



REPUBLIC OF ESTONIA
SAFETY INVESTIGATION BUREAU

RAILWAY SAFETY OCCURRENCES INVESTIGATED IN 2025

ANNUAL REPORT

TALLINN 2026





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Preface

The 2025 Annual Report of the Estonian Safety Investigation Bureau (ESIB) on occurrences affecting railway safety provides an overview of the accidents and incidents notified to the ESIB during the year, the safety investigations initiated and completed, and the proceedings relating to safety recommendations. In addition, the report covers safety investigations conducted over the past five years in order to provide an overview of the ESIB's activities and the occurrences investigated over a longer period.

In 2025, 12 accidents and four incidents were notified to the ESIB. Eight of the accidents occurred at level crossings and three involved persons being struck by trains.

The most significant occurrence affecting railway safety during the year took place on 27 November 2025 at the Saku-Soo passive level crossing, where a passenger train collided with a dump truck. As a result of the collision, one person was killed and, according to the ESIB's assessment, the damage caused amounted to at least 2 million euros. The occurrence was classified as a serious accident, and a safety investigation was initiated, which continued in 2026.

The public railway network in Estonia is shown in Figure 1.

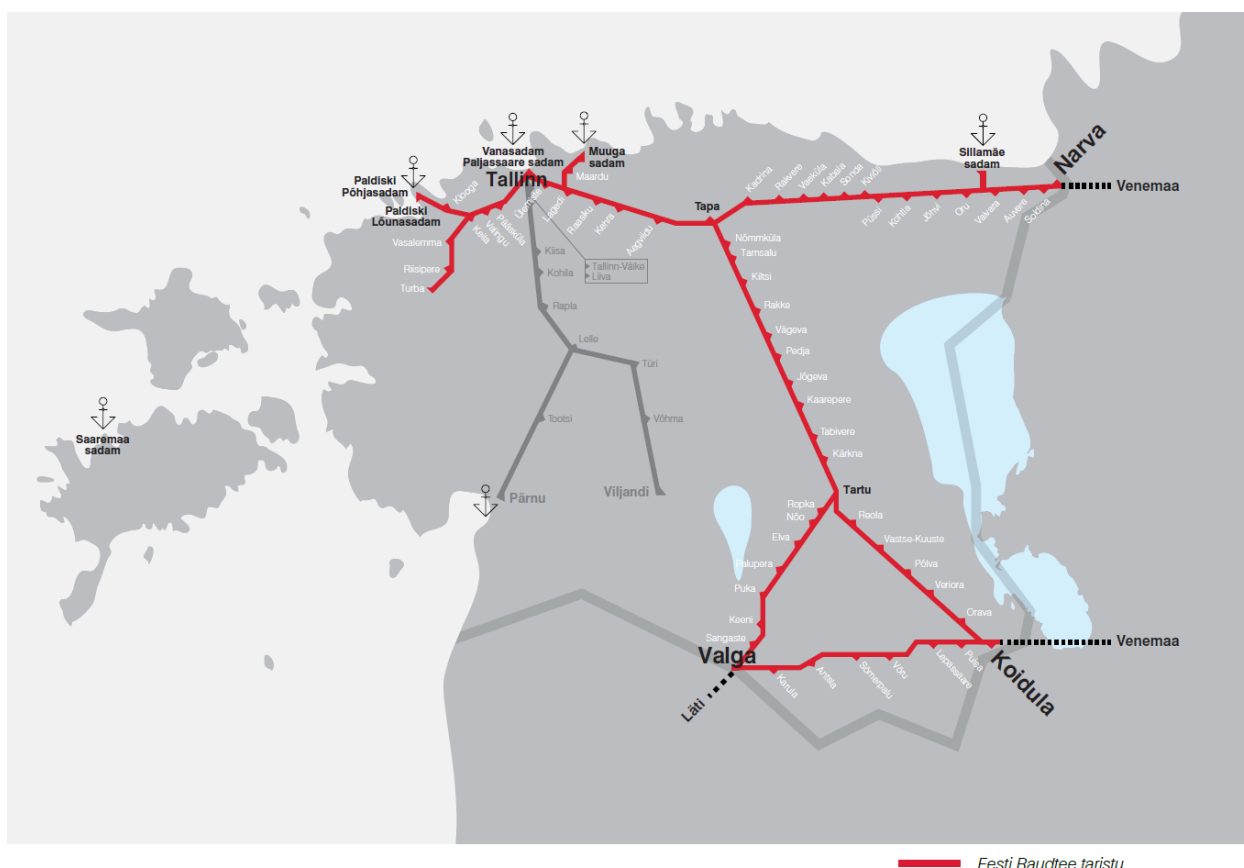


Figure 1. Public railways in the Republic of Estonia. Source: Estonian Railways Ltd

The Saku-Soo accident was the second serious railway accident during the period 2021–2025 for which the ESIB initiated a safety investigation. The previous such occurrence took place at the Ropka level crossing on 11 March 2022, and its safety investigation was completed in 2023. Due to the relatively small number of occurrences and safety investigations, the five-year data are not sufficient to identify a statistically reliable



trend, but they provide an overview of the occurrences investigated and their characteristics.

No new safety recommendations were issued during the year. During the period 2021–2025, the ESIB issued a total of five railway safety recommendations, all as a result of a safety investigation completed in 2023. Four of these recommendations have been implemented and one was rejected. Safety recommendations issued as a result of the investigation into the Saku-Soo serious accident will be addressed in the 2026 Annual Report.

