



ρυθμιστική αρχή
σιδηροδρόμων

regulatory
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for railways

ANNUAL SAFETY REPORT | 2019

GREEK NATIONAL SAFETY AUTHORITY



September 2020

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1. INTRODUCTION

1.1 Purpose, scope and recipients of the report

1.2 Main conclusions on the reporting year



1. Introduction

The 2019 Annual Report on the activities of the Greek National Safety Authority (NSA), the duties of which are exercised by the Regulatory Authority for Railways (RAS), was prepared by the Railway Safety and Interoperability Unit (MASD) of RAS.

It was prepared in accordance with the Guide “Issuing the [yyyy] NSA annual report” (GUI_MRA_002 V 3.0) published by the European Union Agency for Railways («Agency») and addressed to the National Safety Authorities («NSA»). The report covers all the activities undertaken by RAS in the fields of the railway safety & interoperability from 1 January to 31 December 2019 and is available in Greek and English on the following webpage: <http://ras-el.gr>.

For further clarifications, please contact us at: info@ras-el.gr.

1.1 Purpose, scope and recipients of the report

Article 19 of the Railway Safety Directive (EU) 2016/798 transposed into Greek law with article 71, Law 4632/2019 (A’ 159) requires that NSAs publish an annual report each year concerning their activities in the preceding year and send it to the Agency by 30th September.

The annual report contains information on:

- a) the development of railway safety, including an aggregation at Member State level of the Common Safety Indicators («CSIs»), in accordance with Article 5(1) of Directive (EU) 2016/798.;
- b) important changes in legislation and regulation concerning railway safety;
- c) the development of safety certification and safety authorisation;
- d) the results of, and experience relating to, the supervision of infrastructure managers and railway undertakings, including the number and outcome of inspections and audits;
- e) the derogations decided in accordance with Article 15 of Directive (EU) 2016/798; and
- f) the experience of the railway undertakings and infrastructure managers on the application of the relevant Common Safety Methods («CSMs»).

This report is intended to provide evidence of Greece’s ongoing efforts towards its harmonisation with other EU member states, on the following topics:

- Improvement of safety performance;
- Progress in the development of interoperability.

Consequently, the purpose of this report is to inform any interested party and the Agency of RAS's activities on the development of railway safety & interoperability, demonstrating how RAS promotes the EU regulatory framework for railways, monitors the development of railway safety and the interoperability of the railway system in Greece, highlighting problems and good practices.

The structure and the content of this report are based on the Agency's Guide mentioned in the Introduction.

As provided in article 9 (6) of the Directive (EU) 2016/798, transposed into Greek law with article 61. Law 4632/2019, before 31 May of each year, all Infrastructure Managers ("IM") and Railway Undertakings ("RU") submit to the NSA an annual safety report concerning the preceding calendar year. Said annual reports of railway agencies are an important source of information for this report.

This report covers the entire active railway system in Greece.

This report is available to:

- The Agency;
- The Greek National Safety Authority;
- Other NSAs;
- The Greek Ministry of Infrastructure & Transport;
- The National Railway Accident Investigation Body ("NIB") (not active for the time being);
- The railway agencies in Greece, as follows:
 - Railway Undertakings (TRAINOSE, STASY, RAIL CARGO, PEARL & GFR);
 - Infrastructure Manager (OSE);
 - Entity in Charge of Maintenance (formerly EESSTY, currently TRAINOSE);
 - Conformity Assessment Bodies: Notified and Designated Bodies (NoBos & DeBos), Risk Assessment Bodies (AsBos);
- Any other interested party (i.e. passenger associations, e.t.c.)

The availability of this report is ensured through the website of RAS at <http://ras-el.gr> and the ERADIS data base of the Agency. An official transmission to the Minister of Infrastructure & Transport, to the Vice-Minister and the Secretary General of Transport is also carried out.

1.2 Main conclusions on the reporting year

RAS operates as an Independent Administrative Authority in accordance with the Internal Rules of Procedure thereof, approved by Joint Ministerial Decision (JMD) No. Δ4δ/οικ.89995 / 15-11-2018 (B' 5781). In accordance with said JMD, RAS's organisational structure includes the MASD, which is comprised of two Departments: the Railway Safety Department and the Interoperability Department. Four (4) employees are employed exclusively at the RSIU.

The MASD implements the tasks of the NSA arising in particular out of Law 4632/2019 (A' 159), Law 4199/2013 (A' 216), Law 3911/2011 (A' 12) as in force and the respective European legislation for railway safety and interoperability. Furthermore, the MASD performs the duties of the Rules' "Competent Authority" in relation with the international carriage of dangerous goods by rail (RID) of JMD No. οικ. Γ5/48222/2474 / 21-06-2019 (B' 2755).

RAS's organisational framework is outlined with further detail in section 3.4 hereof.

The Board of RAS comprises 5 members. The Chairman, the Vice-Chairman and three (3) regular members, substituted by three (3) substitute members. This Administration was appointed in July 2017 and continued performing its duties throughout 2019.

RAS continued its cooperation with the Ministry of Infrastructure and Transport, focusing especially on preparations for the transposition of the fourth railway package into Greek law, which was implemented with the publication of Law 4632/2019 in the Government Gazette.

In 2019, RAS continued performing its main duty, that of supervision, in accordance with the relevant regulatory framework, undertaking a series of supervision activities vis-a-vis railway operators, in accordance with the relevant annual Supervision Plan for in spite of the lack of sufficient resources.

In application of article 75 of L.4530/2018, RAS approved and issued Decision 9442/14-01-2019 (B' 359) which defined the qualifications, and the terms and conditions for recognising the examiners of the train drivers and candidate train drivers. Based on said Decision, RAS granted the first examiner recognitions of examiners and for the first time the Recognised Train Driver Examiner and Candidate Train Driver Register was published on RAS' webpage.

In March 2019, RAS issued the first "European" train driver licenses in accordance with the Appendix of Regulation (EU) 36/2010. Said licenses were printed by the Hellenic National

Passport and Secure Document Centre of the Headquarters of the Hellenic Police (DDEA) in accordance with the provisions of JMD No. ΑΣ19/1052/14 / 20-07-2018 (B' 3089).

RAS with its 10720/18-07-2019 (B' 2962) decision approved the "Procedure for obtaining a train driver's licence – Organising and conducting examinations for obtaining a train driver's licence", which defines the procedure for organising and conducting examinations. In July 2019, examinations for candidate train drivers were held for the first time, in accordance with the above decision. To acquire a train driver license, sixty-eight candidate train drivers of TRAINOSE participated in the examinations that were held from 30 to 31 July 2019.

In June 2019, in Athens, the on site follow-up audit of RAS's performance and decision making by the Agency, provided for under article 33 of Implementing Regulation (EU) 796/2016, took place for the first time. The inspection focused on two sectors: a) the adequacy of the personnel performing supervising activities and assessing the applications for granting of safety certificates and vehicle authorisations and b) the supervision of railway agencies.

In April 2019, continuing its successful cooperation with the Agency as regards the organisation of the information dissemination activities and of the changes brought about by the fourth Railway Package, RAS organised a seminar entitled: "Raising awareness of safety issues" under the auspices of the Ministry of Infrastructure and Transport, with the participation of the Agency and the support of the Ministry of Digital Policy, Telecommunications and Media.

In June 2019, RAS signed a Cooperation Agreement with the Agency, pursuant to article 76 of Implementing Regulation (EU) 796/2016.

As regards important safety indicators, in 2019 there were 18 significant accidents (lower in relation to 2018 when the corresponding number was 24), while the average for the last five years was 19.6 accidents. Therefore, in 2019 there was an evident reduction of 25% compared to the previous year, while there was a reduction of 8% compared to the average of the last five years.

Further, in 2019, 12 fatalities were recorded, while in 2018 there were 17 fatalities and the average of the five last years was 13.6. This indicator also shows a 29% reduction compared to the previous year and a 11% reduction compared to the average of the last five years.

Analysing the trends in incidents, there is a clear trend towards improvement compared both to the previous year and to the average of the last five years. At this point, it should

be noted that one of the main causes of the incidents in Greece in the last years is the mass migration crisis the country has been facing as a first host country. Many migrants, while trying to cross the country and reach the frontiers to Europe, are walking on the railway tracks, or sheltering in railway installations, which has resulted in many accidents. Of the above mentioned 12 fatalities, 3 involve migrants hit by rolling stock in motion, while walking on the line or sleeping on it.

Other causes of railway accidents in the Greek network are:

- A series of copper theft incidents combined with the financial problems of Greece leading to the destruction of signalling equipment along all main railway corridors. Large parts of the corridors and stations work without signalling and tele-management systems.
- The track-side train protection system (ETCS-L1 installed during the past decade in many sections of the national railway network) still cannot operate due to technical problems and vandalism.
- Current construction works require constant modifications in station layouts, deactivation of signalling installations etc., exacerbating the previous problems.

The good news for 2019 is that many new projects and railway network upgrade projects in Greece were completed within the year. In particular, the electrified Lianokladi-Domokos section on the new Double High-Speed Athens -Thessaloniki Railway Line (HSRL) was delivered and has been operating since the beginning of 2019. This section includes the Othryos twin railway tunnel of 6,380 meters length each. With the new line in operation, the duration of rail travel in the Athens-Thessaloniki section was reduced to 4 hours. This greatly affects the safety provided because in the new sections there are no level crossings and therefore accidents are reduced.

Furthermore, when all the modern railway safety systems (centralized traffic control, ETCS, GSMR etc.) are completed, a further increase of the safety level and a further reduction of accidents are expected.

Finally, in April 2019, the sale and transfer of 100% of the Hellenic Company for Railstock Maintenance (EESSTY - ΕΕΣΣΤΥ) to TRAINOSE RU, a subsidiary of Ferrovie Dello Stato Italiane S.p.A., was completed. In this context, RAS cooperated with the Competition Commission, which approved the notified collection which consists in the acquisition of the exclusive control of EESSTY by TRAINOSE. Additionally, RAS, as a body competent for the certification of an Entity in Charge of Maintenance (ECM) of freight wagons and in the

context of the above legal change, requested that the existing ECM Certificate of EESSTY be updated.

2. SUMMARY IN ENGLISH (SUMMARY IN ENGLISH)



2. SUMMARY IN ENGLISH (SUMMARY IN ENGLISH)

The annual report for 2019 on the activities of the Greek National Safety Authority (NSA) for railways, the duties of which are exercised by the Regulatory Authority for Railways (RAS), was drawn up by the Railway Safety and Interoperability Unit (RSIU) of RAS.

The report covers all RAS activities in the fields of railway safety and interoperability during 2019 and is available in Greek and English on the following website: <http://ras-el.gr>. The report includes all information required as per article 19, Directive (EU) 2016/798 on railway safety, which was incorporated into Greek law with article 71, Law 4632/2019 (A' 159).

RAS operates as an Independent Administrative Authority pursuant to its Internal Rules of Operation and Management, which were approved by Joint Ministerial Decision (JMD) Δ4δ/οικ.89995 / 15-11-2018 (B' 5781). The RAS Board is composed of the President, the Vice President and three (3) additional ordinary members, each of whom is replaced by a corresponding alternate member. The President of RAS presides over all RAS units and directs their work. The current Administration was appointed in July 2017 and continued performing its duties through 2019.

Pursuant to the Internal Rules of Operation and Management, RAS's organisational structure includes the RSIU, among others, which is made up of two Departments: The Railway Safety Department and the Interoperability Department. Four (4) employees are employed exclusively at the RSIU.

The RSIU implements the functions of the NSA arising in particular from Law 4632/2019 (A' 159), Law 4199/2013 (A' 216), Law 3911/2011 (A' 12), as applicable, and the respective European legislation on railway safety and interoperability. Furthermore, the RSIU performs the duties of the Rules' "Competent Authority" in relation with the international carriage of dangerous goods by rail (RID) of JMD No. οικ. Γ5 48222/2474 / 21- 06- 2019 (B' 2755).

2019 was a year of significant changes in the field of railway safety and interoperability, as a series of European legislative acts relating to the 4th set of measures on railways, known as the fourth railway package, was adopted and transposed into the national legislation. At the same time, on 16 June 2019, our country started the immediate implementation of important European Regulations.

RAS continued its cooperation with the Ministry of Infrastructure and Transport, focusing especially on preparations for the transposition of the fourth railway package into the Greek law, which was implemented with the publication of Law 4632/2019 in the Government Gazette.

In 2019, RAS continued performing its main duty, that of supervision, in accordance with the relevant regulatory framework, undertaking a series of supervision activities vis-a-vis railway operators, in accordance with the relevant annual Supervision Plan for 2019, in spite of the lack of sufficient resources.

In application of Article 76, Law 4530/2018, RAS approved and issued Ministerial Decision 9442/14-01-2019 (B' 359) which determined the qualifications, and the terms and conditions for recognising the examiners of train drivers and candidate train drivers. Based on said Decision, RAS granted the first examiner recognitions of examiners and for the first time the Recognised Train Driver Examiner and Candidate Train Driver Register was published on RAS's webpage.

In March 2019, RAS issued the first "European" train driver licenses in accordance with the Appendix of Regulation (EU) 36/2010. Said licenses were printed by the Hellenic National Passport and Secure Document Centre of the Headquarters of the Hellenic Police in accordance with the provisions of JMD ΑΣ19/1052/14 / 20- 07- 2018 (B' 3089).

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In June 2019, in Athens, the on-site monitoring audit of RAS's performance and decision making by the Agency, pursuant to article 33 of (EU) 2016/796, took place for the first time. The items of the audit focused on two topics: a) the adequacy of the personnel performing supervising activities and assessing the applications for granting safety certificates and vehicle authorisations and b) the supervision of railway organisations.

In 2019, continuing its successful cooperation with the Agency as regards the organisation of the information dissemination activity and of the changes brought about by the fourth Railway Package, in April RAS organised a seminar entitled: "Raising awareness of safety issues" under the auspices of Ministry of Infrastructure and Transport, with the participation of the Agency and support of the Ministry of Digital Policy, Telecommunications and Media.

In June 2019, RAS signed a Cooperation Agreement with the Agency, under article 76 of Regulation (EU) 2016/796. Part A of the Agreement covers the compulsory cooperation between the Agency and RAS in relation to the issuance of a single vehicle authorisation and vehicle type authorisation safety certificate, in the cases where the Agency operates as a safety certification body and as an authorisation entity. Part B of the Agreement covers the voluntary cooperation between the Agency and RAS in relation to the above areas, through the assignment of duties by the Agency to RAS experts specified in the Pool of Experts (PoE).

As regards important safety indicators, in 2019 there were 18 significant accidents (lower in relation to 2018 when the corresponding number was 24), while the average for the last five years was 19.6 accidents. Therefore, in 2019 there was an evident reduction of 25% compared to the previous year, while there was a reduction of 8% compared to the average of the last five years.

Further, in 2019, 12 fatalities were recorded, while in 2018 there were 17 fatalities and the average of the last five years was 13.6. This indicator also shows a 29% reduction compared to the previous year and a 11% reduction compared to the average of last five years.

Analysing trends in incidents, there is a clear trend towards improvement compared both to the previous year and to the average of the last five years. At this point, it should be noted that one of the main causes of the incidents in Greece in the last years is the mass migration crisis the country has been facing as a first host country. Many migrants, while trying to cross the country and reach the frontiers to Europe, are walking on the railway tracks, or sheltering in railway installations, which has resulted in many accidents. Of the above mentioned 12 fatalities, 3 involve migrants hit by rolling stock in motion, while walking on the line or sleeping on it.

Other causes of railway accidents in the Greek network are:

- A series of copper theft incidents combined with the financial problems of Greece leading to the destruction of signalling equipment along all main railway corridors. Large parts of the corridors and stations work without signalling and tele-management systems.
- The track-side train protection system (ETCS-L1) installed during the past decade in many sections of the national railway network still cannot operate due to technical problems and vandalism.

- Current construction works require constant modifications in station layouts, deactivation of signalling installations etc., exacerbating the previous problems.

The good news for 2019 is that many new projects and railway network upgrade projects in Greece have been completed this year. In particular, the electrified Lianokladi-Domokos section on the new Double High-Speed Athens-Thessaloniki Railway Line (HSRL) was delivered and has been operating since the beginning of 2019. This section includes the Othryos twin railway tunnel, of 6,380 meters length each. With the new line in operation, the duration of rail travel in the Athens-Thessaloniki section was reduced to 4 hours. This greatly affects the safety provided because in the new sections there are no level crossings and therefore accidents are reduced. Furthermore, when all the modern railway safety systems (centralized traffic control, ETCS, GSMR etc.) are completed, a further increase in the level of safety and a further reduction in accidents are expected.

Finally, in April 2019, the sale and transfer of 100% of the Hellenic Company for Railstock Maintenance (EESSTY - ΕΕΣΣΤΥ) to TRAINOSE, a subsidiary of Ferrovie Dello Stato Italiane S.p.A., was completed. In this context, RAS cooperated with the Competition Commission, which approved the notification of the exclusive control of EESSTY by TRAINOSE. Additionally, RAS, as a body competent for the certification of an Entity in Charge of Maintenance (ECM) of freight wagons and in the context of the above legal change requested that the existing ECM Certificate of EESSTY be updated.

