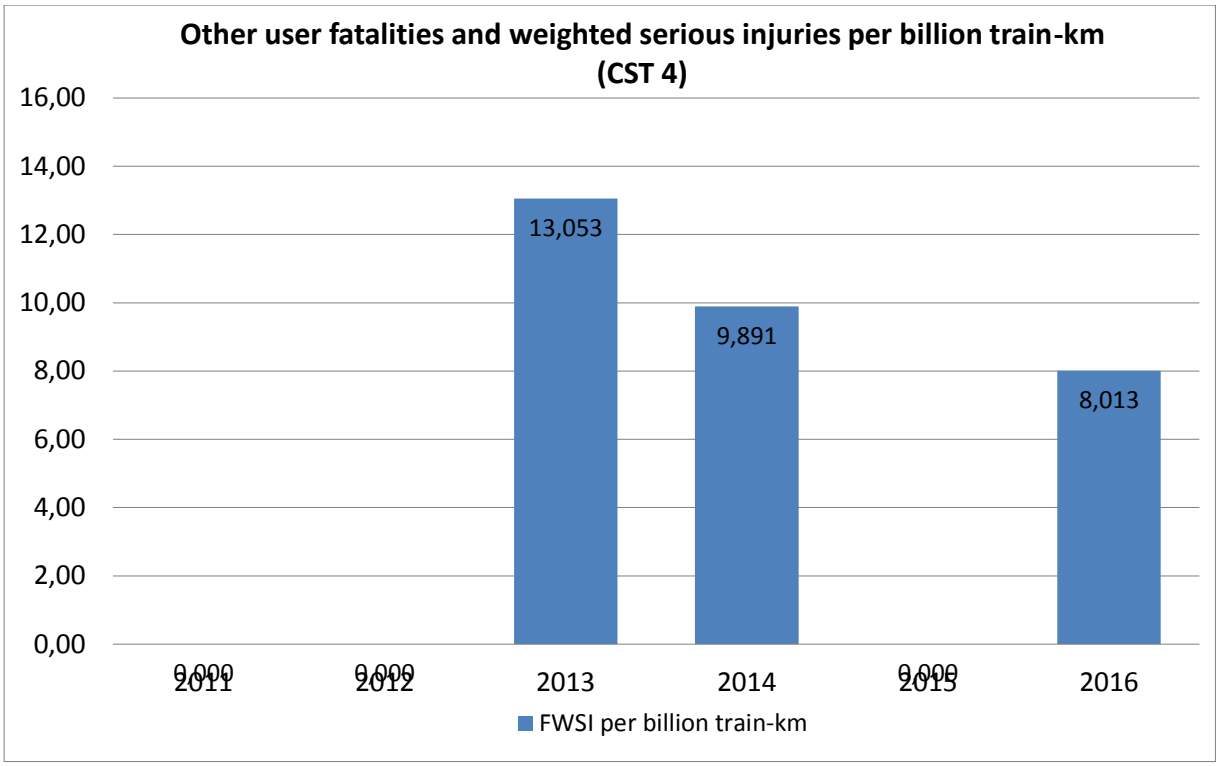


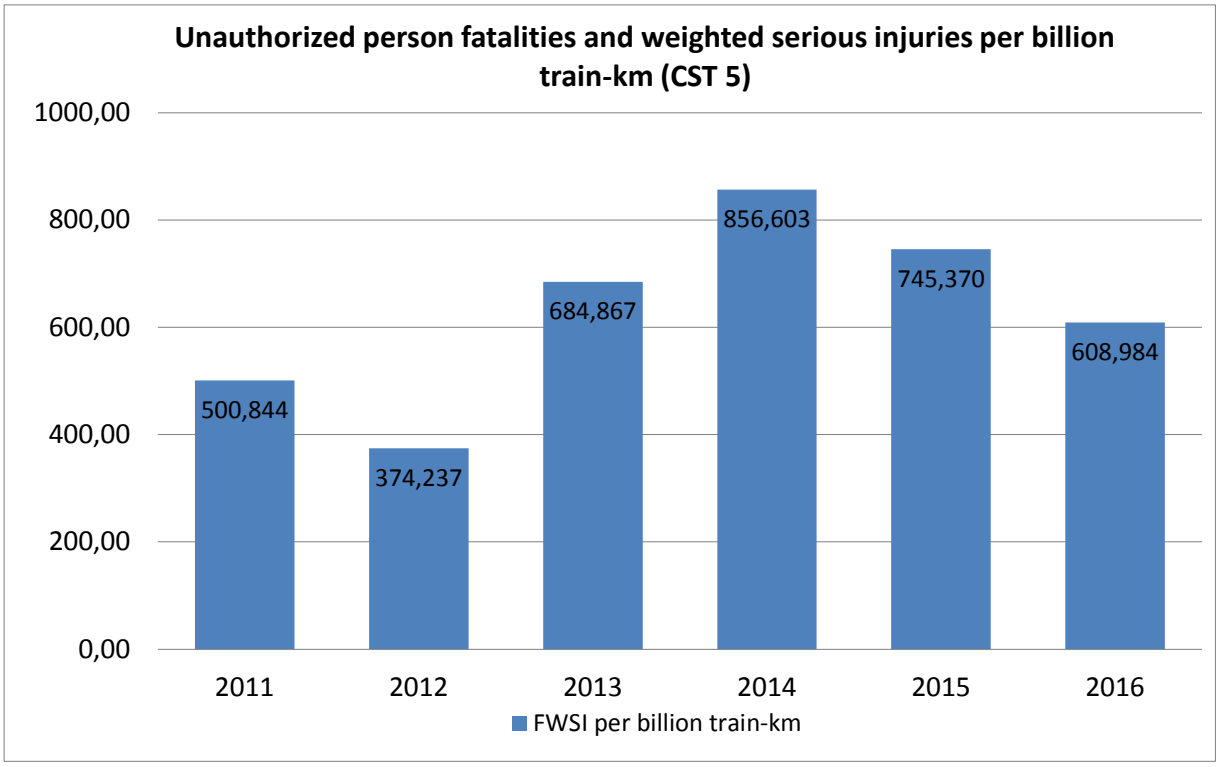

Passenger fatalities and weighted serious injuries per billion passenger-km (CST 1.2)
1,00
0,90
0,80
0,70
0,60
0,50
0,40
0,30
0,20
0,10
0,00
0,795
0,880
0,766
0,732
0,538
0,659
2011
2012
2013
2014
2015
2016
FWSI per billion passenger-km


Employee fatalities and weighted serious injuries per billion train-km (CST 2)
25,00
20,00
15,00
10,00
5,00
0,00
9,981
9,507
4,351
16,816
21,296
11,218
2011
2012
2013
2014
2015
2016
FWSI per billion train-km