The purpose of a safety investigation is to learn from occurrences and to use the knowledge gained to prevent similar occurrences and improve railway safety. The role of the ESIB is not to apportion blame or liability, but to independently establish the causes of occurrences and the circumstances that contributed to them and, where appropriate, to make safety recommendations.



1. Safety Investigation Bureau

1.1. Legal basis

The Safety Investigation Bureau (ESIB) is a structural unit of the Ministry of Economic Affairs and Communications that conducts safety investigations into maritime, aviation and railway accidents and incidents. The main legal basis for safety investigations in the railway sector is provided by Directive (EU) 2016/798 of the European Parliament and of the Council, Sections 47–55 of the Railways Act and Regulation No 72 of the Minister of Economic Affairs and Communications, “Safety Investigation Procedures”.

The Safety Investigation Bureau (ESIB) is independent in conducting safety investigations and in making decisions related to them. The purpose of a safety investigation is to establish the causes and circumstances of an occurrence and, where appropriate, to make safety recommendations in order to prevent similar occurrences. The purpose of a safety investigation is not to apportion blame or liability.

In the event of a serious accident, the ESIB shall initiate a safety investigation without delay. In the case of other accidents and incidents, the decision whether to initiate a safety investigation is made on the basis of the criteria laid down in the applicable legislation. The European Union Agency for Railways is notified when a safety investigation is initiated.

1.2. Role and aim

The Safety Investigation Bureau is one of the parties involved in the transport safety system. Its role is to independently investigate accidents and incidents and to use the safety knowledge gained from investigations to prevent similar occurrences.

The main purpose of a safety investigation is to establish the circumstances and causes of the occurrence under investigation and to determine whether the occurrence was caused by an action, omission, event, condition, or a combination thereof. The investigation does not focus solely on the immediate event, but also analyses the technical, organisational, human-factor-related and other circumstances that contributed to the occurrence and the interrelationships between them. This approach makes it possible to move beyond describing an individual occurrence and identify the factors which, if changed, may reduce the likelihood of similar occurrences recurring. The Railways Act defines the purpose of a safety investigation as determining the causes of an occurrence, making recommendations to prevent similar occurrences, and improving railway safety.