3. NSA SAFETY STRATEGY, PROGRAMMES, INITIATIVES AND ORGANIZATIONAL FRAMEWORK

3.1 Strategy and planning activities

3.2 Safety Recommendations

3.3 Safety measures implemented in addition to the recommendations

3.4 Organisational Context of Safety



3. NSA SAFETY STRATEGY, PROGRAMMES, INITIATIVES AND ORGANIZATIONAL FRAMEWORK

3.1 Strategy and planning activities

One of the most important objectives of the Greek Ministry of Infrastructure and Transport is the continuous improvement of the safety level in Greek railways and therefore the improvement of significant CSIs. Towards this objective, the main concerns are the completion of the new infrastructure projects including modern systems (i.e. ERTMS), the development of a safety culture, the reduction of serious accidents, the adoption of the technical pillar of the Fourth Railway Package transposed into Greek Law with law 4632/2019, the implementation of the IM Traffic Rulebook etc.

In this context, RAS planned and performed the following activities / initiatives for 2019:

- The Greek Ministry of Infrastructure & Transport approved the proposal of RAS to reform the regulatory framework for railway safety, with Ministerial Decision ΑΣ10/77243/580 /13-02-2019 (Β' 698) "Amendment of the General Traffic Regulation (GKK) – Part B (Traffic and Manoeuvre Regulation)." The entry into force of the new GKK was set on 01/01/2020, following a request by TRAINOSE to ensure that the personnel is fully adapted to the new GKK.
- As overspeeding remains a cause of rail accidents. RAS continued its monthly statistical processing of data on the compliance of TRAINOSE train drivers with train speed limits.
- RAS continued to monitor and record railway incidents and accidents in the national railway network on the data base it has created and maintains. It aims to draw statistical conclusions on the overall safety level of the national railway system.
- RAS continued performing its supervising activities based on the annual Supervision Plan, in targeted sectors.
- RAS, in collaboration with OSE, continued implementing the information program for the prevention of accidents on the railway network entitled: "Safe co-existence of students with the railway network". The programme is addressed to students of primary schools and high schools located near the rail network.

3.2 Safety recommendations

The Railway Accident and Incident Investigation Committee established under article 2, law 4313/2014 (A' 261) has not been activated for the time being. Therefore, no safety recommendations were issued during 2019.

3.3 Safety measures implemented

In 2019, RAS proposed and monitored the implementation of the following measures:

- RAS requested from the IM (OSE) to take measures related to fencing the railway infrastructure at points close to Roma camps and to similar actions in other areas of the network where there is no fencing, or where fencing has been damaged.
- On 23 July 2019, in relation to monitoring that passengers of the Athens suburban railway enter and exit trains safely, RAS requested from the IM (OSE) to repair the monitor system, or to install surveillance mirrors of suitable specifications at Railway Stations (RS), as train drivers face problems related to visibility.
- On 14 June 2019, RAS requested from the IM (OSE) to clean the network pruning plants close to the line at the Pyrgos - Katakolo - Olympia, Thessaloniki - Florina and Thessaloniki - Alexandroupoli sections.
- In the beginning of 2019, OSE installed signs warning about the risk of electrocution from aerial power lines at the Athens and Piraeus stations, as it had been requested by RAS with a letter dated 25 September 2018.
- In the beginning of 2019, OSE proceeded to the completion of fencing at the Larissa (Mezourlo) commercial station, to ensure that children who enter the premises of the station to play are protected, and to the installation of numerous warning signs related to the risk of electrocution from overhead power lines. The above had been requested by RAS with a letter dated 11 October 2018.
- In May 2019, due to incidents that took place at the Megara and Agioi Theodoroi stations of the Suburban Railway on 11/02/2019 and 01/04/2019 respectively (without any passenger injuries), RAS issued a recommendation, with a warning of administrative sanctions, to TRAINOSE RU with regard to the strict observance of train speed limits. Additionally, it requested from TRAINOSE to take a series of measures, discussed and agreed on at a meeting between TRAINOSE and RAS executives, to prevent similar incidents in the future.

TRAINOSE answering on 31/05/2019 informed RAS of the measures it had already taken and of the ones it was to take in the future taken to prevent similar incidents.

3.4 Organisational Context of Safety

The national organisational framework in Greece as regards railway safety is as follows:

- The Ministry of Infrastructure & Transport is the legislative authority, responsible for the railway sector in Greece. OSE and ERGOSE operate under its supervision.
- RAS is an Independent Administrative Authority performing, among others, the duties of Greek NSA, in accordance with Law 4199/2013 and Law 4632/2019.
- The Railway Accident and Incident Investigation Committee is an Independent Administrative Authority established under article 2 of Law 4313/2014 (A' 261) in order to perform the duties of the National Investigation Body of article 22 of Directive (EU) 2016/786. For the time being this Committee is not active.
- OSE is the sole national railway infrastructure manager, holder of a valid safety authorization, operating in Greece under the supervision of the Ministry of Infrastructure and Transport. OSE is also the owner of the only recognized Train Driver and Candidate Train Driver Training Center.
 - ERGOSE S.A. is a subsidiary of OSE, responsible for the execution of its Investment Program and the management of the new railway infrastructure projects.
- There are six (6) licensed Railway Undertakings (RUs), four (4) of which hold a safety certificate, as follows:
 - STASY, a public RU providing only passenger services, including high-speed services, Safety Certified (Part A and Part B), in operation;
 - TRAINOSE – Member of the Ferrovie Dello Stato Italiane S.p.A. Group, a private RU providing passenger services, including high-speed services, and freight services, including carriage of dangerous goods services, Safety Certified (Part A and Part B), in operation;
 - RAIL CARGO LOGISTIC GOLDAIR, a private RU providing freight services, including carriage of dangerous goods services, Safety Certified (Part A and Part B), in operation;
 - PEARL, a private RU providing freight services, carriage of dangerous goods services not included, Safety Certified (Part A and Part B), has not started operating;
 - MAKIOS, a private RU providing Freight Services, Non Safety Certified, has not started operating;
 - GFR, a Romanian private RU providing freight services, operating on the Romanian railway network, In November 2019, the company submitted an

application to the Agency (ERA) for the issuance of a single safety certificate under article 10 of Directive (EU) 2016/798, aiming to expand its operation to the Greek Railway network.

- EESSTY S.A. is the only private Rolling Stock Company – Entity in Charge of Maintenance (ECM), holder of a valid ECM certificate. As mentioned above, EESSTY S.A. was initially bought on 1/4/2019 by TRAINOSE and following this in the end of December 2019 it merged with TRAINOSE.
- GAIAOSE S.A. is a public enterprise, holder and manager of the existing national rolling stock, under the supervision of the Ministry of Finance.

See below the organisational chart of RAS and a table with information on the personnel of the Rail Safety & Interoperability Unit (MASD) of RAS.

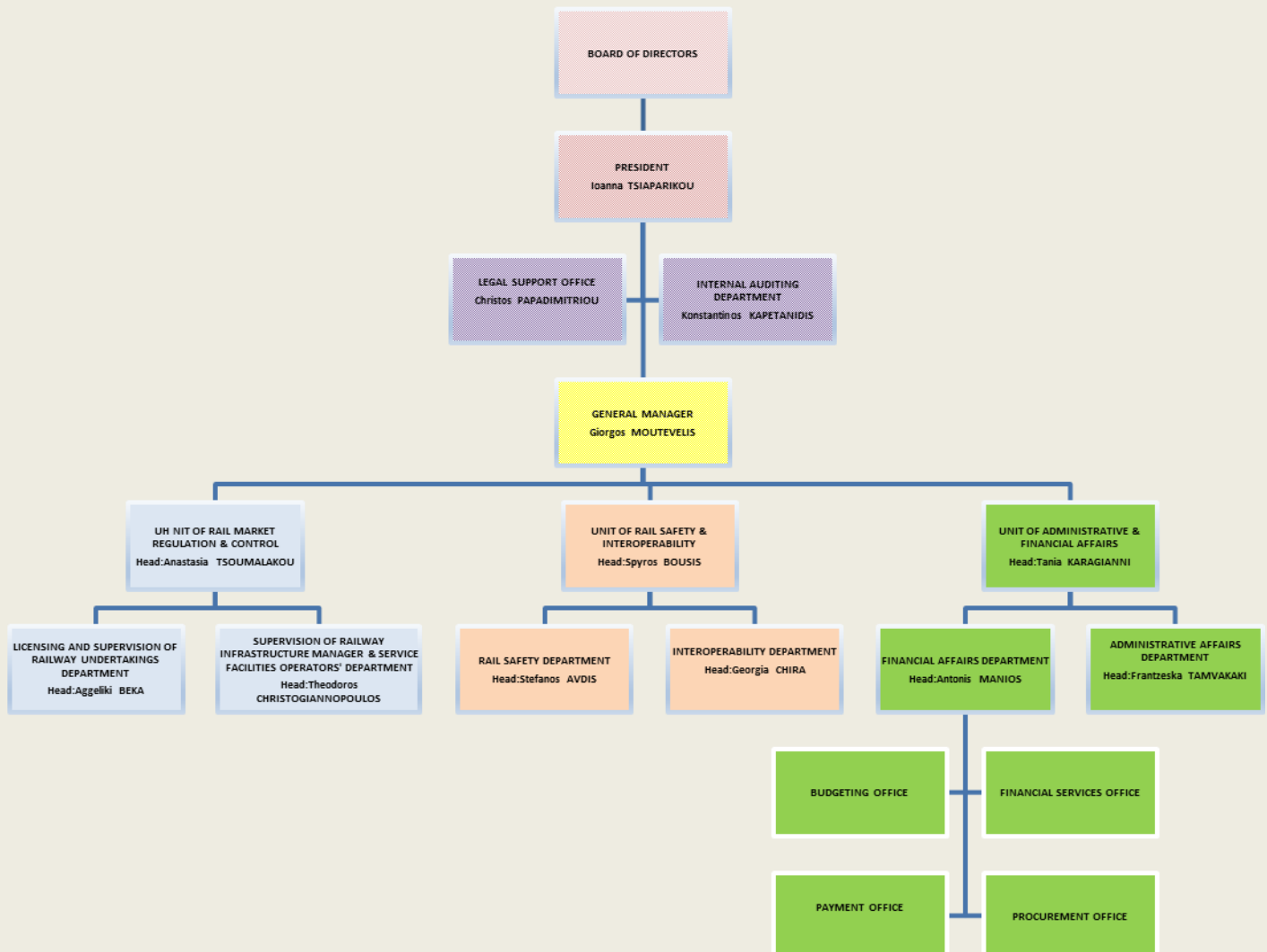


Chart 1: RAS organisational chart

	Provided number of staff positions (Engineers)	Number of covered staff positions (Engineers)	Number of vacant staff positions
Railway Safety Department	6	3	3
Interoperability Department	5	3	2
Total			
	11	6	5

Table 1: Personnel of the Rail Safety & Interoperability Unit of RAS

4. SAFETY PERFORMANCE

4.1 Analysis of particular safety performance information in the last five years

4.2 CSI data charts



4 SAFETY PERFORMANCE

4.1 Analysis of particular safety performance information in the last five years

Based on the CSIs reported from 2015 to 2019, the following safety performance trend analysis was conducted:

Number of significant accidents:

(at least 1 fatality or 1 serious injury, or damages over €150.000 or a delay of more than 6 hours):

2015	2016	2017	2018	2019	2015-19 average
25	9	22	24	18	19.6

The total number of accidents in 2019 compared to previous years shows a decrease (2016 is an exception) and is slightly lower than the average of the last five years. Most accidents (10 or 55%) are accidents to persons caused by rolling stock in motion. These are cases of pedestrians being carried away by trains along the line (level crossings not included). Through the last years, this category has been the main cause of serious accidents. Most accidents involve refugees trying to cross Greece to reach the northern borders who follow the railway line in order not to get lost. Indicatively, in 2019 we had 10 cases of pedestrians hit (59%). Another cause is the habit of people living near the railway line to cross the track or walk along it at points where it is not allowed instead of using overhead pedestrian crossings or level crossings (LC).

The second category of serious accidents involves level crossings where we had 7 incidents (39%). Said accidents involve a collision of vehicles with a train and are mainly caused by careless drivers who violate signs and warnings (light and sound) at the crossings. In 2019, there have been 3 incidents at unattended crossings and 4 incidents at crossings with an automatic protection system.

Number of fatalities:

2015	2016	2017	2018	2019	2015-19 average
14	7	18	17	12	13.6

The number of fatalities in 2019 compared to 2018 (17) was significantly lower by 29%. Furthermore, compared to the previous years, the fatality number shows a decrease (2016 being an exception) and is slightly lower than the average of the last five years (13.6). 50% of the fatalities (6) are due to incidents at level crossings and 50% (6) are due to pedestrians being hit by rolling stock in motion (suicides not included). The incidents at level crossings are due mainly to careless drivers, who do not pay sufficient attention when approaching a LC. Regarding pedestrians hit carried away, half the cases involve refugees, sleeping or walking on the lines trying to reach Greece's northern borders.

Number of serious injuries:

2015	2016	2017	2018	2019	2015-19 average
11	2	10	12	8	8.6

The number of serious injuries during 2019 compared to 2018 (12) is significantly lower by 33%, and it is also lower in relation to previous years (2016 being an exception). Regarding the average, in comparison with the last five years (8.6), it is almost the same and this is due to the very low value in 2016. Most accidents (6 or 75%), same as in the category of fatalities, were due to rolling stock in motion. These are cases of pedestrians hit by trains along the tracks (level crossings not included), which is the main cause of serious accidents.

Number of suicides:

2015	2016	2017	2018	2019	2015-19 average
7	7	7	5	2	5.6

The number of suicides during 2019 compared to 2018 (5) and also compared to previous years shows a decrease. In 2019, we also see significant decrease compared to the average number of suicides in the last five years. After four years of a stable number in suicides, we can see a significant reduction, which we hope will continue in the next years.

Number of precursors to accidents:

2015	2016	2017	2018	2019	2015-19 average
134	127	126	101	74	112.4

The number of precursors to accidents in 2019 compared to 2018 decreased by 26%. Furthermore, compared to the average of the last five years a greater reduction is recorded (34%). This is partially due to the delivery of new line sections (Tithorea-Domokos 107 km long Athens -Thessaloniki Double High-Speed Railway Line).

Cost of significant accidents: (in million Euro)

2015	2016	2017	2018	2019	2015-19 average
37.53	7.79	22.76	18.71	13.14	19.99

The financial cost of significant accidents in 2019 compared to 2018 and to previous years decreased (2016 being an exception). Compared to the average of the last five years, the cost decreased by 34%, a fact that confirms that in 2019 there has been a reduction in all CSIs, such as significant accidents, fatalities and serious injuries.

The cost of fatalities amounts to €12.07 million (the greatest part of the total cost) and the cost of the injuries amounts to €1.05 million. The cost of train delays (€0.008 million) and rolling stock damage (€0.005 million) is very low.