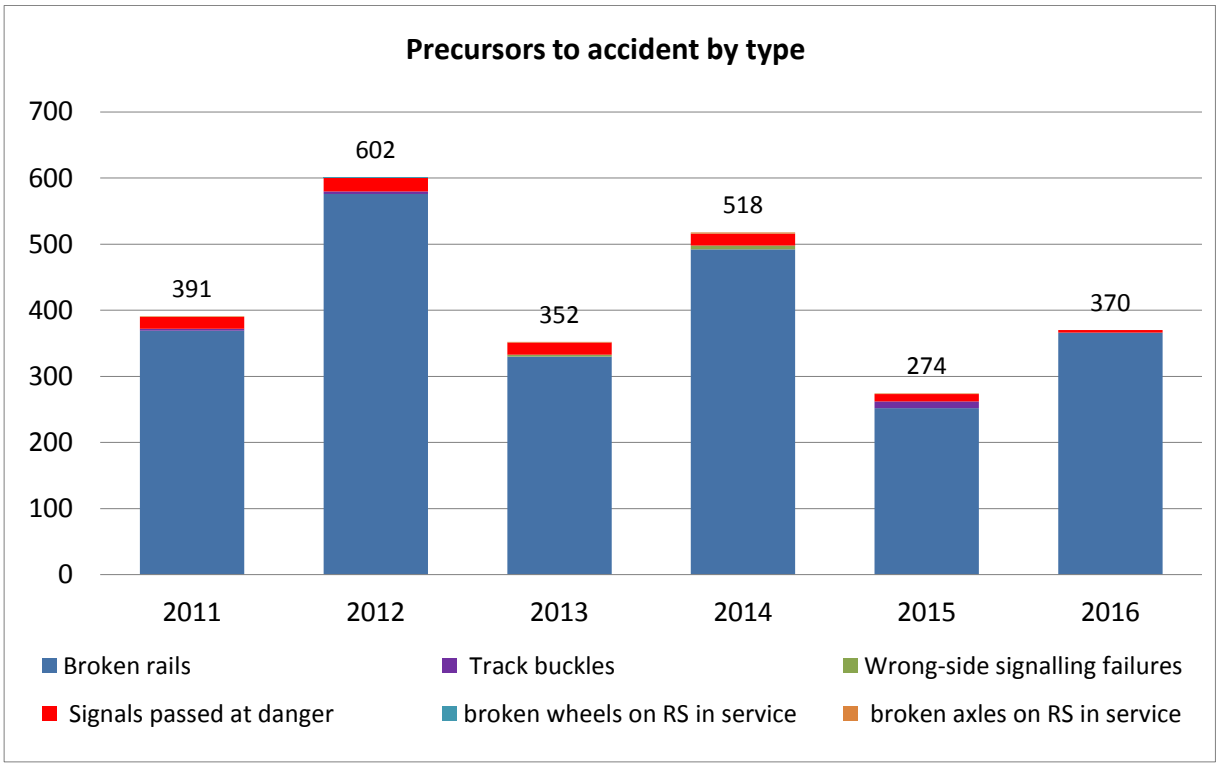

Level crossing user fatalities and weighted serious injuries per billion train-km (CST 3.1)
300,00
250,00
200,00
150,00
100,00
50,00
0,00
264,032
253,237
208,854
220,580
241,667
146,637
2011
2012
2013
2014
2015
2016
FWSI per billion train-km

