

Annual Railway Safety Report 2024

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1 Introduction

1.1 Purpose, scope and target group of the Annual Railway Safety Report

This Annual Railway Safety Report by the Finnish Transport and Communications Agency Traficom (hereinafter Safety Report) describes the status of railway safety in Finland in 2024. The Annual Railway Safety Report additionally describes the central issues of Traficom's permit, supervisory and regulatory activities related to railways in 2024. The Annual Railway Safety Report is Traficom's annual report on railways referred to in section 17 of the Rail Transport Act (1302/2018). Under the Rail Transport Act, Traficom must each year prepare a report on its operations and the development of railway safety in Finland in the previous year and submit the report to the European Union Agency for Railways (ERA) by the end of September. The Safety Report is also submitted to the Ministry of Transport and Communications and published on Traficom's website. The main sources of the safety information presented in this report include the safety reports of infrastructure managers and railway undertakings, railway operators' accident and incident reports, and the Safety Investigation Authority's accident investigation reports. Information on Traficom's operations has been gathered from its public officials and by reviewing documents relevant to its operations. The structure of the Annual Railway Safety Report follows the latest version of ERA's reporting guidelines issued in April 2020.

1.2 Summary of the safety situation in 2024

The volume of train transport increased slightly in 2024 compared to the previous year. In 2024, 48.6 million kilometres were travelled by train on the Finnish railways, while a year earlier this figure was 47.4 million¹. The kilometres travelled by train in goods transport no longer decreased, whereas in passenger transport the traffic volume continued to increase and has returned very close to the kilometres travelled by passengers during the years before the COVID-19 pandemic. According to VR Group Plc's statistics², record-breaking 15.3 million journeys were completed in domestic intercity services in 2024.

The level of passenger safety has remained excellent, and the number of significant accidents as defined by the EU³ on Finnish railways decreased by

¹ Source: Statistics Finland, railway statistics. Main data on train stock performance, 2005–2024.

² VR Group Plc, Rautatietoiminnan turvallisuskertomus 2024.

³ Significant accident: any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, track, other installations or environment (causing costs of at least EUR 150,000), or extensive disruptions to traffic (lasting at least six hours), excluding accidents in workshops, warehouses and depots.

almost one half from the previous year (21 accidents in 2023 vs. 11 in 2024) (Figure 1). The number of significant accidents was also clearly lower in 2024 than the average for the previous ten years (16.7). Compared to 2023, there was a particular decrease in the number of level crossing accidents and other accidents.

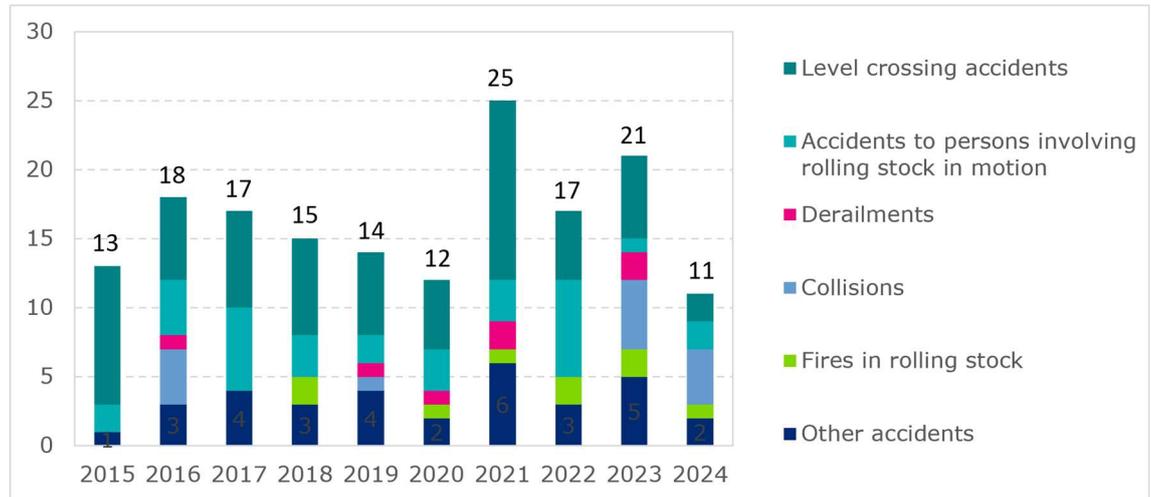


Figure 1. Number of significant railway accidents by accident type in 2015–2024.

The significant accidents that occurred in 2024 resulted in four fatalities, while one person suffered serious injuries. Two accidents to persons involving rolling stock in motion occurred in 2024, both resulting in one fatality. One of these fatalities was a track worker. One accident, which resulted in the death of a shunting foreman, was additionally placed in the ‘other accidents’ category. This accident, which was investigated by the Safety Investigation Authority, occurred at a round timber loading site⁴. The fourth person died in an accident where the train hit a car and a person leaning on it in the area outside a level crossing.