Technical safety of infrastructure and its implementation, safety management:

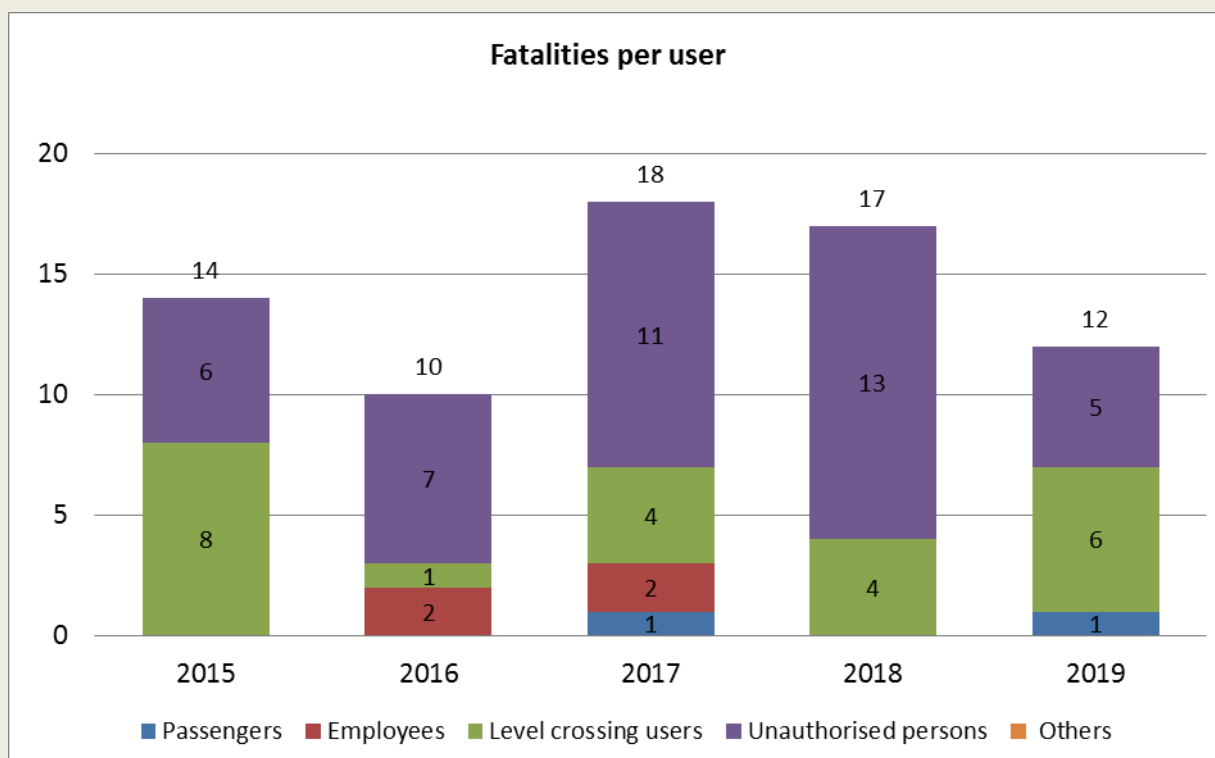
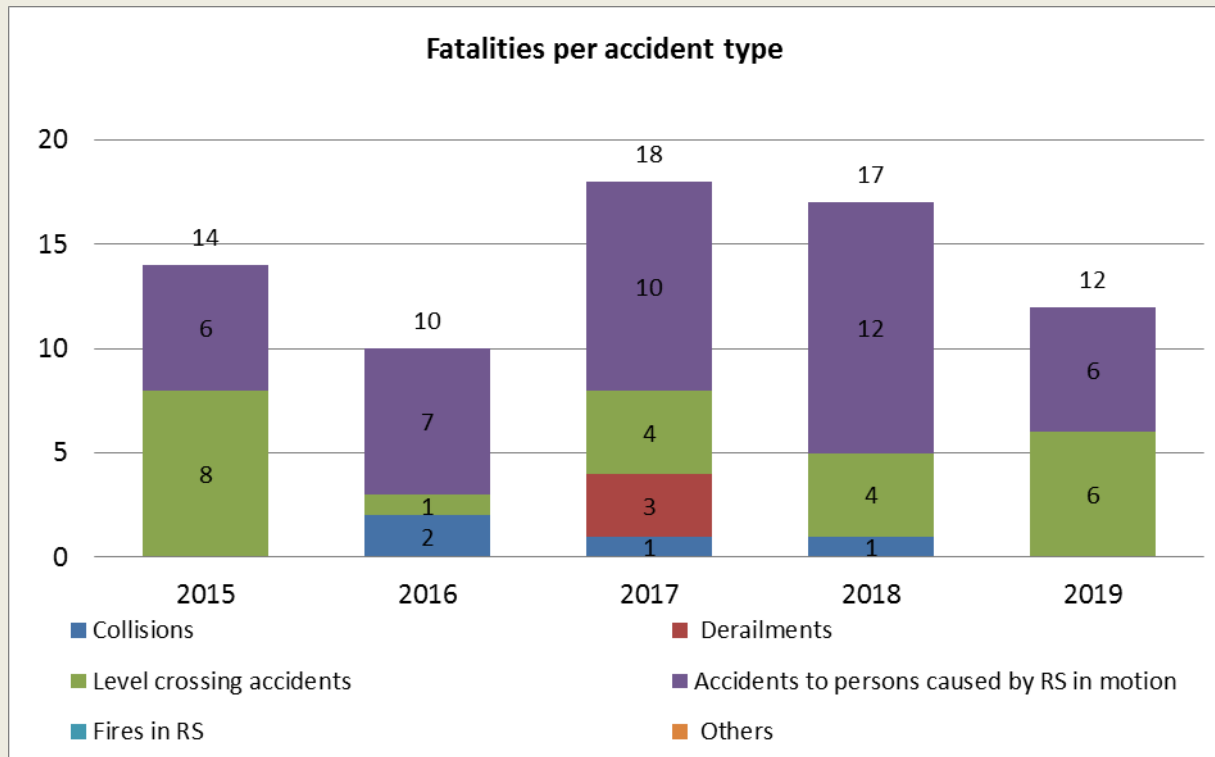
Number of level crossings by type:

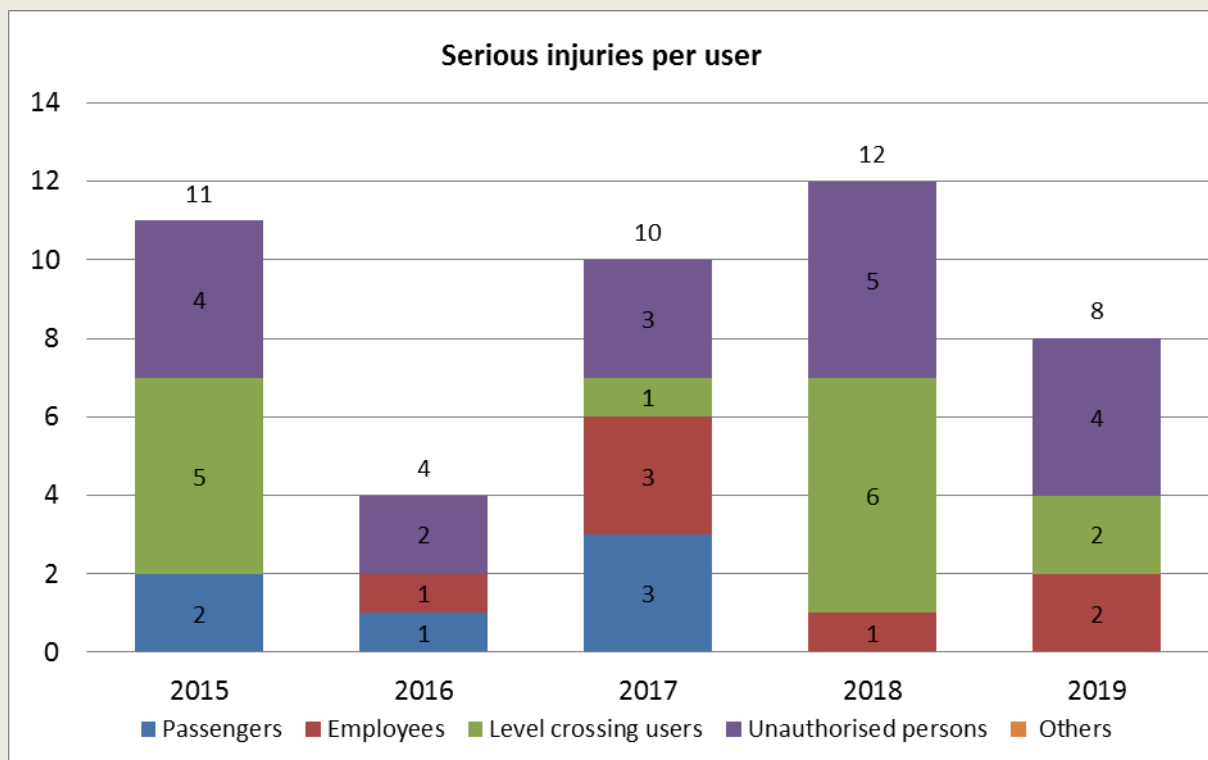
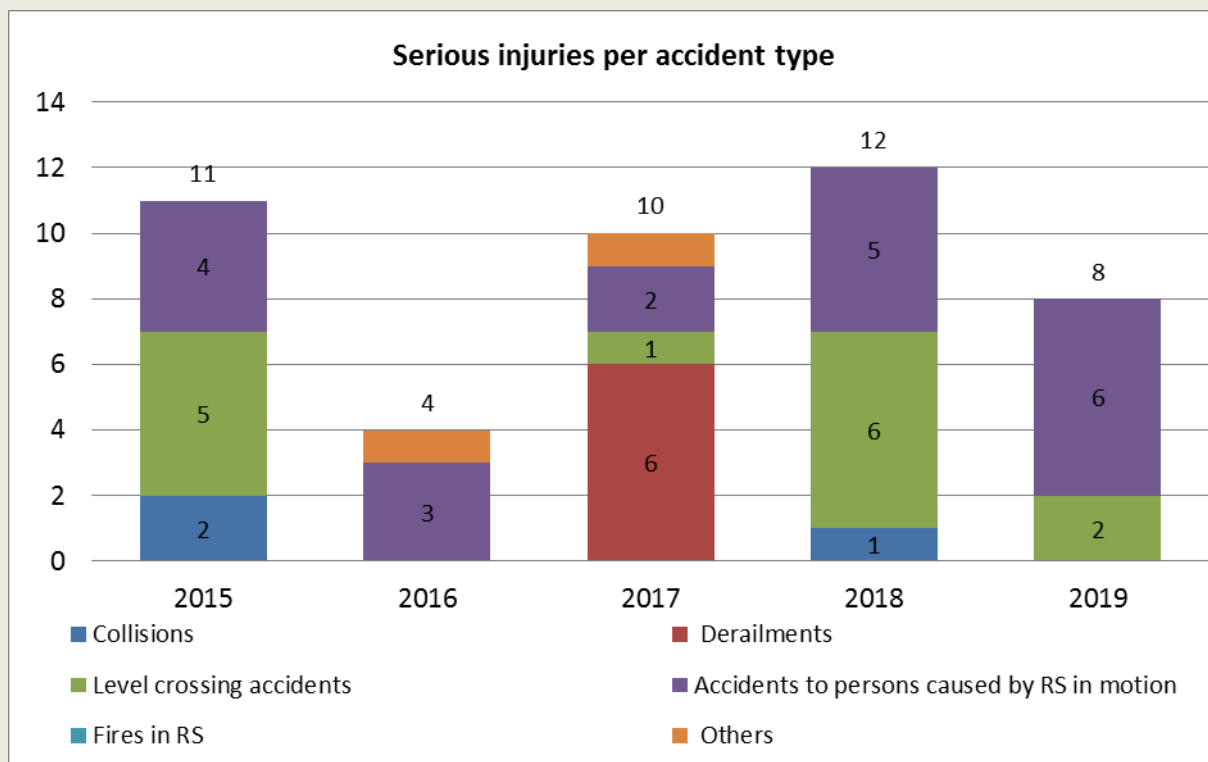
	2015	2016	2017	2018	2019
Active	749	749	692	695	685
Passive	656	656	571	568	551
Total	1405	1405	1263	1263	1236

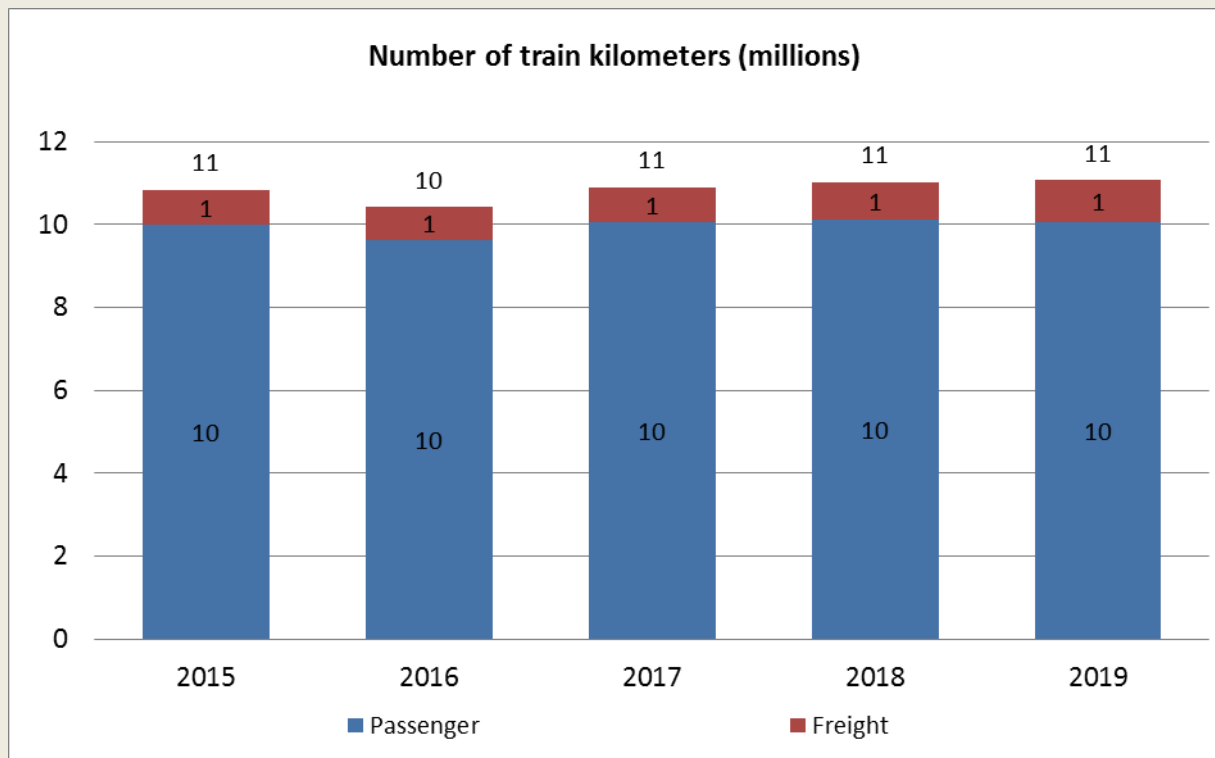
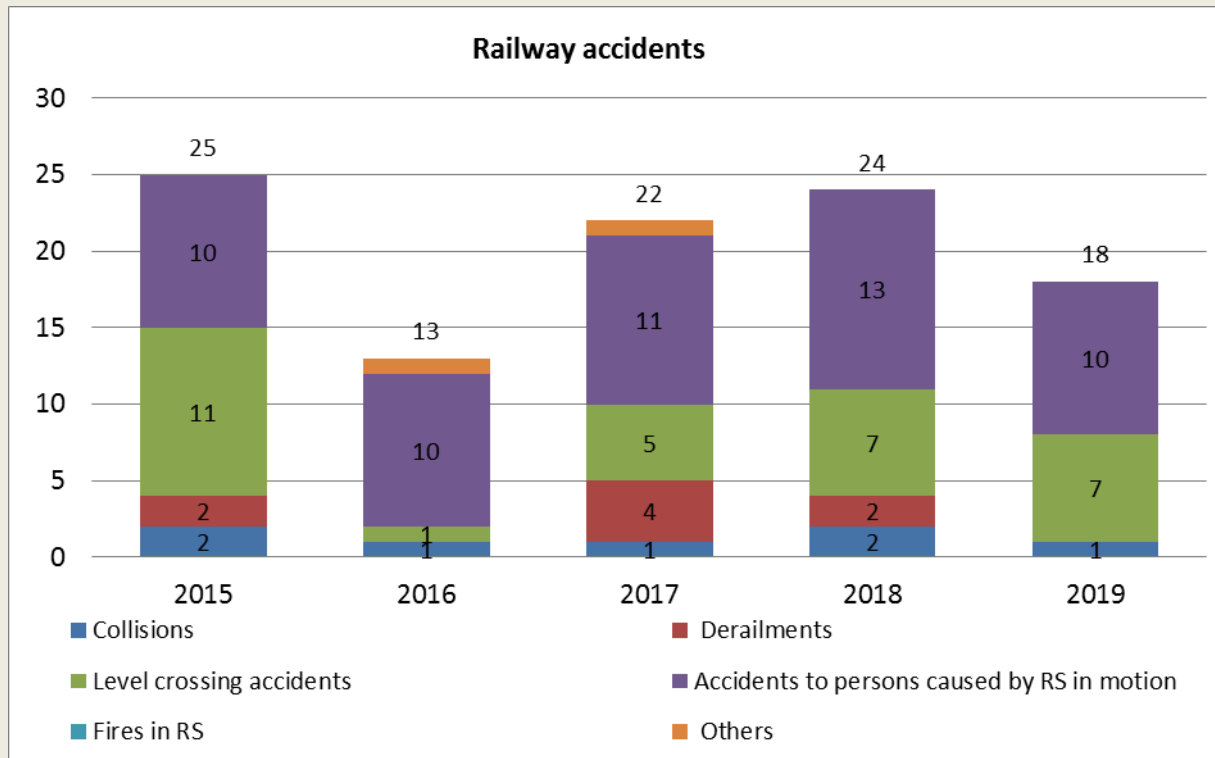
The number of LCs in the Greek network has been reduced in the last five years with regard to both active and passive LCs. This is due to the gradual delivery of new sections of the new line with the consequent elimination of certain, mainly passive, LCs. In 2019 there has been a small reduction of passive LCs by 17.