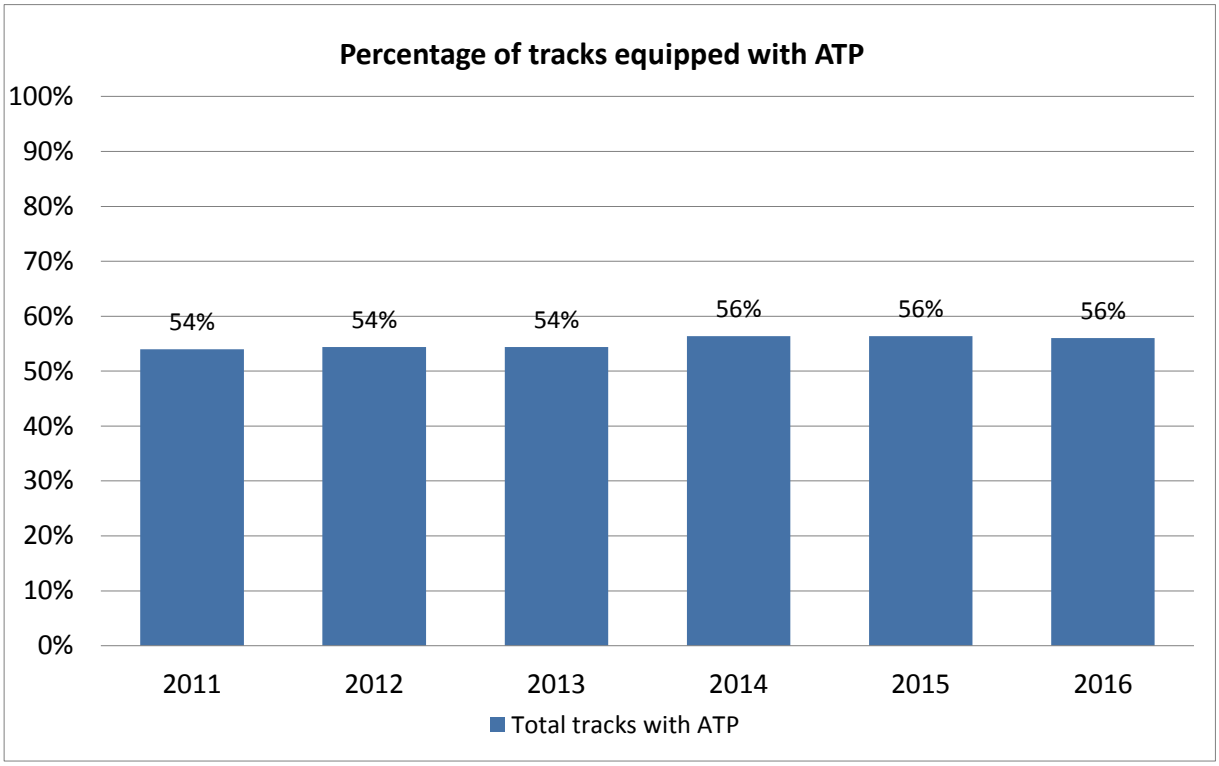

Level crossing user fatalities and weighted serious injuries per billion train-km / Track-km per No of level crossings (CST 3.2)
180,00
160,00
140,00
120,00
100,00
80,00
60,00
40,00
20,00
0,00
150,850
144,635
119,286
150,007
164,367
2011
2012
2013
2014
2015
2016
FWSI per exposure