The purpose of a safety investigation is not to apportion blame or liability. The information gathered and the analysis carried out during the investigation are used primarily to identify safety-relevant causes, deficiencies and opportunities for improvement. This approach distinguishes a safety investigation from other proceedings whose purpose may be to establish legal liability or determine whether an infringement has occurred. Nor does the safety investigation report apportion blame to any person.

The role of the ESIB is therefore not limited to establishing the causes of an occurrence. Based on the findings of a safety investigation, consideration is given to what changes could be made to technical solutions, work organization, safety management, regulations or other parts of the railway system in order to reduce the likelihood of similar occurrences recurring or to mitigate their potential consequences. Where appropriate, safety recommendations are made for this purpose. The recommendations are based on the circumstances identified during the specific investigation, but their impact may extend beyond the individual occurrence investigated to the wider railway system. As described by the ESIB itself, the purpose of a safety investigation is to improve railway safety by establishing causes and circumstances and by developing preventive measures.



The role of a safety investigation is fulfilled primarily through the investigation report and the safety recommendations contained therein. The safety investigation report brings together the factual information collected about the occurrence, the analysis, conclusions, measures taken and, where appropriate, safety recommendations. The reports are made public so that the knowledge gained from the investigation can be used not only by the organisations directly involved in the occurrence, but also by other parties in the railway sector.

An important part of the ESIB's role is also to monitor the follow-up to safety recommendations. The addressees of the recommendations provide the ESIB with information on measures taken or planned in response to the recommendations, and an overview of their follow-up makes it possible to assess how the findings of safety investigations are translated into practical changes. In this way, the investigation of an occurrence, the identification of causes and contributing factors, the making of safety recommendations, and the monitoring of measures taken in response to those recommendations form an integrated process whose ultimate objective is the continuous improvement of railway safety. The Railways Act requires both the reporting of measures taken or planned in response to safety recommendations and their inclusion in the ESIB's annual report.

1.3. Organisational structure

The Safety Investigation Bureau began operating as a unified multimodal safety investigation body on 1 January 2012. The ESIB's position within the Ministry's organisational structure, as well as its functions and principles of management, are laid down in the statutes of the Ministry of Economic Affairs and Communications and the Safety Investigation Bureau.

The specific nature of the ESIB compared with the Ministry's other structural units arises from the requirement for independence in safety investigations. Although the ESIB is organisationally part of the Ministry of Economic Affairs and Communications and uses the Ministry's support services, it is independent in conducting safety investigations and in making decisions related to them. The ESIB independently decides whether to initiate and how to conduct a safety investigation, determines the scope of the investigation and the lines of investigation to be pursued, and draws its own conclusions and makes safety recommendations resulting from the investigation.

Within the railway system, the ESIB is functionally independent from the national safety authority, railway regulatory bodies and any parties whose interests could conflict with the tasks entrusted to the safety investigation body. This includes, among others, independence from infrastructure managers and railway undertakings. The purpose of this independence is to ensure that the conduct of a safety investigation, its conclusions and recommendations are not influenced by the interests of organisations involved in the occurrence under investigation or by those of other parties.

The ESIB is headed by a Director, and the organisation of safety investigations is divided among three transport sectors: aviation, maritime and railway. Safety investigations in each sector are the responsibility of the Senior Investigator for the respective sector (Figure 2). This organisational structure makes it possible to maintain specialist expertise in each mode of transport while also drawing, where necessary, on the knowledge and experience available in the ESIB's other sectors.

The Senior Investigator for Railway Accidents is responsible for organising safety investigations in the railway sector and performs the function of investigator-in-charge in individual safety investigations. The investigator-in-charge organises the conduct of the investigation, the collection and analysis of evidence, communication with the parties involved and, where necessary, the involvement of experts.



In carrying out its tasks, the ESIB cooperates with other state authorities, railway undertakings, experts, investigating bodies of other countries and international organisations. The purpose of such cooperation is to ensure access to the information and expertise required for a safety investigation; however, such cooperation does not alter the ESIB's responsibility for the conduct of the investigation or its findings. A safety investigation remains independent even where criminal, supervisory or other proceedings concerning the same occurrence are conducted in parallel.