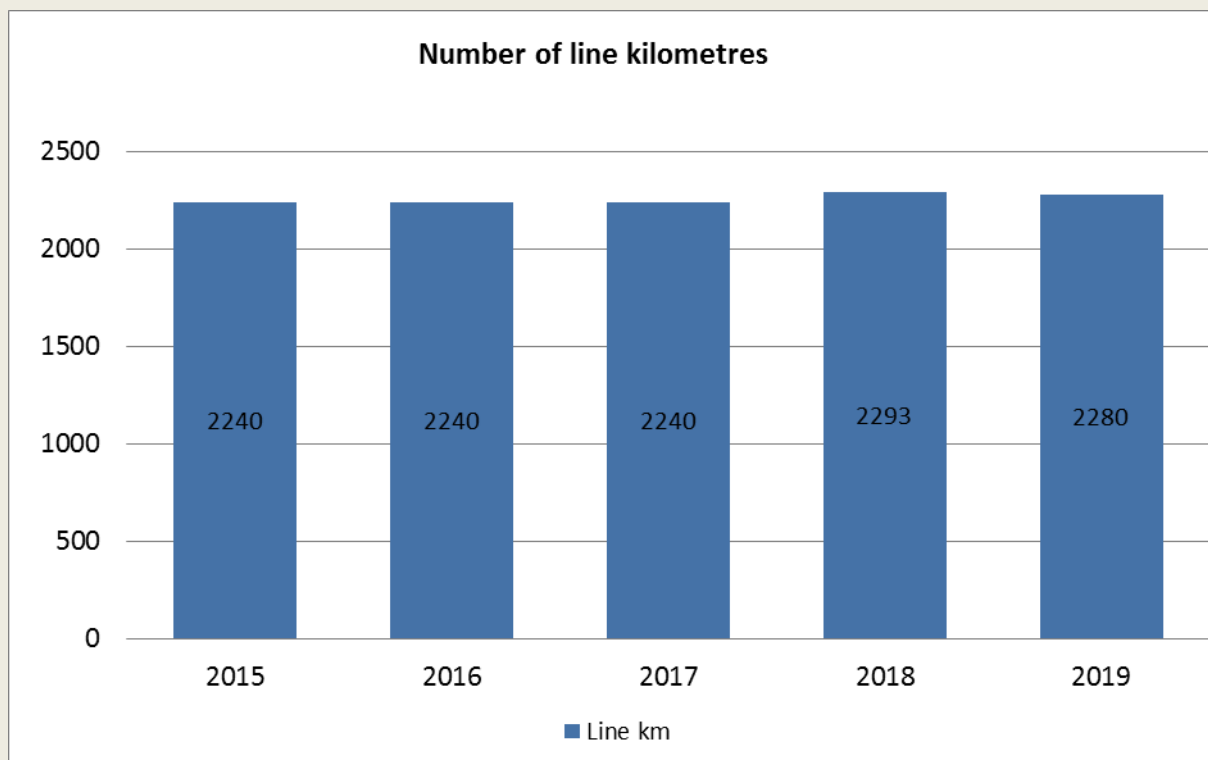
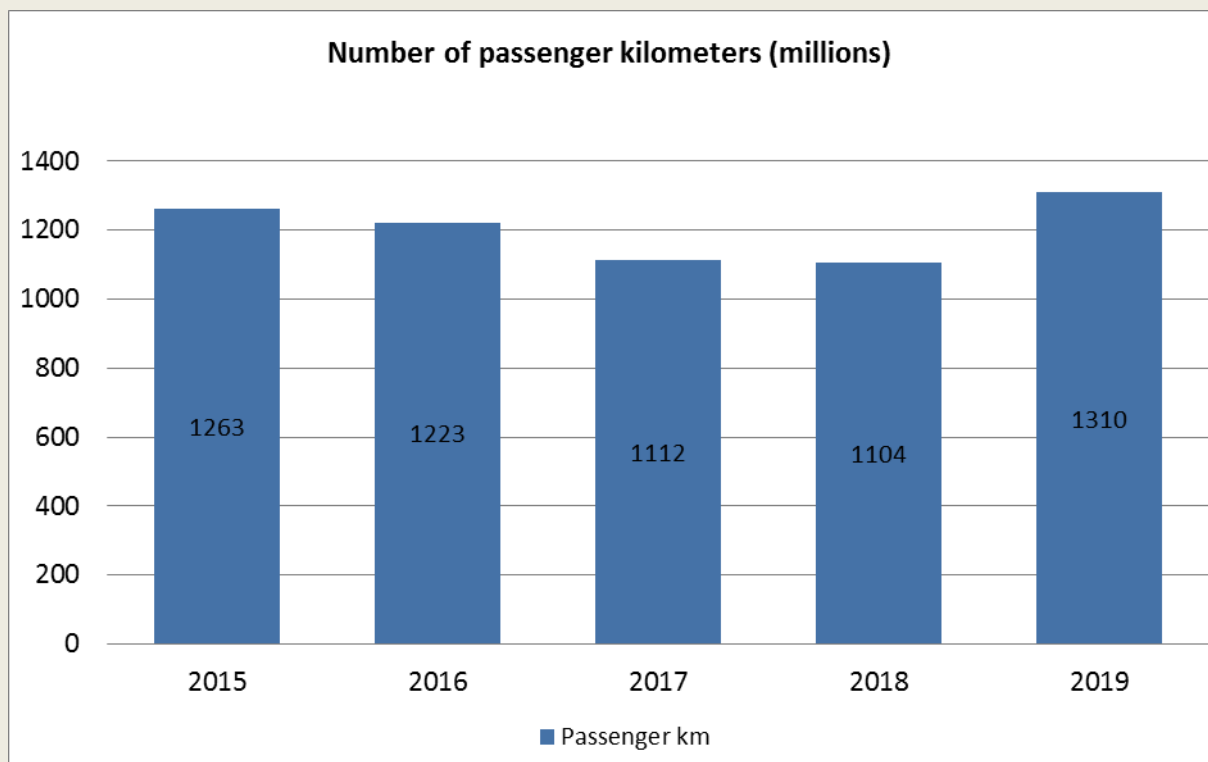
This trend towards the reduction of passive LCs will continue in the future with the delivery of new line sections.

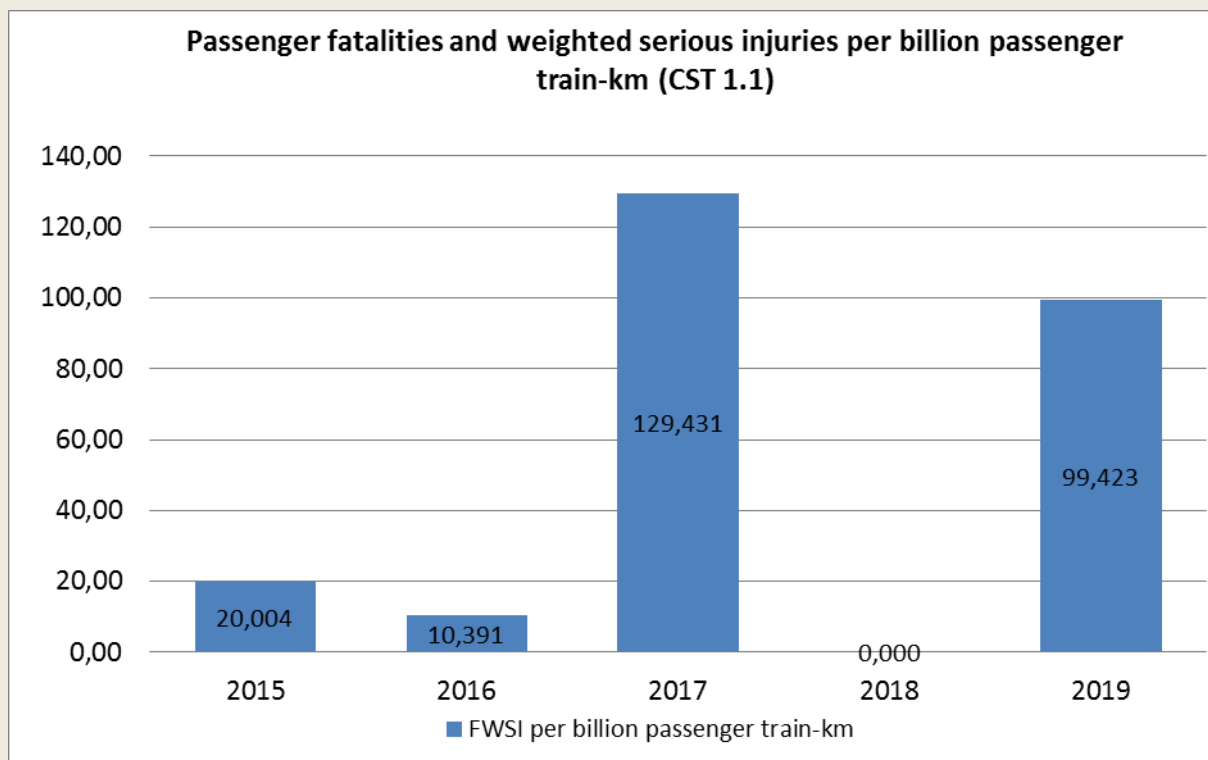
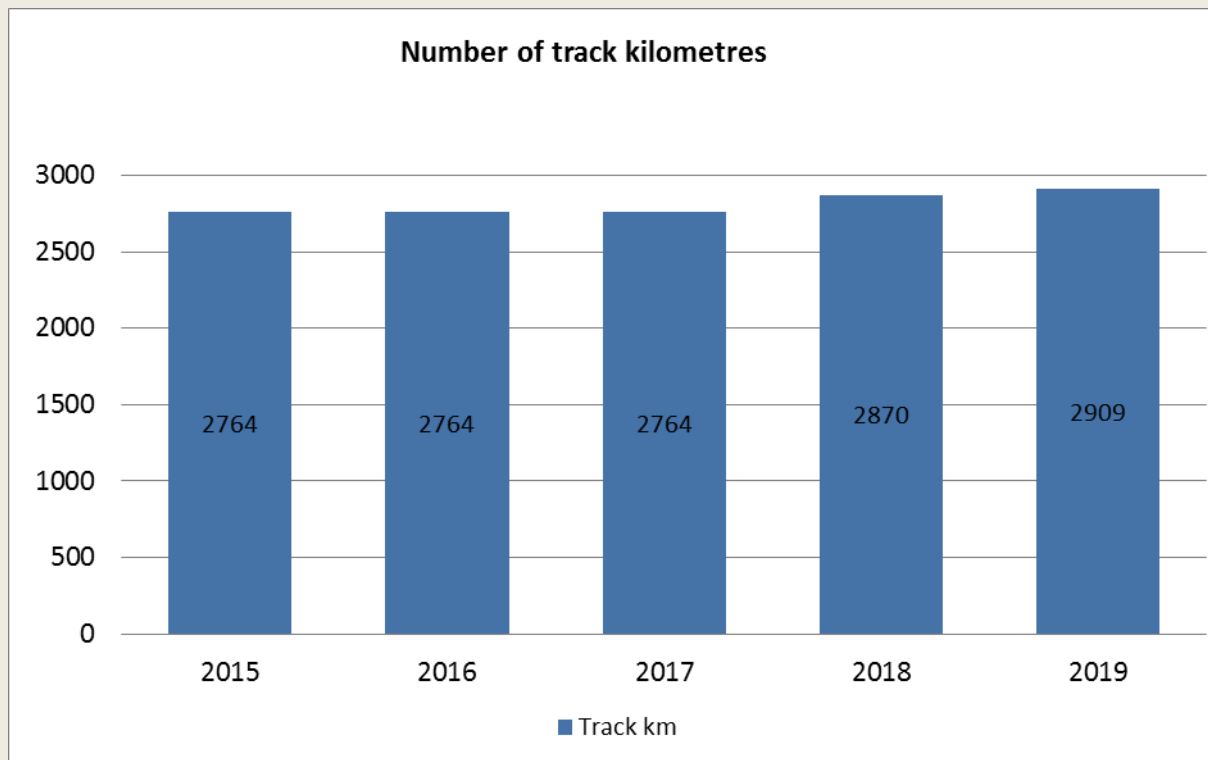
4.2 CSI data charts

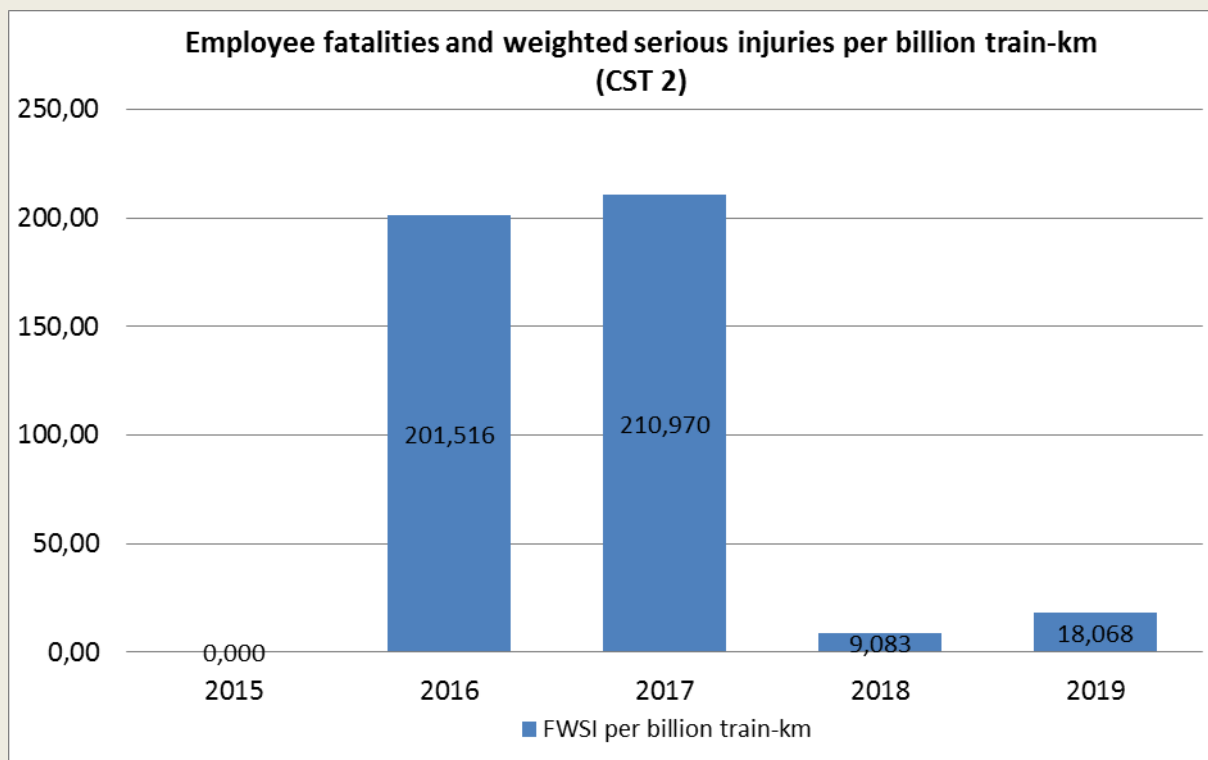
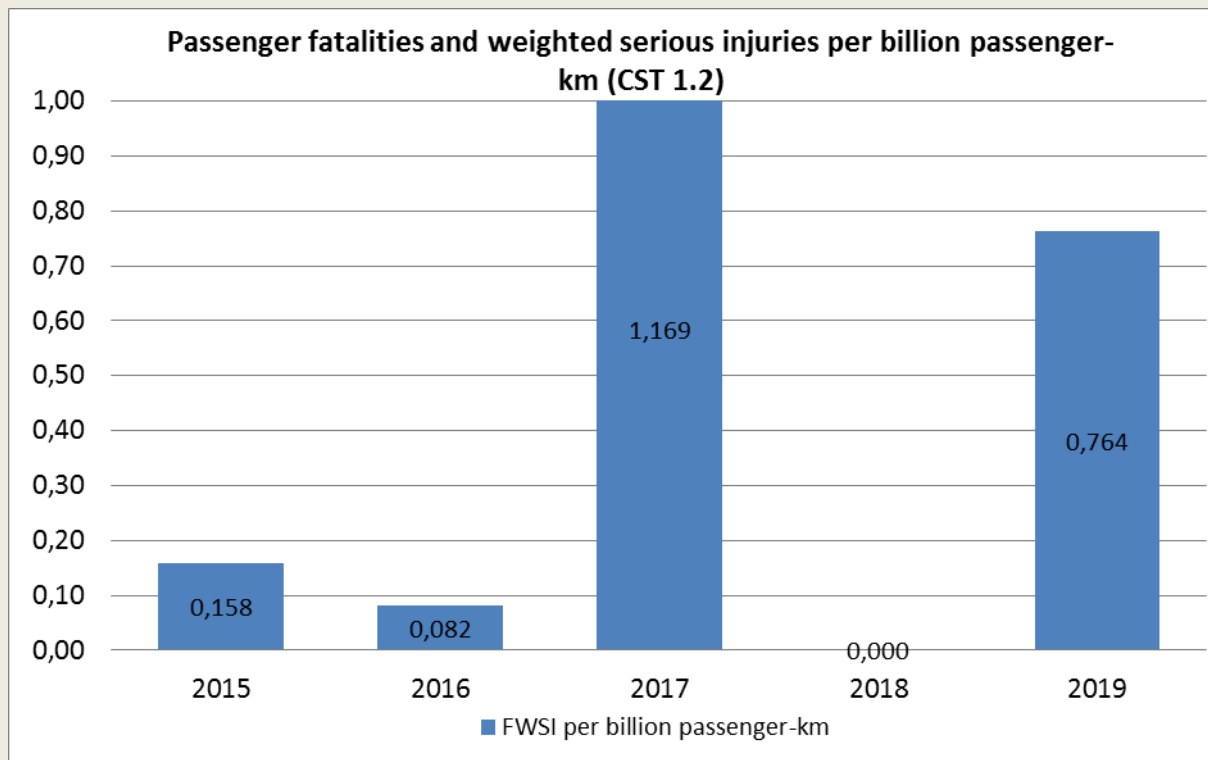