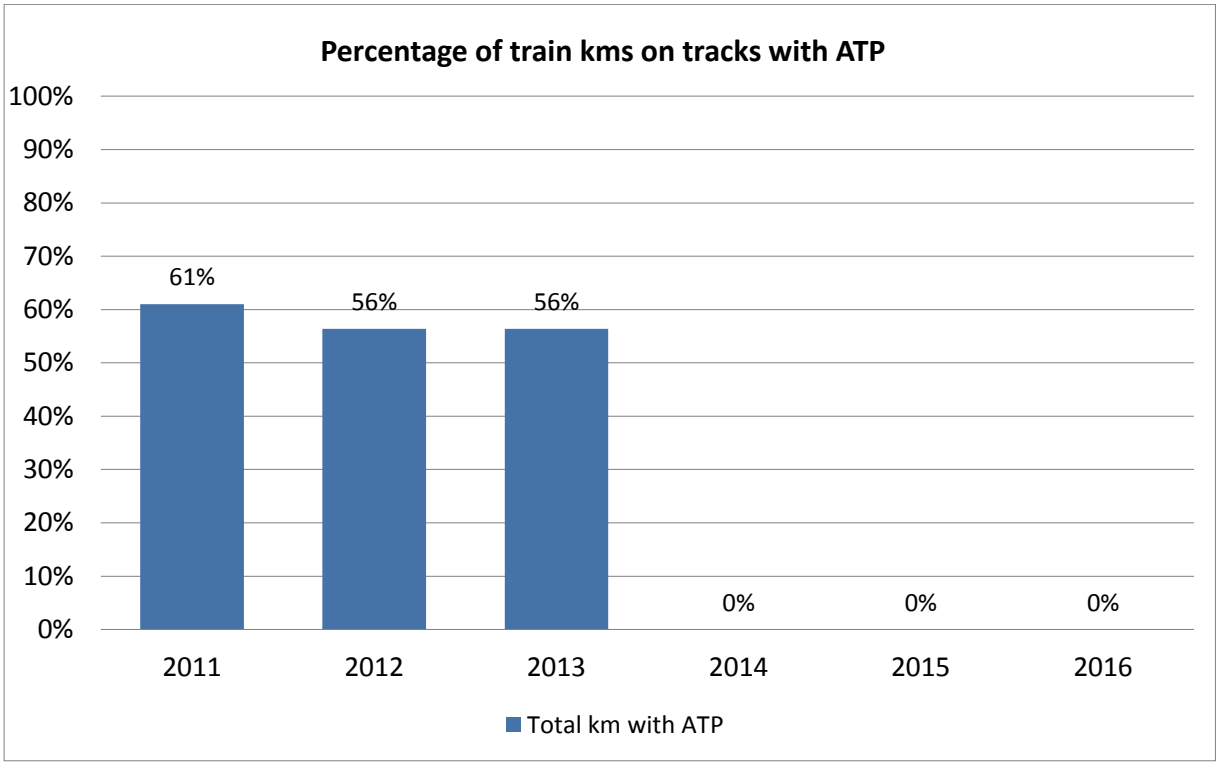

Other user fatalities and weighted serious injuries per billion train-km (CST 4)
16,00
14,00
12,00
10,00
8,00
6,00
4,00
2,00
0,00
0,000
0,000
13,053
9,891
0,000
8,013
2011
2012
2013
2014
2015
2016
FWSI per billion train-km


Unauthorized person fatalities and weighted serious injuries per billion train-km (CST 5)