The ESIB is located at Mäealuse 2/3, Tallinn. The Bureau has its own website and contact channels, and safety investigation reports are published on the ESIB's website.

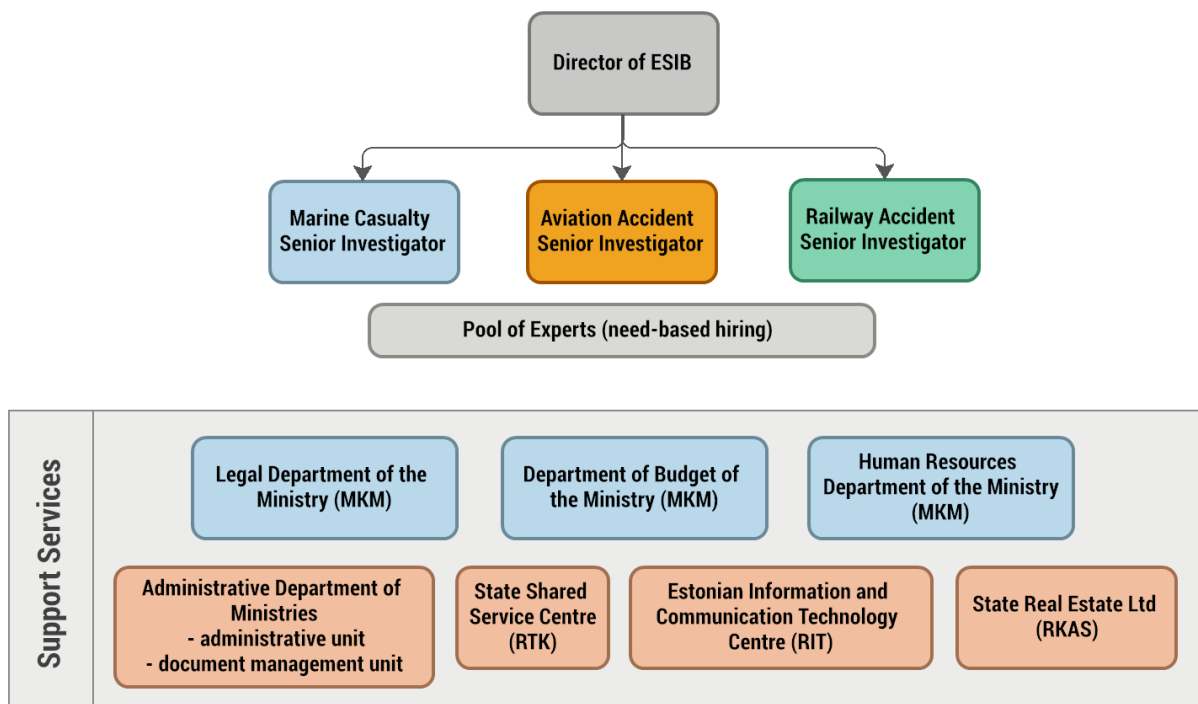


Figure 2. Organisational structure of the Safety Investigation Bureau and providers of support services



2. Safety investigation process

2.1. Cases to be investigated

The mandatory grounds for conducting safety investigations of occurrences affecting railway safety are laid down in the Railways Act of the Republic of Estonia. The classification of occurrences affecting railway safety and the terminology used are based on Directive (EU) 2016/798 of the European Parliament and of the Council on railway safety.

In the event of a serious accident, the Safety Investigation Bureau initiates a safety investigation without delay. In the case of other accidents and incidents, the decision whether to initiate a safety investigation is made on a case-by-case basis. In making this decision, account is taken of the seriousness of the occurrence and its impact on railway safety, as well as whether it may form part of a series of similar occurrences affecting the railway system as a whole. In addition to the legal criteria, a risk-based approach is applied, taking into account the potential consequences of the occurrence, its recurrence and other circumstances that may indicate a wider safety risk.