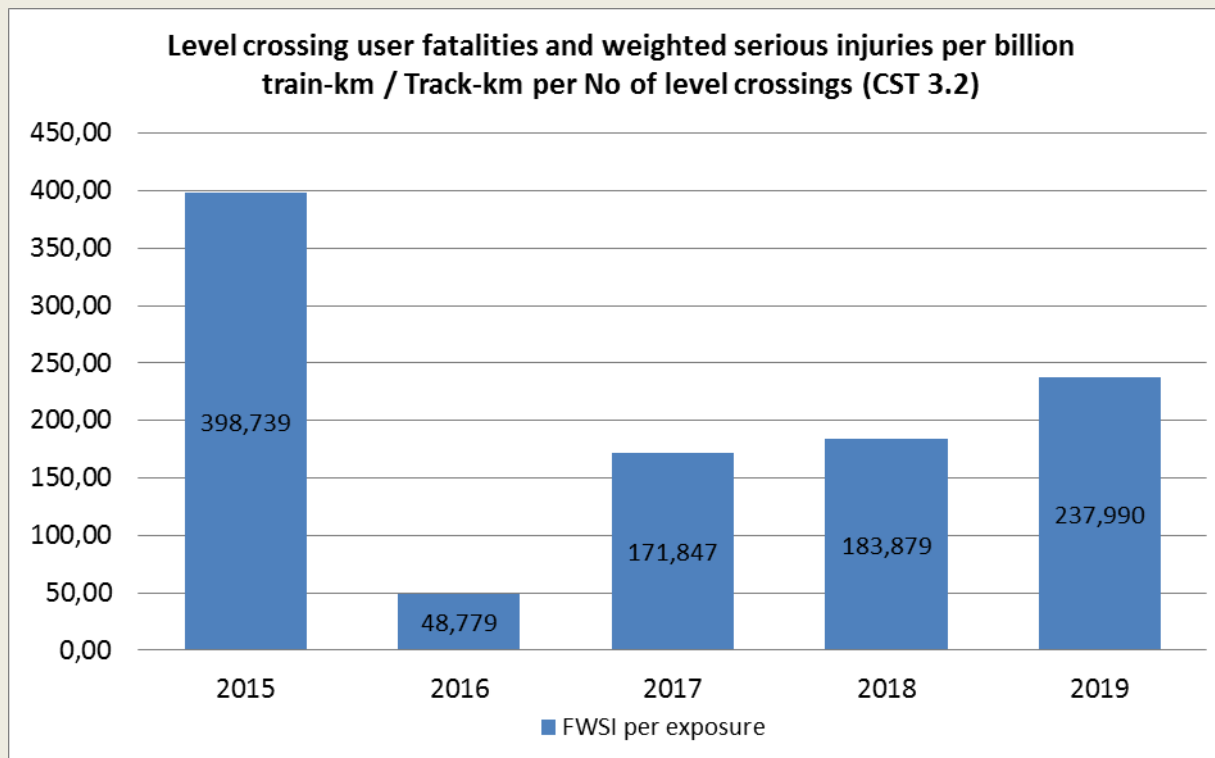
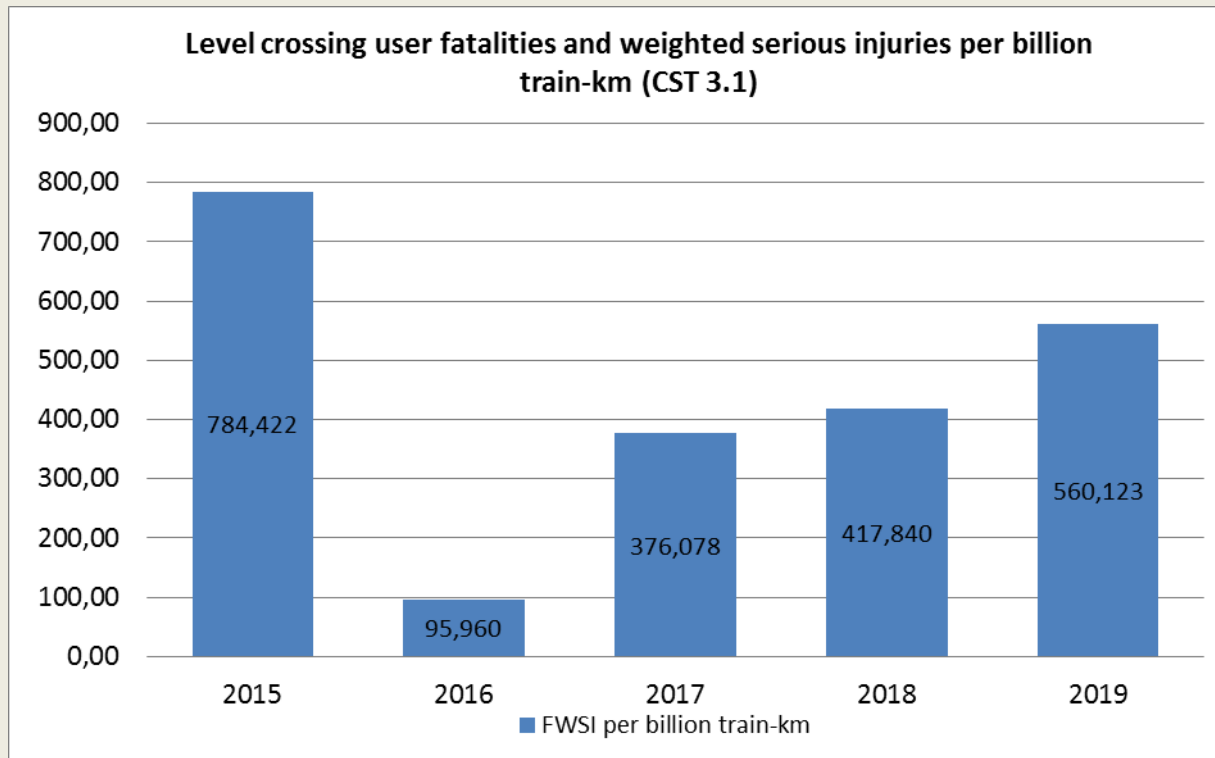


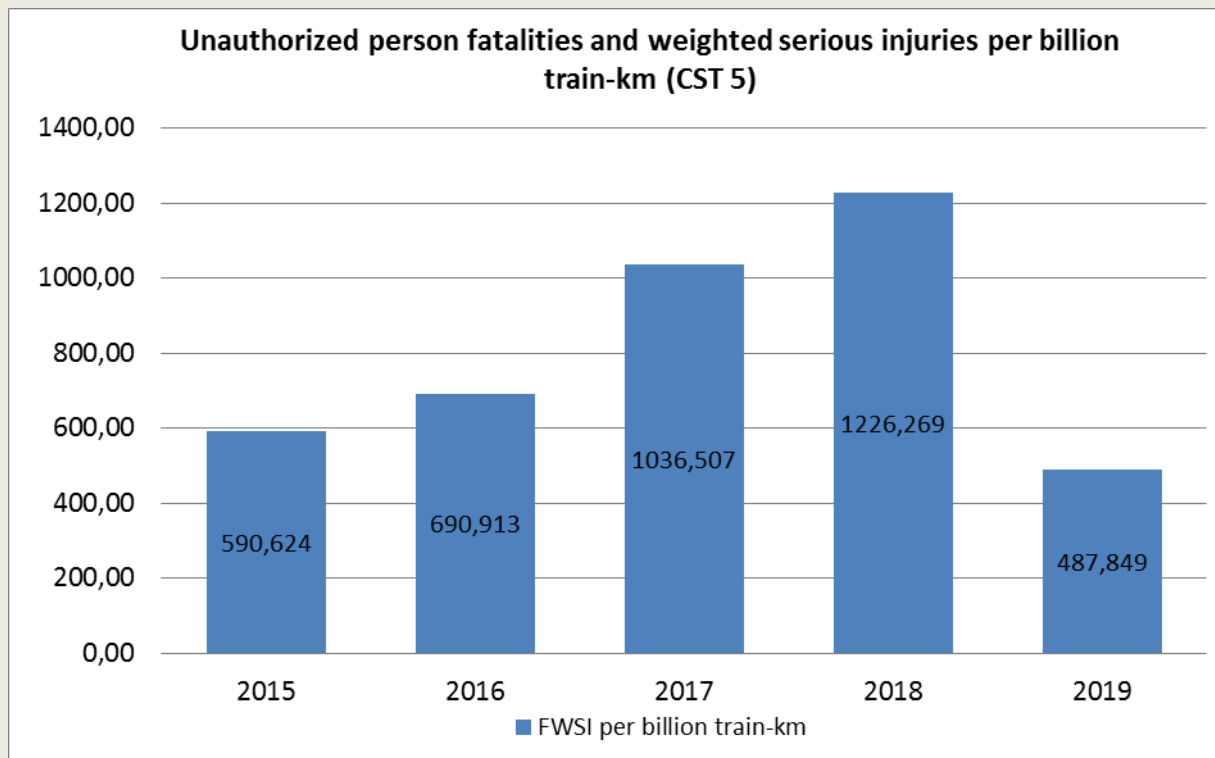
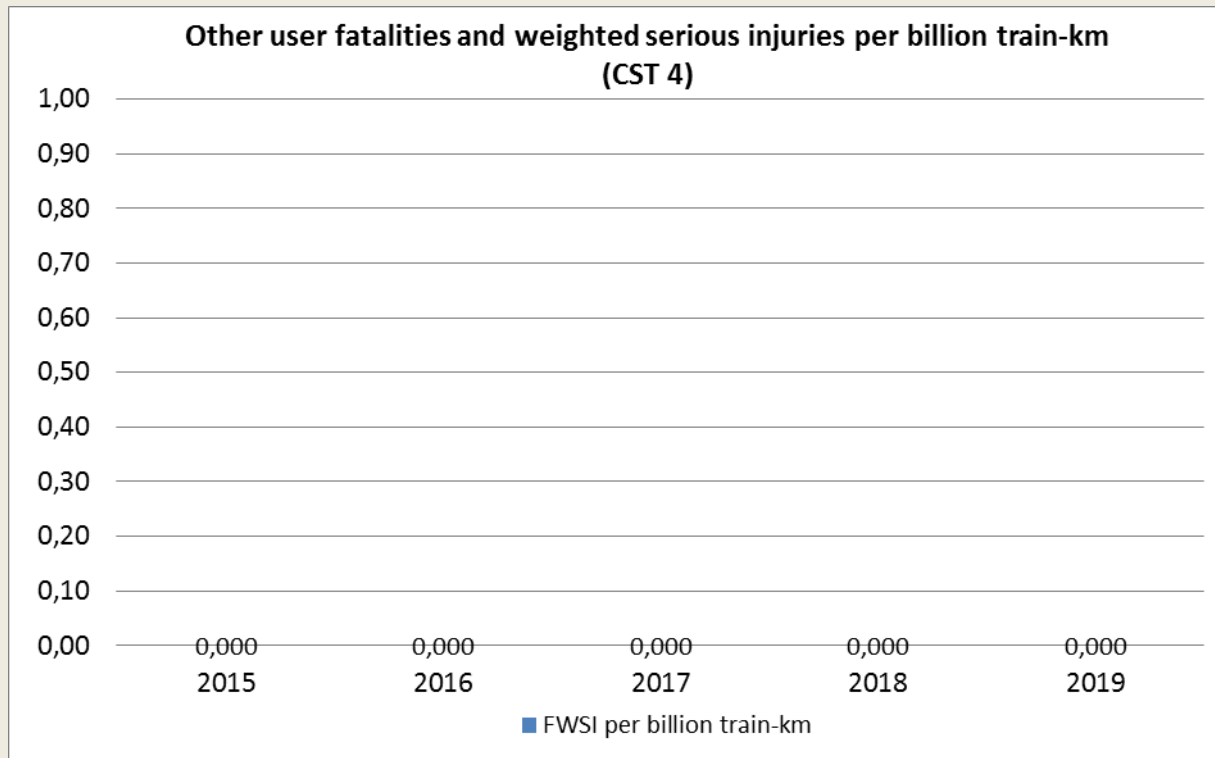


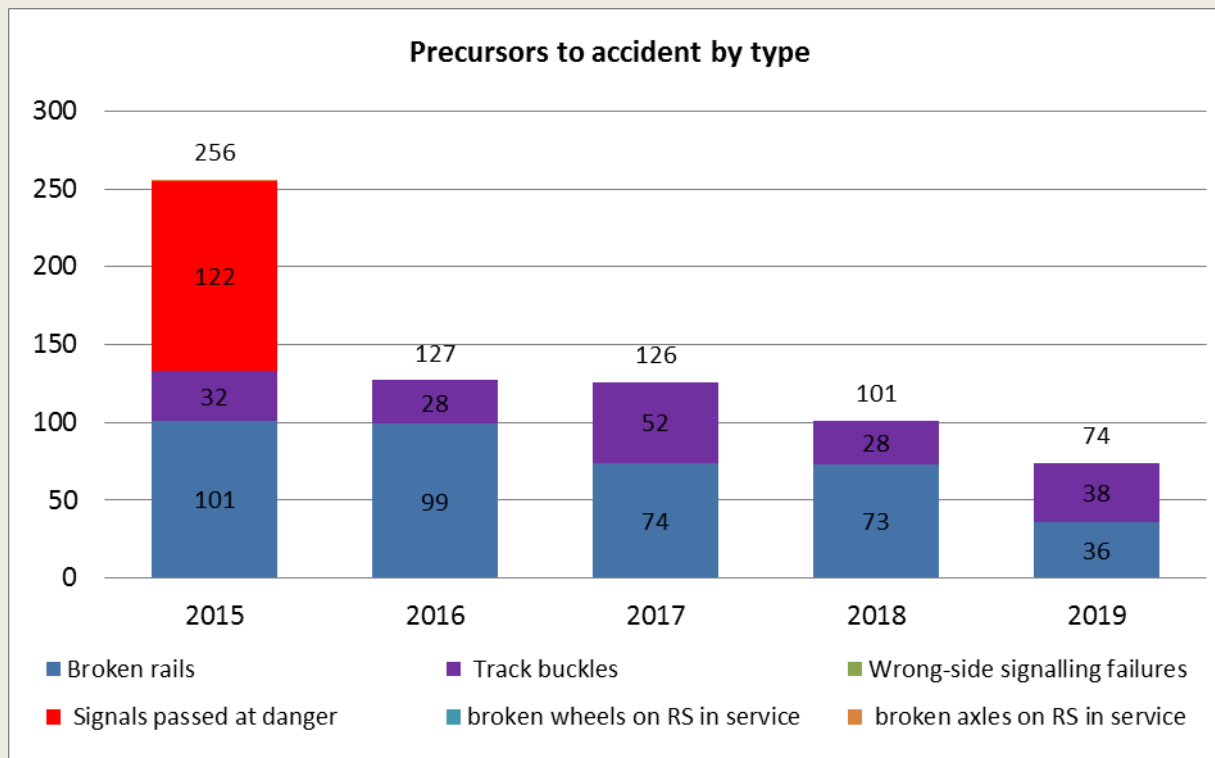
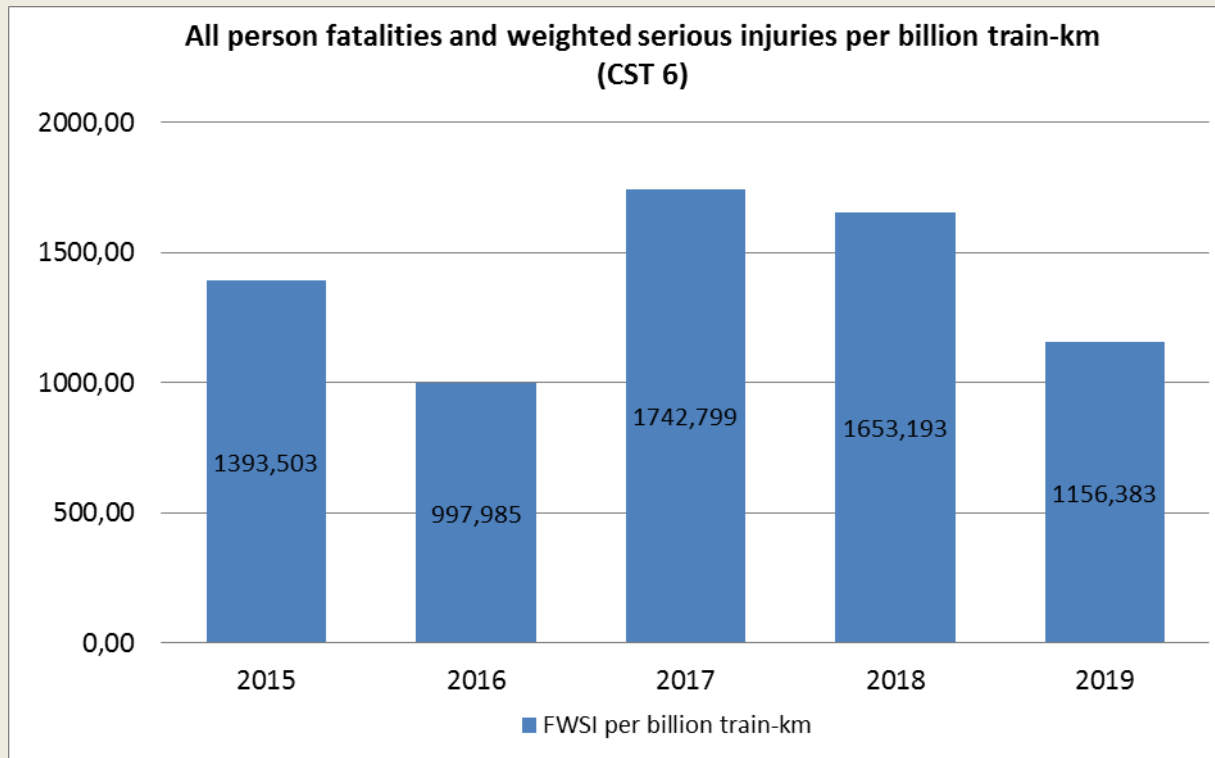