Two significant level crossing accidents took place in 2024. The first one was a collision between a railcar and a passenger car, in which a bin lorry driver sustained serious injuries. The parties to the other significant level crossing accident were a railcar and a passenger car. In this accident, both the driver of the passenger car and one railcar passenger sustained minor injuries. The accident was classified as significant because it resulted in a disruption to traffic that lasted more than six hours and caused costs in excess of EUR 150,000.

In addition to these, three other accidents occurred in which a train collided with an object or other obstacle on the railway premises. The obstacle on the track was two elk in one case, a fallen electric railway pylon with the contact line hanging loose in another, and in the third case it was a contact

⁴ Investigation report: https://www.turvallisuustutkinta.fi/material/sites/otkes/otkes/fo6mlfrur/R2024-01_Kurkimaki_Tutkintaselostus.pdf

line hanging loose as a result of vandalism. All three cases caused a disruption to traffic of more than six hours on the main line. Additionally, there was an accident placed in the 'Other accidents' category, in which the tarpaulin of a freight train got entangled with the contact line, as well as one fire in rolling stock. Both of these cases also caused a disruption to traffic lasting more than six hours.

The number of derailments and collisions during shunting was slightly lower than in the previous year. The accident resulting in the death of the shunting foreman referred to earlier in this section cast a shadow over this positive trend, however.

A large share of the fatalities on Finnish railways are caused by a person being run over by a train due to trespassing on the railway premises. These accidents cause on average 50 to 60 fatalities every year, most of them intentional. The annual number of persons run over by a train has remained at a similar level for quite a long time.

The numbers of occurrences associated with track work were mainly very similar to the figures recorded in the last few years. An increase was observed in neglecting to follow safety guidelines and track work protection errors. Track work protection errors have shown an increasing trend for several years now, as a result of which a small working group was set up to put together proposals for measures aiming to improve the safety of track work and traffic management related to it. In 2024, the unfortunate accident mentioned above occurred in track work, in which a track worker was hit by a passenger train and died of their injuries.

A lot of good work is being done to improve railway safety. Operators have gradually sharpened their focus on addressing human and organisational factors (HOFs) in their operations, and to support these efforts, Traficom has for several years also paid attention to undertakings' activities from the safety culture perspective in its oversight. Led by Traficom, Finland's first national railway safety plan that provides common guidelines for improving railway safety in the country was completed in late 2024. The goal is that the operators take into account the vision, objectives and measures of the safety plan as part of their safety development work and participate actively in the implementation and further development of the plan.

2 Traficom's safety operations and organisation

2.1 Safety strategy and plans

The objectives for Traficom's Railway Transport department (up till 30 September 2024, Rail Transport service area) for 2024 were adopted on 5 February 2024. The objectives and the measures linked to them were

followed up at the department level quarterly, or four times a year. The person responsible for each objective and the measures relating to it reports on the progress of objective achievement using traffic light indicators⁵.

The objectives for 2024 were divided into three themes: 1) The Government Programme, 2) Development and increased efficiency of operations, and 3) Objectives for basic work. See Table 1 for the sets of objectives related to the different themes. Some of the sets of objectives comprised several more detailed goals. A total of 24 individual objectives and 77 measures related to them were defined for 2024. One or more concrete measures were identified for each objective.

Table 1. Sets of objects for 2024 by theme. Some of the sets of objectives comprised several more detailed goals.

Theme	Sets of objectives
Government Programme	Promoting the Digirail project and preparing a national safety plan
Development and increased efficiency of operations	Development of information systems and the operating system as well as other improvements in operational efficiency and development. Systematic development of competence and well-being at work
Objectives for basic work	Processing permit decisions within the target time, development of oversight, conduct of supervision in accordance with the oversight plan, development of urban rail traffic regulation, international advocacy in keeping with the priorities set for influencing, and raising operators' awareness of safety and requirements.

In 2023, Traficom launched development work related to the annual safety plan referred to in the Directive on railway safety ((EU) 2016/798). This work was actively promoted in cooperation with the ministry and key operators in 2024. Finland's first national railway safety plan, which is valid for three years at a time, was completed in late 2024. The safety plan defined a safety vision and safety targets for Finnish rail transport as well as measures that will support their achievement. The goal is that the safety plan will support the achievement of the common safety targets set for Finland. Traficom can also use the safety plan to set its own operative targets in the years to come. Detail will be added to the content of the safety plan in the next few years, and the plan can be updated annually, especially regarding the measures.

⁵ Green = Progressing according to plan, objective will be achieved.
 Yellow = Progressing poorly, objective may not be achieved.
 Red = Not progressing according to plan, failure to achieve the objective is very likely.

2.2 Safety recommendations

See Figure 2 for the annual numbers and statuses of railway safety recommendations issued by the Safety Investigation Authority over the past ten years. Most (80.7%) of these recommendations have been implemented. A decision has been made not to implement a few of them, and the realisation of others is still in progress. As seen in Figure 2, the implementation of roughly one half of all rail transport safety recommendations issued in 2023 and 2024 is still under way.