2.2. Parties involved in safety investigations

Institutions, undertakings, experts and individuals may be involved in a safety investigation in accordance with the provisions of the Railways Act and the regulation governing safety investigation procedures. The investigator-in-charge, under whose direction and responsibility the investigation is conducted, decides on the need for, extent and manner of such involvement in each safety investigation. The purpose of involving other parties is to obtain the information necessary concerning the occurrence and the related circumstances and to ensure the proper conduct of the safety investigation. Railway undertakings and third parties are required, at the request of the ESIB, to provide any relevant information in their possession.

Since 2015, a cooperation agreement has been in place between the Safety Investigation Bureau, the Police and Border Guard Board, the Office of the Prosecutor General, the Rescue Board and the Emergency Response Centre, setting out the coordinated activities of the authorities in cases of mutual interest. The cooperation covers, among other things, notification of occurrences, preservation of the accident site and evidence, and the exchange of information to the extent possible. Criminal proceedings and the safety investigation are conducted independently of each other, and cooperation must not prejudice the objectives or conduct of either proceeding.

The ESIB also cooperates with investigating bodies in other countries. In 2025, the ESIB had cooperation agreements in force with the investigating bodies of Sweden, Finland and Latvia. In the event of a cross-border occurrence, the legal framework allows the investigating body of another Member State to be involved in the safety investigation and, where necessary, enables the expertise of investigating bodies from other Member States or the European Union Agency for Railways to be used.

The investigator-in-charge is responsible for coordinating the activities of the parties involved, analysing the information collected and ensuring that the investigation is conducted in a comprehensive manner. During the safety investigation, the parties concerned are given an opportunity to express their views and, before the investigation is concluded, to review the draft report insofar as it concerns them and to submit comments on it. The parties involved do not participate in formulating the conclusions of the safety investigation or the safety recommendations.

To ensure the independence of the safety investigation, it is kept separate from criminal, supervisory, internal company and other proceedings relating to the same occurrence. The persons conducting the safety investigation do not participate in other proceedings concerning the same occurrence, and the persons



conducting other proceedings do not participate in the decision-making process of the safety investigation.

2.3. Investigation process and approach

The handling of an occurrence affecting railway safety begins when the ESIB receives the initial notification. Information may be received from the Emergency Response Centre, a railway infrastructure manager or a railway undertaking, or, where an occurrence comes to light in the course of supervisory activities, from the Consumer Protection and Technical Regulatory Authority. In the event of an accident or a serious accident, following the initial notification, the railway undertaking submits a written notification in the prescribed form to the ESIB containing more detailed information on the circumstances and consequences of the occurrence and the measures taken.

Based on the information received, the official responsible for railway accident safety investigations carries out a preliminary assessment of the occurrence and, where necessary, additional information is collected before a decision is made on whether to initiate a safety investigation. The need to attend the accident site is also assessed. The decision whether to initiate a safety investigation is made within the time limit laid down in the Railways Act, and the European Union Agency for Railways is notified of the initiation of the investigation.

The Senior Investigator for the respective sector organises the safety investigation, performs the function of investigator-in-charge, and is responsible for planning and conducting the investigation and ensuring its compliance with the applicable requirements. The investigator-in-charge organises the collection and analysis of evidence and data, communication with the parties concerned and, where necessary, the carrying out of expert examinations. For the investigation of a more complex occurrence, a safety investigation commission may be established or experts with the necessary specialist expertise may be involved. In 2025, the list of experts in the railway sector comprised seven experts.

The investigation report is prepared in accordance with the requirements laid down in Commission Implementing Regulation (EU) 2020/572.

The safety investigation is conducted as openly as possible, taking into account the restrictions on the disclosure of information arising from applicable legislation and the need to ensure the independence of the investigation. The parties concerned are given an opportunity to express their views and provide relevant information during the investigation.