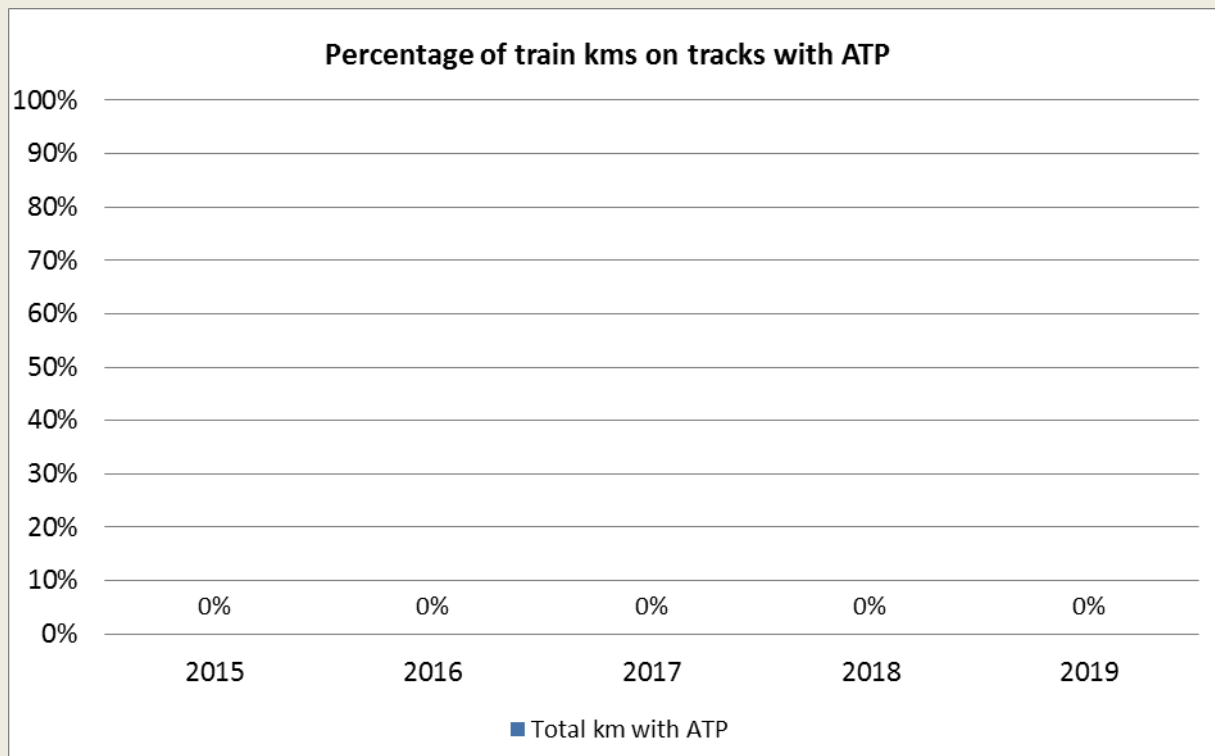
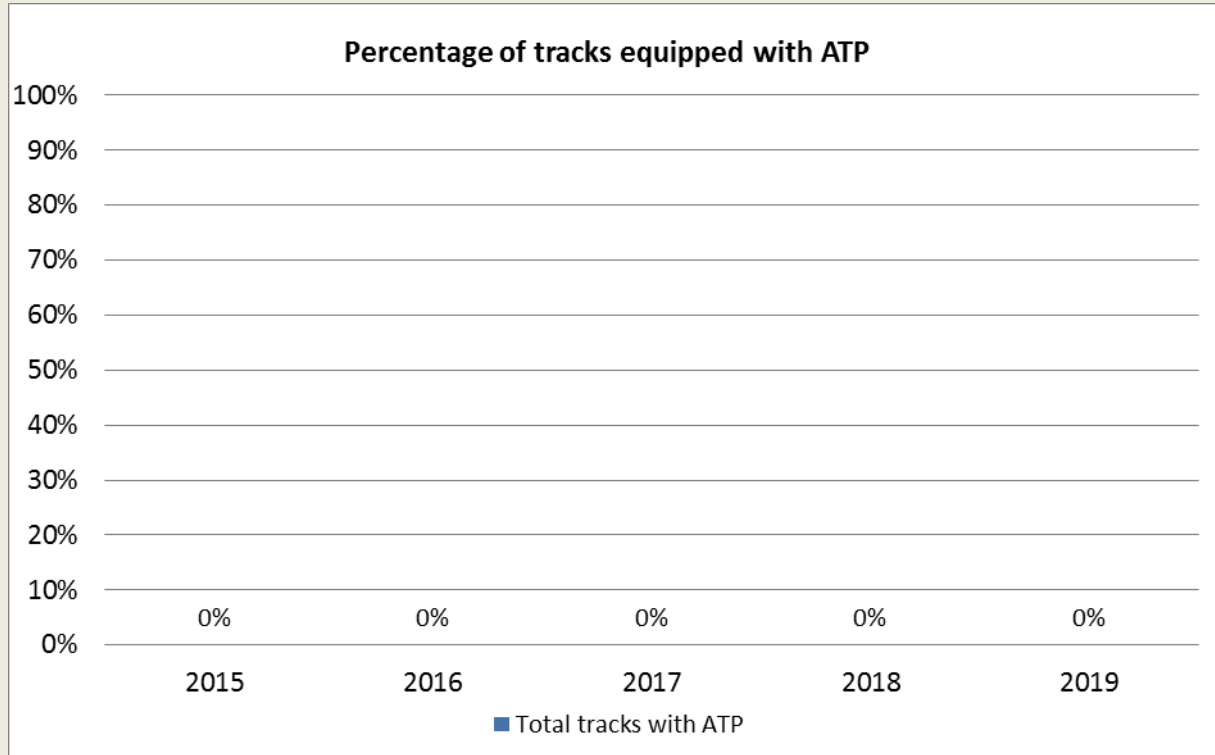


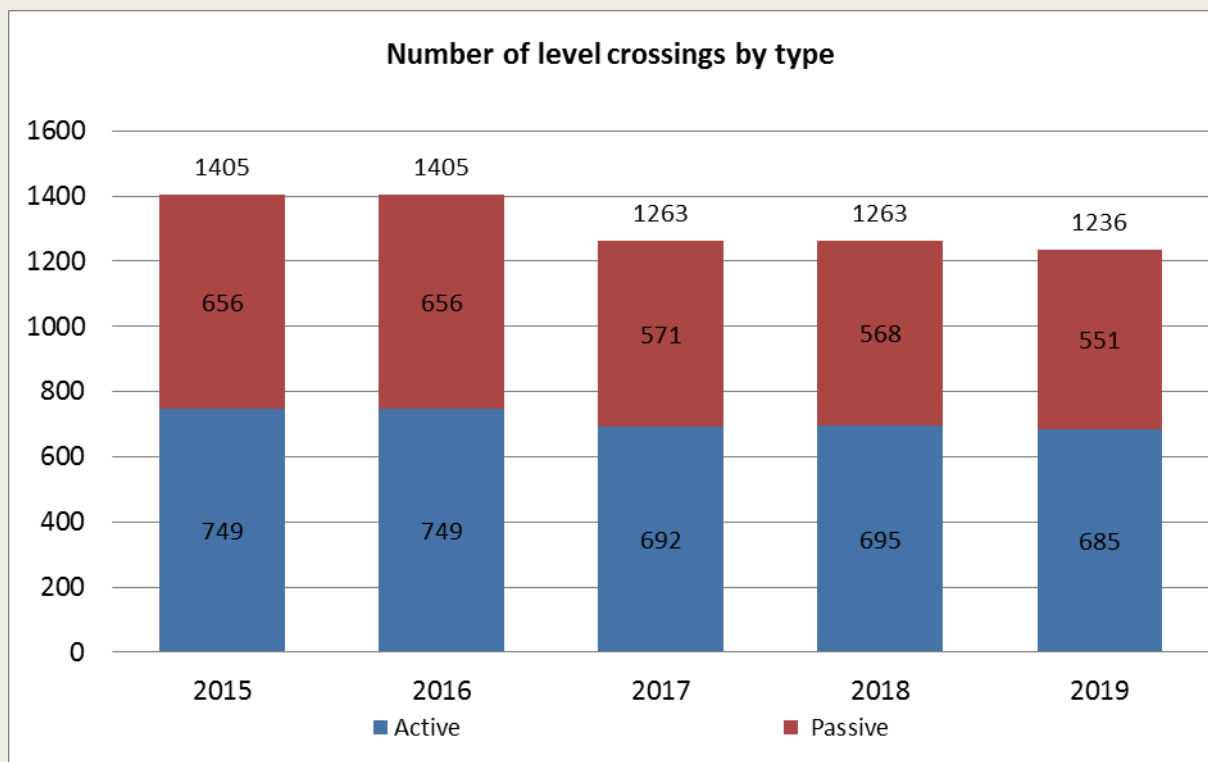












5. EU LEGISLATION AND REGULATION

5.1 Changes in laws and regulations

5.2 Derogations pursuant to Art. 15 Directive (EU) 2016/798



5. EU LEGISLATION & REGULATION

5.1 Changes in legislation and regulations

2019 has been a year of significant changes in the Greek legislation, as a series of European legislative acts related to the Fourth Railway Package was adopted and incorporated into it. At the same time, as of 16/06/2019 a direct implementation of significant European Regulations started in our country, such as Delegated Regulation (EU) 761/2018 on supervision, Delegated Regulation (EU) 762/2018, Implementing Regulation (EU) 2018/763, Implementing Regulation (EU) 2018/545, Implementing Regulation (EU) 2019/250, Regulation (EU) 2019/776 which amended the Technical Specifications for Interoperability (TSIs). Furthermore in 2019, Implementing Regulation (EU) 2019/777 on the Register for Railway Infrastructure, Implementing Regulation (EU) 2019/779, to enter into force on 16/06/2020, amending the ECM certification system, and Implementing Regulation (EU) 2019/773 --to enter into force on 16/06/2021, with the exception of points 4.2..2.1.32 and point 4.4 of the Appendix, which have been in force since 16/06/2020-- on the TSI relating to the operation and traffic management subsystem, were published etc.

The railway sector was informed of all the legislative acts above by the Ministry of Infrastructure and Transport, and RAS.

In 2019, the following legal and regulatory acts on railway safety and interoperability were issued on a national level:

1. Law 4632/2019 (A' 159) - "Transposition into the Greek legislation of Directives 2016/797, 2016/798 and 2016/2370 of the European Parliament and Council and other provisions."
2. JMD No. οικ. Γ5/48222/2474 / 21-06-2019 (B' 2755) - "Adaptation of the Greek legislation to the provisions of Directive 2008/68/EC of the European Parliament and Council, on the inland transport of dangerous goods, as the appendices thereof were adapted to scientific and technical progress with Directives 61/2010/EU, 2012/45/EU, 2014/103/EU, (EU) 2016/2309, (EU) 2018/217 and (EU) 2018/1846 of the Commission.
3. Decision of the Minister of Infrastructure and Transport No. ΑΣ10/77243/580 /13-02-2019 (B' 698) "Amendment of the General Traffic Regulation (GTR) – Part B (Traffic and Manoeuvre Regulation)."

4. Decision of the Minister of Infrastructure and Transport No. ΑΣ10/80239/659/2019 (Β' 3134) - "Amendment of Ministerial Decision No. ΑΣ10/77243/580/13-02-2019."
5. Decision of the Minister of Infrastructure and Transport No. ΑΣ10/80239/659/2019 (Β' 4167) - "Amendment of Ministerial Decision No. ΑΣ10/77243/580/13-02-2019."
6. Decision of the Minister of Infrastructure and Transport No. ΑΣ16.2/22932/183/05-06-2019 (Β' 2195) - "Amendment of Ministerial Decision No. ΑΣ16.4/οικ.24863/2723/30-05-2012 "Decision of the Minister of Infrastructure and Transport on the procedure, supporting documents and all other details related to the submission of an application to the Authority for the approval of commissioning/use of a subsystem and for the approval of commissioning of a vehicle or a series of vehicles" (Β' 1812).
7. Decision of RAS No. 9442/14-01-2019 (Β' 359) – "Definition of qualifications, terms and conditions for the granting of initial recognition and renewal thereof for the examiners at the Train Driver and Candidate Train Driver Training Center."
8. Decision of RAS No. 10720/15-07-2019 (Β' 2962) – "Procedure for acquiring a train driver license – Organisation and definition of the process of examination to obtain a train driver license."

5.2 Derogations pursuant to Art. 15 Directive (EU) 2016/798

In Greece, no derogation pursuant to Art. 15 Directive (EU) 2016/798 has been decided.

6. SAFETY CERTIFICATIONS, SAFETY AUTHORISATIONS AND OTHER CERTIFICATES ISSUED BY THE NSA

- 6.1 Single Safety Certificates and Safety Authorisations
- 6.2 Vehicle Authorisations
- 6.3 Entities in Charge of Maintenance of Freight Wagons (ECM)
- 6.4 Train Drivers
- 6.5 Other types of Authorizations and Certifications
- 6.6 Contacts with other National Safety Authorities
- 6.7 Exchange of Information between NSAs and Railway Operators
- 6.8 Cooperation with the EU Railway Agency



6. SAFETY CERTIFICATES, SAFETY AUTHORISATIONS AND OTHER CERTIFICATES ISSUED BY THE NSA

6.1 Single Safety Certificates and Safety Authorisations

For the time being, no Single Safety Certificate has been issued in Greece. However, the safety certificates (Part A and Part B) in the following table shall remain in force until their expiry date.

The valid Safety Certificates and Safety Authorisations issued by RAS until the end of 2019 are shown in the table below:

Company	History	Date of issue	Valid until	Certificate Type	Type of service
OSE	New	05/06/15	04/06/20	Safety Authorisation	Infrastructure Manager
PIRAEUS EUROPE ASIA RAIL LOGISTICS (PEARL) SA	Amended	21/03/18	09/11/22	Safety Certificate - Part B	Freight, carriage of dangerous goods not included
PIRAEUS EUROPE ASIA RAIL LOGISTICS (PEARL) SA	Amended	21/03/18	18/12/21	Safety Certificate - Part A	Freight, carriage of dangerous goods not included
RAIL CARGO LOGISTICS GOLDAIR (RCLG) SA	New	21/06/17	20/06/22	Safety Certificate - Part B	Freight, carriage of dangerous goods included
RAIL CARGO LOGISTICS GOLDAIR (RCLG) SA	New	30-09-16	29-09-21	Safety Certificate - Part A	Freight, dangerous goods carriage services included.
TRAI NOSE S.A.	Renewed	28-12-17	31-12-22	Safety Certificate - Part A	Passenger, high-speed services included - Freight, carriage of

Company	History	Date of issue	Valid until	Certificate Type	Type of service
					dangerous goods included
TRAI NOSE S.A.	Renewed	28/12/17	31/12/22	Safety Certificate - Part B.	Passenger, high-speed services included - Freight, carriage of dangerous goods included
STASY S.A.	New	15/07/16	14/07/21	Safety Certificate - Part A	Passenger, high-speed services included
STASY S.A.	New	15/07/16	14/07/21	Safety Certificate– Part B.	Passenger, high-speed services included

For the time being, there has been no case of a Safety Certificate or a Safety Authorization having been revoked in Greece.

There were no changes in the strategy and the procedures of RAS for issuing Safety Certificates and Safety Authorisations, with the exception of the ones introduced by new legislation on the Fourth Railway Package.

Following numerous contacts and consultations that started in the beginning of 2019, on 01/09/2019 GFR, the Romanian RU, submitted, via the OSS, a preliminary contact application before the submission of an application for the issuance of a single safety certificate, aiming to expand its freight carriage services to the Greek network. In this context, a team of RAS assessors assessed the relevant information submitted by GFR.

Following this, on 23/11/2019 GFR RU submitted an application to ERA, via the One Stop Shop(OSS), for the issuance of a single safety certificate, in accordance with Article 10 of Directive 2016/798. In the context of the above application there have been discussions with both the NSA of Romania and ERA officials for the issuance of a Single Safety Certificate.