1000,00
800,00
600,00
400,00
200,00
0,00
500,844
374,237
684,867
856,603
745,370
608,984
2011
2012
2013
2014
2015
2016
FWSI per billion train-km

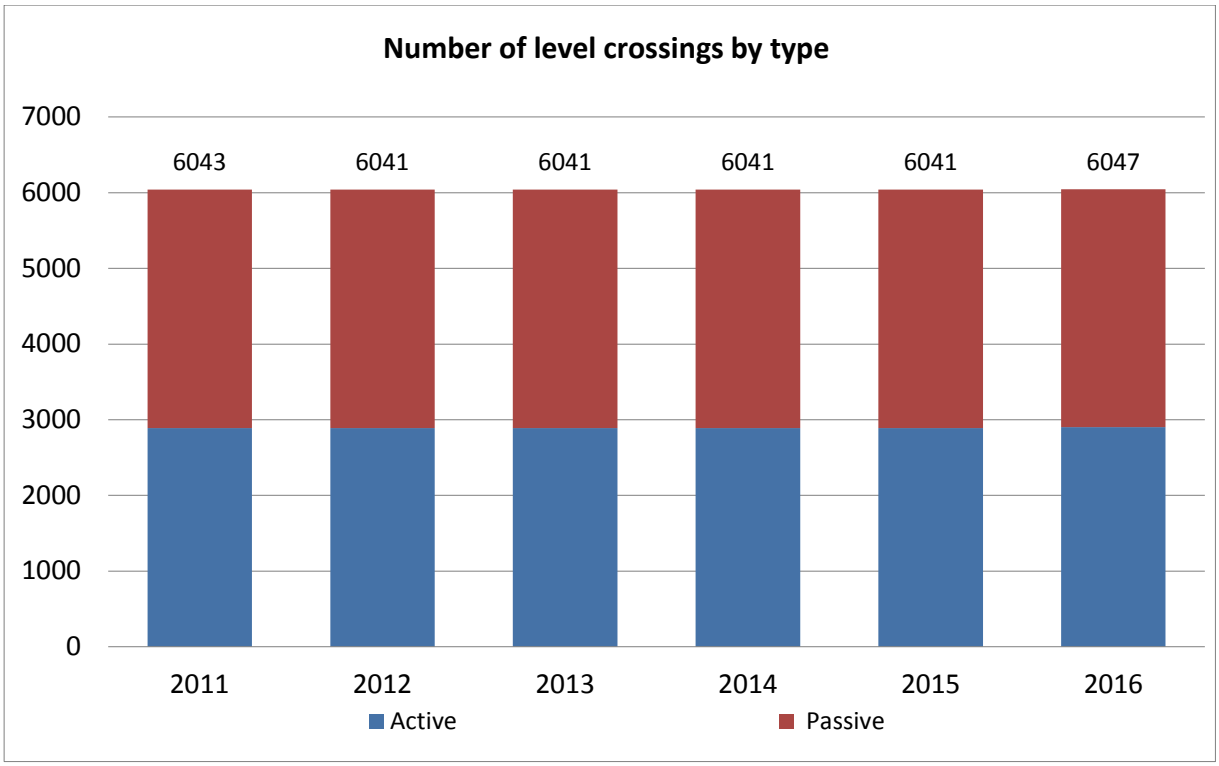
Precursor to accidents







Please note: For reporting years 2014, 2015 and 2016 no input data were available.