The findings of the safety investigation are presented in the final report and, where appropriate, safety recommendations are made. The ESIB monitors the follow-up to the recommendations, and the addressees of the recommendations provide the ESIB with information on measures taken or planned in response to the recommendations.



3. Safety Investigations

3.1. Safety investigations completed in 2025

During 2025, the Safety Investigation Bureau received 12 notifications of accidents and four notifications of incidents. Of the accidents, eight occurred at level crossings, including one serious accident for which a safety investigation was initiated, and three involved persons being struck by trains. The report does not include suicides occurring on the railway. The numbers and classifications of occurrences in previous years are presented in Figure 3.

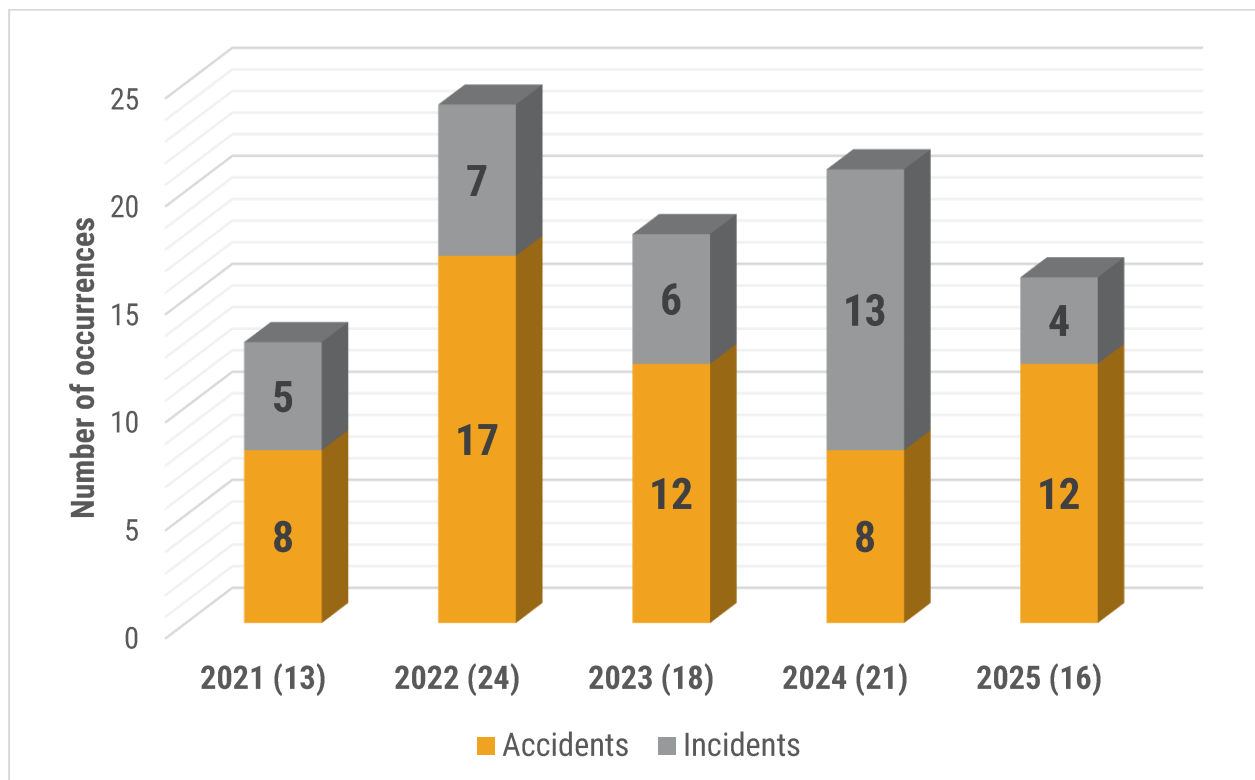


Figure 3. Number and classifications of occurrences in 2021-2025

No safety investigations remained incomplete in 2024 that would have had to be continued in 2025 (Table 1). All safety investigations conducted to date have been completed within the prescribed period of one year.