Apart from the case above, no other discussions or cooperation with other NSAs have taken place concerning the issuance of a Safety Certificate or Authorisation in 2019.

6.2 Vehicle Authorisations

Until the end of 2019, there have been no cases of issuance of a Vehicle Authorisation for placing on the market in the Greek railway network.

Following several contacts and consultations with GFR, which started in the beginning of 2019, on 17/09/2019 GFR submitted two applications together with the relevant supporting files, via the OSS, for the approval of two Romanian vehicles, one diesel and one electric locomotive, to be used on the Greek railway network. RAS was selected as an Authorisation Agency, and after confirming receipt of the two applications, it implemented the completeness check according to article 32 of Implementing Regulation (EU) 2018/545.

Additionally, in 2019 discussions with representatives of GAIAOSE and the Agency took place with regard to the application for the approval of the commissioning of the on-board ETCS subsystem on eighty eight (88) locomotives. The new requirements applicable after the introduction of the Fourth Railway Package, which must be applied for the approval above, were discussed.

There have been no changes to the strategy and to the procedures of RAS for issuing Vehicle Authorisations, with the exception of the ones introduced with the new legislation related to the Fourth Railway Package.

6.3 Entities in Charge of Maintenance of Freight Wagons (ECM)

RAS is the certification body/agency appointed by the Greek legislation for the rolling stock maintenance system (RSMS) of freight wagons for ECMs in Greece. Every agency responsible for the maintenance of freight wagons used on the railway network in EU, must have a certified maintenance system in accordance with the Regulation EU 445/2011.

Until the end of 2019, EESSTY S.A. was the only rolling stock ECM in Greece, holder of freight wagon ECM certificate No. EL 3120180001 issued by RAS on 2018.

Given that on 1 April 2019 the sale and transfer of 100% of EESSTY's share capital to TRAINOSE RU, a subsidiary of Ferrovie Dello Stato Italiane S.p.A., was completed and on 31/12/2019 the merger of the two companies was completed with the acquisition of EESSTY by TRAINOSE, RAS, as the agency responsible for certifying freight wagon ECMs and in the context of the above legal change requested from TRAINOSE to submit an application for the update of the existing ECM Certificate of EESSTY, in accordance with the provisions of Regulation EU 445/2011.

6.4 Train Drivers

- Issuance of train driver licenses

Pursuant to Law 3911/2011, RAS is the competent authority for the issuance of train driver licenses under the community example of Appendix I of Regulation (EU) 36/2010. According to the provisions of the above law, the printing of the train driver licenses was assigned to the Hellenic National Passport and Secure Document Centre of the Headquarters of the Hellenic Police (DDEA).

RAS, applying the above legislation, has installed and operates the “TRAIN DRIVER LICENSES” electronic online programme/application entitled, via which it receives applications for the issuance and granting of train driver licenses.

In the end of February 2019, RAS issued the first “European” train driver licenses in accordance with the Appendix of Regulation (EU) 36/100. In particular, in 2019 a total of 195 licenses was issued, 165 of which related to the conversion of valid national licenses into “European” licenses and 30 related to the issuance of new “European” licenses.

Furthermore, the “TRAIN DRIVER LICENSES” programme/application is connected and feeds the National Train Driver Licenses Register kept by RAS with the data of the train drivers, in accordance with Decision 2010/17/EU “on the adoption of main parameters for registers of train driver licences”. By the end of 2019, the National Train Driver Licenses Register included the data of 195 train driver licenses.

- New train driver licensing procedure

In 2019, the 10720/15-07-2019 (B’ 2962) Decision of RAS was published in the Gov. Gaz., which approved the procedure for obtaining a train driver license and the organisation of examinations for obtaining a train driver license.

In the above context, RAS established the Central Examination Committee (CEC), which is responsible for organising and defining the examination process.

To ensure that the organisation of the examinations is reliable, a Pool of Questions was created, from which the appropriate number of questions for the examination of candidate train drivers was selected by ballot. The pool of questions was approved by the CEC and Examination Committees were established made up of examiners listed in the Recognised Train Driver Examiner Register kept by RAS.

In the first application of the above Decision of RAS, theoretical & practical examinations for sixty eight (68) candidates were held on 30/07/2019 & on 31/07/2019 at the OSE vocational training centre and at the Athens - Lianokladi & Thessaloniki - Larissa routes respectively.

The Board of RAS issued a decision approving the results of the examinations the candidate train drivers had taken and granted an examination success certificate to successful candidates so that they could apply for the issuance of a train driver license.

In accordance with the above decision two (2) candidates were rejected, one in the theoretical part of the examination and one in the practical part of the examination. The two rejected candidates applied for a re-examination and RAS proceeded to the organisation of a re-examination, for the theoretical part at the OSE vocational training centre on 11/11/2019 and for the practical part in the Agioi Anargyroi-Chalkida route. According to the examination results the two candidates passed the examinations and the RAS Board issued a decision approving the results and granted the examination success certificate to the two successful candidates so that they could apply of the issuance of a train driver license.

- Train driver certificates

RAS requested the RUs to begin issuing train driver certificates for train drivers for whom a train driver license has been issued and to keep a Complementary Certificate Register. A train driver certificate must comply with the example in Appendix II of Regulation (EU) 36/2010.

- Recognition of train driver and candidate train driver training centres

In 2019 RAS did not issue a new statement of recognition of a train driver and candidate train driver training centre.

The statement of recognition of the OSE training centre for train drivers and candidate train drivers was issued by RAS in 2018 and is valid until 22/08/2023.

Trainers - Examiners - Doctors of candidate train drivers & train drivers

In 2019 RAS granted:

- recognition to twenty-four (24) doctors to conduct the required examination for the confirmation of the physical and occupational psychological fitness of train drivers and candidate train drivers. Of which seven (7) regarded a new recognition and seventeen (17) regarded the renewal of a recognition.
- Adequacy certification to fifty-five (55) train driver– candidate train driver trainers.
- Recognition to twenty-six (26) train driver - candidate train driver examiners in 2019, of which one was removed for health reasons following his request.

6.5 Other types of Authorizations /Certifications

RAS is the competent authority in Greece for authorizing the placing in service of fixed installations, in accordance with article 18 of the Directive (EU) 2016/797. In this context, no such authorization was issued in 2019.

With regard to the application for the authorization of the placing into service/use of an infrastructure subsystem for the “Railway connection of the Alexandroupoli Port” (ΑΣ

740/2013), which was submitted in 2018, RAS in a letter sent in April 2019 requested that additional information be submitted in relation to said application.

Ministerial Decision ΑΣ16.2/22932/183 / 05-06-2019 (Β' 2195) established the procedure and the documents necessary for an interim license for the placing into service/use of parts of the structural subsystems included in autonomous parts of the project, which are placed into use following the procedure of the Administrative Acceptance for Use (AAU).

6.6 Contacts with other National Safety Authorities

In 2019, RAS initiated contacts and cooperated with the Romanian NSA and Agency on the application for a safety certificate submitted by the GFR RU and on the two applications for vehicle authorisations submitted by the same RU.

In 2019, no requests from / to other NSAs asking for information on authorisations/certifications were sent because there is no RU operating an international route between Greece and a neighbouring country.

There were no outcomes of discussions with other NSAs on supervision results.

6.7 Exchange of Information between NSAs and Railway Operators

In 2019, RAS continued exchanging views and information with railway operators on issues related to railway safety and interoperability. This exchange of information is usually carried out through regular and extraordinary supervision, or other meetings as well as through correspondence. Railway Operators can express opinions on issuing procedures/practices, can file complaints to RAS and can raise any topic for discussion. In accordance with the regulatory framework for supervision, at least one supervision meeting with each railway operator separately and at least one joint meeting with all the actors are carried out on an annual basis.

The topics discussed at the as above meetings in 2019 are listed below:

- An overview of the supervision activities of RAS in 2019 and their results - Planned changes to the implementation of the 2020 Supervision Plan
- Safety Culture
- Implementation of Law 4632/2019 (Α' 159) – Outstanding issues
- Preparation for the publication of the Presidential Decree (PD) provided for in Law 4632/2019 which will define issues related to working time, driving time and resting time of train drivers
- Implementation of the revised General Traffic Regulation (GKK) – Part Β'

- Drafting of the Rule Book as per the revised GKK and Regulation (EU) 995/2015 (TSI OPE) and incorporation thereof into the Safety Management System.
- Consultation with the railway sector on the national rules in the field of safety.
- Train driver issues (Conversion of existing train driver licences - issuance of train driver certificates by RUs and the IM – Pool of Questions for the examinations of train driver candidates seeking to obtain a train driver license)
- One Stop Shop (OSS) Training
- Contingency plans / Progress in implementation / Compliance with the provisions of Article 4.2.3.7. of the Annex to Regulation (EC) 2015 / 995 (TSI OPE)
- Taking measures relating to expenses for train driver training in accordance with Article 24, Law 3911/2011
- The National Railway Accident Investigation Body (“NIB”) is not active

6.8 Cooperation with the EU Railway Agency

On 11/06/2019, RAS and the Agency signed a Cooperation Agreement at Bucharest, during an international conference on railways in the context of the Romanian Presidency of the European Council.

The above agreement was established under Article 76 Regulation (EU) 796/2016 and consists of two (2) parts. Part A of the Agreement covers the compulsory cooperation of ERA and RAS on the issuance of a Single Safety Certificate as per Article 14 Regulation (EU) 796/2016, Vehicle Authorisation as per Article 20 Regulation (EU) 796/2016, Vehicle Authorisation as per Article 20 Regulation (EU) 796/2016, and Vehicle Type Authorisation as per Article 21 Regulation (EU) 796/2016. This involves cases where the ERA acting as the Certification/Authorisation Body undertakes to evaluate the “European” part of the relevant applications for the issuance of a Single Safety Certificate, Vehicle Authorisation and Vehicle Type Authorisation, and cooperates with RAS, which evaluates the “national” part of said applications.

Part B of the Agreement covers the voluntary cooperation between ERA and RAS in relation to the above, through the assignment of duties by the ERA to RAS experts specified in the Pool of Experts (PoE).

In 2019, and in the context of the above voluntary cooperation, two (2) RAS employees took part in a training programme of experts for the authorisation of vehicles and one (1) employee in a training programme for the Single Safety Certificate.

7. SUPERVISION

- 7.1 Strategy, planning and decision making
- 7.2 Supervision results
- 7.3 Coordination and cooperation
- 7.4 Follow-up audit of the RAS performance and decision making by the Agency



7. SUPERVISION

7.1 Strategy, planning and decision making.

According to the Supervision Framework of RAS for the monitoring of safety performance after the issuance of safety certificates and safety authorisations [Decision 5791/29-05-2017 (B' 2158)], RAS, by decision, authorises, issues and implements a three-year Supervision Strategy. The Supervision Strategy must cover all the relevant requirements of the Annex to the delegated Regulation (EU) 2018/761 that entered into force on 16/06/2019.

The Supervision Guide issued and published by the ERA includes as an Annex a proposed template for a supervision strategy. Based on the template, RAS started to draft the Strategy, which is expected to be approved in 2020.

In spite of the absence of an approved strategy, RAS carried out supervision activities in 2019, taking into consideration the relevant risk areas after analysing information from various sources, such as: reports of earlier supervision activities, reports : reports of previous supervision activities, reports from the conformity assessment of applications for safety certification or safety authorization, meetings with railway operators, data from railway accident and incident report, complaints, findings and investigation reports of railway accidents and incidents, complaints, annual reports of railway operators, safety indicators, monthly statistical processing of data on the compliance of TRAINOSE RU with the provided train speed limits, etc.

There have not been any changes in the procedure related to the “Regulatory framework for the Supervision of RAS concerning the safety performance after issuing a Safety Certificate or a Safety Authorization”. However, said framework is based on Regulation (EU) 1077/2012 and covers supervision activities only in the sector of railway safety and interoperability, within the framework of the exercise of the activities of RAS as the National Safety Authority (NSA) for railways. Said Regulation on supervision was repealed on 16/06/2019 and was replaced by Implementing Regulation (EU) 2018/761.

The new institutional framework for railway safety and interoperability (the technical pillar of the Fourth Railway Package), which entered into force at the European level on 16/06/2019 (and was transposed into the national legislation with Law 4632/2019), the broadening of the scope of the RAS Regulatory Framework to include both the oversight of the maintenance systems of the Entities in Charge of Maintenance (ECM) and supervision

activities in the field of the regulation and control of the railway market (installations for the provision of railway transport services, implementation of Regulation 1371/2007, etc.) make its reform essential so that it can respond to the new demands.

Moreover, the reform of the above regulatory framework and its publication in the Government Gazette by the end of 2020 are a basic obligation of RAS and is included in its Action Plan, which was agreed upon with the Agency (ERA) after the follow-up inspection of the RAS performance and decision making, which was conducted in June 2019, in accordance with Article 33, Regulation (EU) 2016/796.

The Supervision Plan for 2019 included twenty-six (26) supervision activities on IMs and RUs. Due to limited resources for inspections, the Supervision Plan was revised in September 2019 and the revised plan included twenty (20) supervision activities, eleven (11) of which were conducted.

One (1) “random inspection” was also conducted on the implementation of the practical part of a training programme for candidate train drivers seeking to obtain a European train driving license.

No complaints on the decisions made by RAS during the supervision activities were filed by the parties concerned.

7.2 Supervision results

In 2019, RAS conducted the following supervision activities per railway operator:

- OSE IM (2 supervision activities).
 - one (1) inspection of infrastructure (relating to maintenance work on the railway line).
 - one (1) process inspection on the implementation of a training programme for candidate train drivers seeking to obtain a European train driving license (theoretical part).
- TRAINOSE RU (2 supervision activities)
 - One (1) supervision meeting
 - One (1) inspection of activity (cab ride, inspection of train drivers and accompanying personnel.)
- STASY IM (3 supervisory activities)
 - One (1) audit of the Safety Management System (SMS)
 - One (1) supervision meeting
 - One (1) inspection of activity (pre-departure and cab ride)
- RAIL CARGO IM (3 supervision activities).
 - One (1) supervision meeting
 - One (1) inspection of activity (cab ride, inspection of train drivers).

- One (1) inspection of activity relating to train composition.
- EESTY ECM
- One (1) surveillance audit of the maintenance system (RSMS) of freight wagons
- IM and all RUs (1 supervision activity)
- Joint supervision meeting

The outcomes of the above activities showed nine (9) non-compliances and also six (6) areas for improvement indicated by the auditors. Non-compliances involved, among others, sectors such as train driver documentations, traffic management, adequacy of staff, the internal inspection of SMSs, etc.

Five (5) of the above non-compliances have already been closed, while the implementation of the required corrective actions for the remaining non-compliances is still underway under the monitoring of RAS.

7.3 Coordination and cooperation

There have been no discussions on supervision results with other NSAs during 2019.

7.4 Follow-up audit of the RAS performance and decision making by the European Railway Agency

As per Article 33, Regulation (EU) 2016/796, the Agency is assigned the task of monitoring the ability of NSAs to perform tasks related to the safety and interoperability of railways and the effectiveness of the monitoring of safety management systems of actors as referred to in Article 17 of Directive (EU) 2016/798.

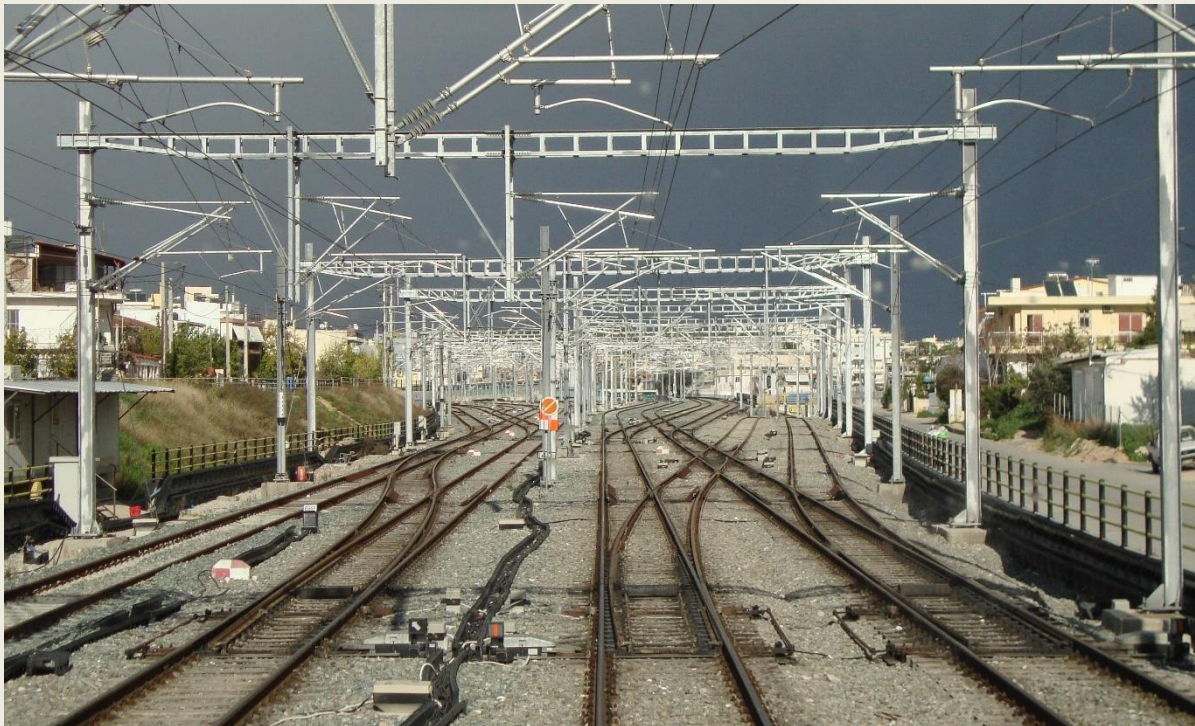
Within this framework, RAS was audited by a team of ERA inspectors, the scope of the audit being: a) the adequacy of the personnel performing supervision activities and assessing the applications for granting safety certificates and vehicle authorisations and b) the supervision of railway agencies. The audit started on 25/01/2019, the date of the first contact between RAS and the Agency and was completed on 25/11/2019. The on-site audit was carried out during 25-28 June 2019 at the offices of RAS.