Number of level crossings by type
7000
6000
5000
4000
3000
2000
1000
0
6043
6041
6041
6041
6041
6047
2011
2012
2013
2014
2015
2016
Active
Passive

C.2. Definitions used in the annual report

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

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

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

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

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

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

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

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

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

C.2.2. National definitions

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

"Definitions

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

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

C.3. Abbreviations

CSI	Common Safety Indicator
CSM	Common Safety Method
SPAD	Signal Passed At Danger
CST	Common Safety Target
Reg.	Regulation
ATP	Automatic Train Protection
EIN	European Identification Number
ERA	European Union Agency for Railways
NIB	National Investigation Body
RSD	Railway Safety Directive
LC	Level Crossing
MLN	10^6
BLN	10^9
NSA	National Safety Authority
RS	Rolling Stock
RU/IM	Railway Undertaking and Infrastructure Manager

ANNEX D: Important changes in legislation and regulation

Please refer to section 'E' for the report on the current and upcoming changes in the national legal environment.

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

E.1 Safety Certificates according to Directive 2004/49/EC

	Number of certificates 'Part A' – 2016			
	Number of part A New	Number of part A Amended	Number of part A Renewed	Number of part A Revoked
Total	3	0	10	0

	Number of certificates 'Part B' – 2016			
	Number of part B New	Number of part B Amended	Number of part B Renewed	Number of part B Revoked
Total	4	0	12	0

E.1.3. List of Railway Undertakings with only part B certificate

Name of RU	Member-State where Safety Certificate 'Part A' was issued
boxXpress.de GmbH	Federal Republic of Germany
Central Railways a.s.	Slovak Republic
Express Group a.s.	Slovak Republic
Lokorail a.s.	Slovak Republic
LTE Logistik- und Transport GmbH	Republic of Austria
METRANS /Danubia/ a.s.	Slovak Republic
PETROLSPED s.r.o.	Slovak Republic
PKP Cargo Spółka Akcyjna	Republic of Poland
Prvá Slovenská Železničá, a.s.	Slovak Republic
RTS Rail Transport Service GmbH	Republic of Austria
Slovenská Železničná Dopravná Spoločnosť a. s.	Slovak Republic
Železničná spoločnosť Cargo Slovakia a. s	Slovak Republic

E 1.5. Number of certificates Part A revoked in the reporting year	0

E 1.6. Number of certificates Part B revoked in the reporting year	0

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

	Total number of safety authorisations
E.2.1. Number of valid Safety Authorisations issued to Infrastructure Managers in the reporting year and in previous years and remain valid at the end of the year 2016	2

		A	R	P
E.2.2. Number of applications for Safety Authorisations submitted by Infrastructure Managers in year 2016	New authorisations	-	-	-
	Updated/amended authorisations	-	-	-
	Renewed authorisations	1	-	-

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

E.3. Procedural aspects – Safety Certificates part A

		New	Updated /amended	Renewed
The average time after receiving of the application with the required information and the final delivery of a Safety Certificate **Part A** in year 2016 for Railway Undertakings [days]	Where the part A has been issued in the Member-State	90	90	30
	Where the part B has been issued in another Member-State	90	90	30

E.4. Procedural aspects – Safety Certificates part B

		New	Updated /amended	Renewed
The average time after receiving the application with the required information and the final delivery of a Safety Certificate **Part B** in year 2016 for RUs [days]	Where the part A has been issued in the Member-State	90	90	30
	Where the part B has been issued in another Member-State	90	90	30