Table 1. Summary of safety investigations completed in 2025

Classification of investigated occurrences	Number of occurrences	Casualties		Estimated losses (EUR)	Trend compared with the previous year
		Fatalities	Seriously injured		
Serious accident	–	–	–	–	same
Incident	–	–	–	–	–

3.2. Safety investigations initiated in 2025

In 2025, one serious accident occurred for which a safety investigation was initiated (Table 2).

Table 2. Safety investigations initiated in 2025

Date of occurrence	Classification and location of the occurrence under investigation	Legal basis
27.11.2025	Collision between a passenger train and a dump truck at the passive Saku-Soo level crossing at km 18.796	Railway Safety Directive and Railways Act

The collision between a dump truck and a passenger train at the passive Saku-Soo level crossing (Figure 4) was classified as a serious accident, as one person was killed in the collision and, according to the assessment of the Safety Investigation Bureau, the damage caused amounted to at least 2 million euros. The safety investigation continued in 2026.



Figure 4. Collision damage to the train in the Saku-Soo serious accident. Source: Safety Investigation Bureau

3.3. Summary of safety investigations completed in 2025

No safety investigations were completed during the year under review.

3.4. Accidents and incidents investigated over the last five years (2021 – 2025)

Over the last five years, two serious accidents have occurred for which the ESIB initiated safety investigations. On 11 March 2022, an accident occurred at the Ropka automatic level crossing in southern Estonia, which the Safety Investigation Bureau classified as a serious accident. The classification was based on injuries to at least five persons, and the ESIB estimated the damage caused by the accident to exceed EUR 2 million. The safety investigation into the Ropka accident was completed in 2023.



On 27 November 2025, a serious accident occurred at the passive Saku-Soo level crossing in northern Estonia. The safety investigation continued in 2026; therefore, its final conclusions and any safety recommendations are not covered in this Annual Report.

Table 3 presents the occurrences investigated and the safety investigations completed during the period 2021–2025.

Given the relatively small number of accidents and safety investigations conducted, the five-year data are not sufficient to identify a statistically reliable trend. The data presented by year primarily provide an overview of the occurrences and the safety investigations conducted by the ESIB.

Table 3. Investigated cases by year

Title of the case		Year, number of investigations					
		2021	2022	2023	2024	2025	Total
Article 20 (1) of Directive	Train collision	–	–	–	–	–	–
	Train collisions with an obstacle	–	–	–	–	–	–
	Train derailment	–	–	–	–	–	–
	Level crossing accident	–	–	1	–	–	1
	Accident to a person involving rolling stock in motion	–	–	–	–	–	–
	Fire in rolling stock	–	–	–	–	–	–
	Accident involving dangerous goods	–	–	–	–	–	–
Article 22 (6) of Directive	Train collision	–	–	–	–	–	–
	Train collisions with an obstacle	–	–	–	–	–	–
	Train derailment	–	–	–	–	–	–
	Level crossing accident	–	–	–	–	–	–
	Accident to a person involving rolling stock in motion	–	–	–	–	–	–
	Fire in rolling stock	–	–	–	–	–	–
	Accident involving dangerous goods	–	–	–	–	–	–
Incident		–	–	–	–	–	–
Total		–	–	1	–	–	1

The numbers of persons injured and killed in railway accidents investigated over the last five years are presented in Table 4. The distribution of persons injured and killed in railway accidents investigated over the last five years is presented in Table 5.