On 26/07/2019, a draft audit report sent by the Agency and detailing all the findings of the audit was delivered. On 25/10/2019, RAS sent to the Agency its comments on the draft audit report and a proposed plan of action to remedy non-compliances and comments identified during the audit. At the final meeting of the audit, carried out on 25/11/2019 in Athens, RAS and the Agency agreed on the final wording of the report and on the action plan.

The audit report and the agreed upon action plan were sent to RAS on 15/01/2020. RAS has been faithfully adhering to the plan and the timetable in order to remedy all the findings of the audit.

8. 8. APPLICATION OF CSMs BY RUs and IMs

- 8.1 Application of Regulation (EU) 2018/762 on the CSM for the Safety Management System
- 8.2 Application of Regulation (EU) 402/2013 on the CSM for risk evaluation and assessment
- 8.3 Application of Regulation (EU) 1078/2012 on the CSM for the Safety Management System for Monitoring
- 8.4 Participation in and implementation of EU projects



8. APPLICATION OF CSMs BY RUs and IMs

8.1 Application of Regulation (EU) 2018/762 on the CSM for the Safety Management System

The new CSM for the Safety Management System [Commission Regulation (EU) 2018/762] has not been applied by RUs and IMs in Greece. So far, all Safety Management Systems have been evaluated and supervised by RAS based on the criteria stipulated in Regulations (EU) 1158/2010 and 1169/2010,

The application of the above regulations by the national railway sector is deemed satisfactory.

8.2 Application of Regulation (EU) 402/2013 on the CSM for risk evaluation and assessment

The new CSM for risk evaluation and assessment has not been applied in Greece yet. The national legislation clearly requires that its application by applicants be examined in cases of applications for placing structural subsystems into service.

In 2018, RAS asked an interested RU to examine the application of Regulation (EU) 402/2013 in the context of the expansion of its operation in new sections of the railway network, as per in Article 10(5) of Directive 2004/49/EC. There is no further information available concerning this request, since the above expansion had not been implemented by 2019.

In 2019, on the occasion of the merger by acquisition of EESSTY ECM by TRAINOSE RU, RAS requested that it be examined if, based on Regulation (EU) 402/2013, the change in question, being of an organisational nature, had any implications for the operation or maintenance processes.

The application of the CSM for risk evaluation and assessment will constitute RAS's scope of supervision for its next supervision plan.

8.3 Application of Regulation (EU) 1078/2012 on the CSM for the Safety Management System for Monitoring

Most of railway organisations in Greece have tried to apply the CSM for Monitoring without, however, substantial results. It is considered necessary for the organizations to distinguish monitoring from other similar activities, such as internal audit or management review.

The application of the CSM for risk evaluation and assessment will constitute RAS's scope of supervision for its next supervision plan.

8.4 Participation in and implementation of EU projects

RAS wishing to contribute actively to the dissemination of a safety culture introduced by Directive (EU) 798/2016 (Articles 9 & 29) successfully organised a seminar entitled: "Raising awareness of safety issues" on 4 April 2019 in Athens, The event was held under the auspices of Ministry of Infrastructure and Transport, with the participation of the European Railway Agency (ERA) and the support of the Ministry of Digital Policy, Telecommunications and Media.

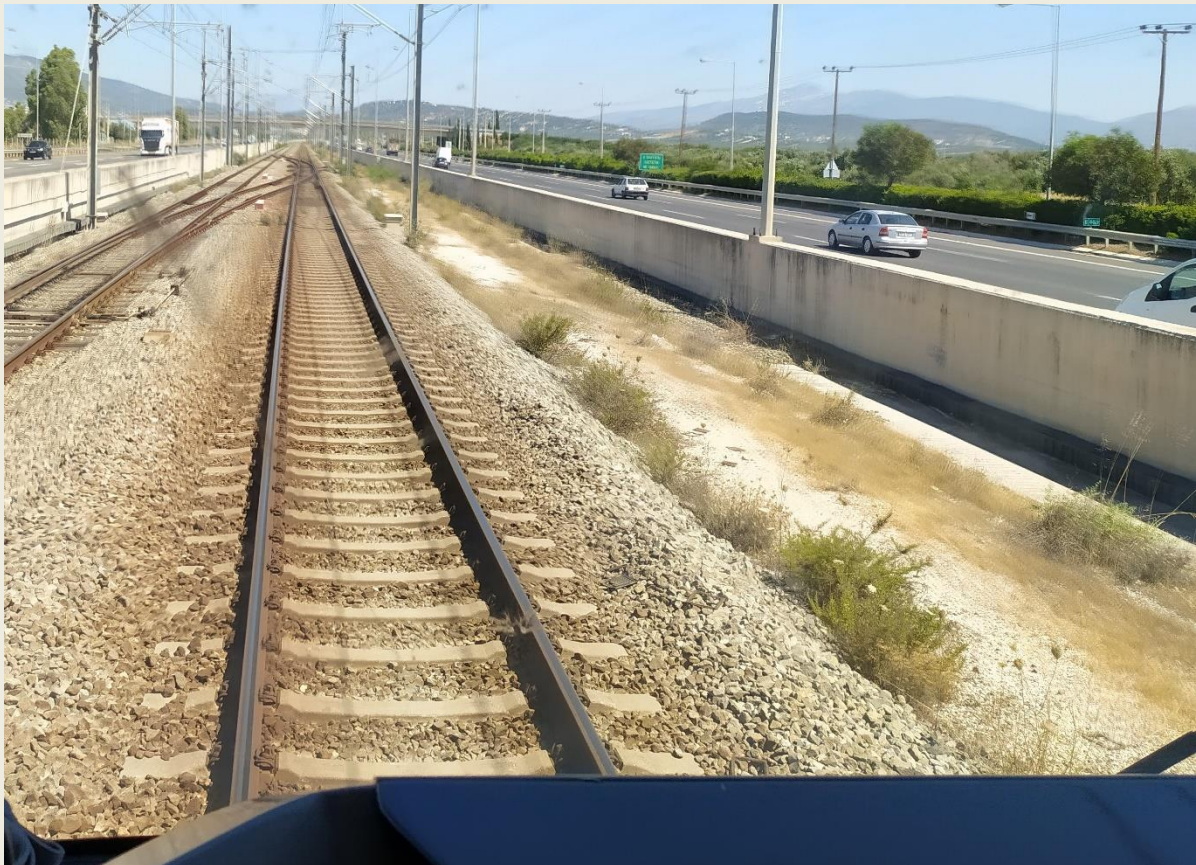
The purpose of the seminar was to present methods and tools that will on the one hand contribute to the evaluation of the existing safety culture and on the other to the development of strategic choices to foster its constant improvement. In the event, the representative of the ERA spoke of the basic principles of the promotion of the safety culture, the significance of its promotion in railways, and of ways to improve the practices applied to this day. The representatives of the Ministry, of RAS and Railway Undertakings spoke of the actions they promote and of the initiatives aiming in raising public awareness of safety issues in the Greek railways.

9. SAFETY CULTURE

9.1 Evaluation and Monitoring

9.2 Initiatives / Projects

9.3 Initiatives, Projects and Communication



9. SAFETY CULTURE

9.1 Evaluation and Monitoring

RAS, even though it has not yet started the evaluation and monitoring process of the safety culture in the Greek railway market, in 2019 it started in cooperation with the ERA the effort to inform railway organisations and the signing on their part the text of the ERA's European Railway Safety Culture Declaration. You can read more below.

Additionally, in 2019 RAS requested the Agency for its cooperation in organising a training programme in Athens to train employees of RAS and of railways operators in the Greek market on the evaluation and monitoring of the safety culture of railway operators. The implementation of the training had initially been scheduled for November 2019 but was eventually postponed for 2020.

9.2 Initiatives / Projects

The Fourth Railway Package, and in particular the Directive on railway safety, [Directive (EU) 2016/798] requires that Member-States promote a culture of mutual trust, good faith and learning. Through the Safety Management Systems implemented, railway undertakings and infrastructure managers are called to promote the above culture with staff being encouraged to contribute to the development of safety.

RAS wishing to actively promote the dissemination of the safety culture organised a seminar entitled “Raising awareness of safety issues” in Athens, on 4 April 2019. The event was held under the auspices of Ministry of Infrastructure and Transport, with the participation of the European Railway Agency (ERA) and the support of the Ministry of Digital Policy, Telecommunications and Media.

The purpose of the seminar was to present methods and tools that will on the one hand contribute to the evaluation of the existing safety culture and on the other to the development of strategic choices to foster its constant improvement. In the event, the representative of the ERA spoke on the basic principles for the promotion of the safety culture, the significance of its promotion in railways, and on ways to improve current practices. The representatives of the Ministry, of RAS and of Railway Undertakings presented the actions they promote and the initiatives aiming to raise public awareness of safety issues in the Greek railways.

At the closing, the text of the ERA's European Railway Safety Culture Declaration was read and then consigned by railway stakeholders. This way, they confirmed their agreement to promote relations of mutual trust, good faith and learning, in the context of which the people of Railway Undertakings and of the Infrastructure Manager will contribute to the development of Safety.

9.3 Initiatives, Projects and Communication

In 2019, RAS wishing to get closer to the Greek society on issues of safety in the railway sector, undertook the following initiatives and actions:

- RAS, in collaboration with OSE, continued executing the information program on the prevention of accidents on the railway network entitled: "Safe student co-existence with the railway network". The programme is addressed to students of primary schools and secondary schools located near the railway network. In 2019, the programme was presented to approximately 60 schools and 19,000 students in areas of the prefectures of Athens, Larissa, Achaia, Pieria, and Pella. The programme was presented in the 21th European Level Crossing Forum at the headquarters of the International Union of Railways (UIC) in Paris, on 26/3/2019. Moreover, articles on the programme have been published in Greek newspapers and websites (Kathimerini, ypodomos.com) and in international railway magazines, such as the Global Railway Review on 4/12/2019. You can read about the programme on the RAS website (<https://ras-el.gr/enhmerwsou/>).
- For the second consecutive year, RAS, in cooperation with the "Panos Mylonas" Road Safety Institute participated in the events of the "International Level Crossing Awareness Day (ILCAD 2020)", which was held on 11 June 2019 and is organised by the International Union of Railways (UIC). RAS and the Panos Mylonas Institute issued a joint press release and produced a poster. Moreover, at a teleconference organised by the International Union of Railways (UIC), they presented the actions and initiatives concerning safety at level crossings that they have undertaken.

THEME CHAPTER

Not applied.



ANNEX: PROGRESS WITH INTEROPERABILITY



ANNEX I: Progress with interoperability

Lines excluded from the scope of IOP/SAF Directive (end of

1. year)

1a	Length of lines excluded from the scope of application of the IOP Directive [km]	196.6
1b.	Length of lines excluded from the scope of application of the SAF Directive [km]	0

Please provide the list of lines excluded:

Length of new lines authorized by NSA (during the reporting

2. year)

2a	Total length of lines [km]	0
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3. PRM adapted stations (end of year)

3a	PRM TSI compliant railway stations	0
3b.	PRM TSI compliant railway stations - partial TSI compliance	2
3c.	Accessible railway stations	40
3d.	Other stations	208

4. Train driver licenses (end of year)

4a	Total number of valid European licenses issued in accordance with the TDD	195
4b.	Number of newly issued European licenses (first issuance)	195

5. Number of vehicles authorized under the interoperability Directive (EU) 2008/57 (during the reporting year)

5a	First authorization – total	0
5aa	Wagon	
5ab	Locomotives	
5ac	Hauled passenger vehicles	
5ad	Fixed or pre-defined formation	
5ae	Special vehicles	
5b	Additional authorization - total	0
5ba	Wagon	
5bb	Locomotives	
5bc	Hauled passenger vehicles	
5bd	Fixed or pre-defined formation	

5be	Special vehicles	
5c	Type authorization – total	0
5ca	Wagon	
5cb	Locomotives	
5cc	Hauled passenger vehicles	
5cd	Fixed or pre-defined formation	
5ce	Special vehicles	
5d	Authorizations granted after upgrade or renewal - total	0
5da	Wagon	
5db	Locomotives	
5dc	Hauled passenger vehicles	
5de	Fixed or pre-defined formation	
5df	Special vehicles	

6. ERTMS adapted stations (end of year)

6a	Tractive vehicles including trainsets equipped with ERTMS	0
6b	Tractive vehicles including trainsets – no ERTMS	

Number of NSA staff (full time equivalent employees) by the

7. end of year

7a	FTE staff involved in safety certification	
7b	FTE staff involved in vehicle authorization	
7c	FTE staff involved in supervision	
7d	FTE staff involved in other railway-related tasks	

Appendix to Annex I: Definitions – Progress with interoperability

Applicable definitions are those contained in the relevant articles of the legal documents.

In addition, the following definitions apply:

1. Lines excluded from the scope of IOP/SAF Directive (end of year)

Railway lines excluded by the Member States from the scope of the application of RSD/IOD: DIRECTIVE (EU) 2015/797, Art. 4 a-d; DIRECTIVE (EU) 2015/798, Art. 3 a-d, as of 31.12.20xx (reporting year).

2. Length of new lines authorized by NSA (during the reporting year)

Length of lines constituting the Union rail system authorized for placing in service in accordance with Article 18(2) of Directive (EU) 2015/797 during the reporting year.

3. PRM adapted stations (end of year)

Railway stations as of 31.12.2019 (reporting year), that complies with the requirements of the Commission Regulation (EU) No 1300/2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility (PRM TSI).

Full TSI compliance means full conformity with PRM TSI requirements, as demonstrated with the NoBo certificate. Partial TSI compliance means conformity with some (but not all) PRM TSI requirements, as demonstrated with the NoBo certificate. Accessible station means a station considered accessible under national legislation. (No NoBo certificate available.).

Railway station means a location on a railway system where a passenger train service can start, stop or end.

4. Train driver licenses (end of year)

Newly issued and valid driver licenses as of 31.12.2019 (reporting year), issued in accordance with the Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the EU railway system.

5. Number of vehicles authorized under the interoperability Directive (EU) 2008/57 (during the reporting year)

Regulatory Authority for Railways, 33 Stadiou str. | 105 57 Athens | info@ras-el.gr

Printed copies are “not controlled.”

The number of issued, renewed and amended vehicle authorizations for placing on the market in accordance with Article 21(8) of Directive (EU) 2015/797 during the reporting year.

5. ERTMS adapted stations (end of year)

Number of operated tractive vehicles (owned, leased, and rented minus rented-out) equipped with ETCS.

Vehicles without power units are excluded. Multiple units to be counted once. Includes only vehicles which are operated to transport freight or passengers. Yellow fleet and other IM vehicles are not included. Includes only vehicles which are registered in the country of main business activities of RUs.

7. Number of NSA staff (full time equivalent employees) by the end of year

Total number of full time equivalent NSA employees as of 31.12.2019 (reporting year).

Only staff dealing with railways is to be included

ANNEX II: ACRONYMS AND DEFINITIONS

Acronym	Meaning
GKK	General Traffic Regulation
DDEA	National Passport and Secure Document Centre
IM	Infrastructure Manager
NSA	National Safety Authority
EU	European Union or European Commission
EESSTY	Hellenic Company for Rolling Stock Maintenance
EMAM	National Register of Train Driver Licences
CSI	Common Safety Indicators
KEE	Central Examination Committee
KEK	Vocational Training Centre
CSM	Common Safety Methods
JMD	Joint Ministerial Decision
MASD	Rail Safety & Interoperability Unit
PD	Presidential Decree
RAS	Regulatory Authority for Railways
HSRL	High-Speed Railway Line
SMS	Safety Management System
RU	Railway Undertaking
TSI	Technical Specification for Interoperability
ECM	Entity in Charge of Maintenance
YYM	Ministry of Infrastructure and Transport

Acronym	Meaning
Gov. Gaz.	Government Gazette
ASBO	Assessment Body
DEBO	Designated Body
ERA	European Railway Agency
ERADIS	European Railway Agency Database for Interoperability and Safety
ERTMS	European Railway Traffic Management System
ETCS	European Train Control System
GSMR	Global System Mobile for Railways
NIB	National Investigation Body
NSA	National Safety Authority