Table 4. Total number of persons injured and killed in investigated cases

Year	Fatalities	Injured in road vehicles/ of whom seriously injured	Injured in rolling stock/ of whom seriously injured
2021	–	–	–
2022	–	–	8/2
2023	–	–	–
2024	–	–	–
2025	1	–	3/0
Total	1	–	11/2

Table 5. Breakdown of persons injured and killed in investigated cases by category

Breakdown by category		Year, number				
		2021	2022	2023	2024	2025
Fatalities	Passengers	–	–	–	–	–
	Staff	–	–	–	–	–
	Third parties	–	–	–	–	1
	Total	–	–	–	–	1
Injured	Passengers	–	8	–	–	2
	Staff	–	–	–	–	1
	Third parties	–	–	–	–	–
	Total	–	8	–	–	3



4. Safety recommendations

4.1. Overview of safety recommendations

During a safety investigation, the ESIB may issue safety recommendations aimed at preventing the recurrence of similar occurrences and improving railway safety. The recommendations are formulated on the basis of the circumstances identified and conclusions reached during the investigation and are included in the final safety investigation report.

Safety recommendations are addressed to the authority, undertaking or other organisation responsible for resolving the safety issue concerned or implementing the necessary measures. Recommendations may be addressed, among others, to the national safety authority, infrastructure managers and railway undertakings, and, where necessary, to other relevant authorities or organisations. Before the safety investigation report is finalised, the parties concerned are given an opportunity to review the draft report and submit their views. The ESIB is independent in the final formulation and issuance of safety recommendations and acts on the basis of the safety issues identified during the investigation and the need to address them.

In accordance with the provisions of the law, the addressees of safety recommendations are required to provide the ESIB with information on the follow-up to the recommendations and on measures taken or planned to implement them. Monitoring the follow-up to safety recommendations makes it possible to assess what measures have been taken as a result of the safety investigation.

During the period 2021–2025, a total of five safety recommendations were issued, all as a result of a safety investigation completed in 2023 (Table 6). Of these, four recommendations, or 80%, have been implemented, while one recommendation, or 20%, was rejected (Table 7). No new safety recommendations were issued in 2025.

Table 6. Number and classification of safety recommendations by year

Area of recommendation	Year, number of recommendations				
	2021	2022	2023	2024	2025
Maintenance and upkeep of railway infrastructure	–	–	1	–	–
Maintenance, upkeep and operation of rolling stock	–	–	–	–	–
Organisation of supervision	–	–	–	–	–
Road traffic management and traffic control devices	–	–	–	–	–
Winter road maintenance	–	–	–	–	–
Road safety awareness and training	–	–	–	–	–
Amendments to legal acts and regulating instructions	–	–	2	–	–
Operation of signalling equipment and traffic control	–	–	–	–	–
Organisation of railway communication systems	–	–	–	–	–
Use of data recording devices	–	–	–	–	–
Professional qualifications of railway personnel	–	–	1	–	–
Other organisational measures	–	–	1	–	–
Total	–	–	5	–	–



Before the safety investigation report, including its safety recommendations, is finalised, it is presented to the parties concerned. The addressee of a recommendation is given an opportunity to express its views. The Safety Investigation Bureau is independent in the final formulation and issuance of safety recommendations. In doing so, the ESIB acts on the basis of the need to address the safety issue identified.

Table 7. Implementation of safety recommendations

Total number of recommendations		Recommendation implementation status							
		Implemented		In progress		Not to be implemented		Implementation suspended	
Year	No.	No.	%	No.	%	No.	%	No.	%
2021	–	–	–	–	–	–	–	–	–
2022	–	–	–	–	–	–	–	–	–
2023	5	4	80	–	–	1	20	–	–
2024	–	–	–	–	–	–	–	–	–
2025	–	–	–	–	–	–	–	–	–
Total	5	4	80	–	–	1	20	–	–

4.2. Safety recommendations in 2025

In 2025, the Safety Investigation Bureau did not issue any safety recommendations. The safety investigation into the serious accident that occurred at the Saku-Soo level crossing on 27 November 2025 continued in 2026. The safety recommendations resulting from the investigation will be addressed in the 2026 Annual Report.

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