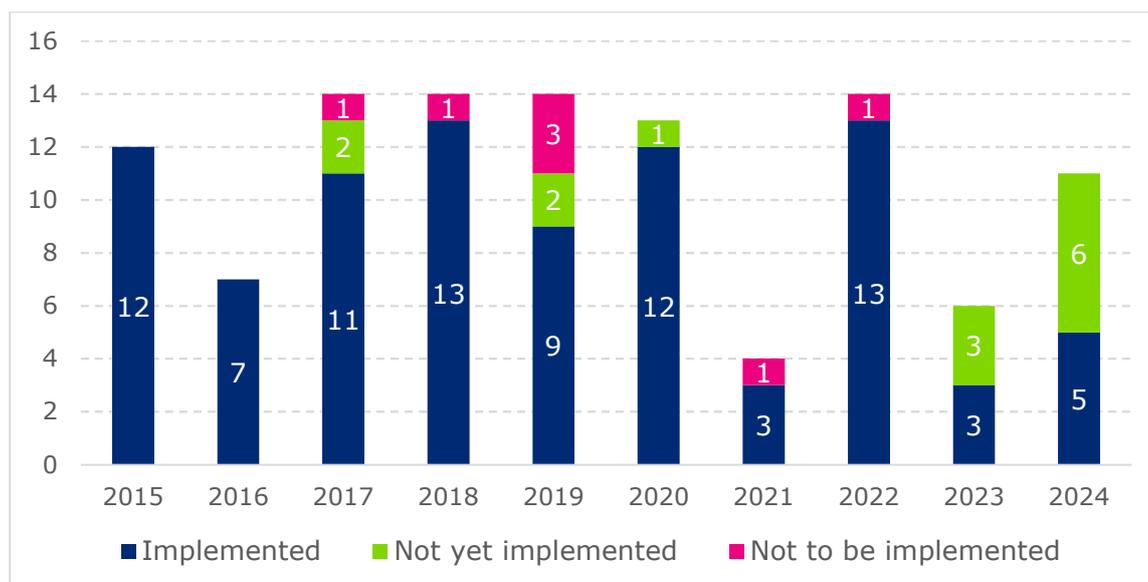


Figure 2. Annual number and status of rail transport safety recommendations issued by the Safety Investigation Authority in 2015–2024 (situation on 25 August 2025).

In 2023, the Safety Investigation Authority issued six safety recommendations, but none of them concerned rail traffic (the recommendations were concerned with urban rail transport, i.e. metro and tramway). All safety recommendations issued in 2024 concerned rail transport.

2.3 Actions taken on the basis of safety recommendations

The realisation of actions taken on the basis of safety recommendations is monitored in an annual recommendation monitoring meeting led by the Safety Investigation Authority. Participants in said meeting include all the parties to whom recommendations have been issued (e.g. railway undertakings, rescue services, police, municipalities and road infrastructure managers). In the meetings, the parties review the status of all recommendations that have not been fully implemented.

In 2024, one safety recommendation concerning the supervision and management of the overall safety of the railway system was targeted at Traficom. This recommendation urges the Finnish Transport and

Communications Agency to ensure not only the supervision of guidelines followed in transport operations but also the effectiveness of operators' self-monitoring. The Safety Investigation Authority also recommended that the Finnish Transport and Communications Agency take on an active role in managing and developing the overall safety of the railway system. In Traficom experts' view, Traficom's operations are already in line with the recommendation. Since the investigation report was completed, Traficom has drawn up a response to it, in which justifications are provided for the claim that the operations are compliant with the recommendation. Based on this response, the Safety Investigation Authority noted at a monitoring meeting held in spring 2025 that the recommendation had been implemented.

In addition, Traficom has not fully implemented a safety recommendation issued in 2020 concerning the development of an information system for safety deviations and ensuring that operators have functional deviation management processes. Traficom has been working on development related to this issue for some time, and these efforts continue. Consequently, the status of the recommendation still is 'incomplete'.

2.4 Organisation of railway operations in central government administration and the Finnish Transport and Communications Agency

In 2024, transport matters in Finland fell within the remit of the Ministry of Transport and Communications, which prepares the policies, strategies and legislation concerning the transport sector. The Finnish Transport and Communications Agency Traficom served as the national railway safety authority. The Rail Regulatory Body, which ensures well-functioning markets and the fair and non-discriminatory treatment of operators, also operated in conjunction with Traficom.

The Finnish Transport Infrastructure Agency was the infrastructure manager of the state-owned rail network and also assumed responsibility for roads and waterways. In addition to the state-owned rail network, there were approximately 150 track sections in Finland owned by industrial plants, ports and municipalities that connect to the state-owned railway network. The length of private sidings varies from spur tracks of less than a hundred metres to networks of dozens of kilometres. In practice, traffic on private sidings is always shunting. Traffic management services were provided by Traffic Management Company Fintraffic Ltd (Fintraffic), a state-owned special task company, whose subsidiary, Fintraffic Railway Ltd, is responsible for traffic management on railways. Other subsidiaries of Fintraffic specific to each mode of transport were responsible for traffic management services for shipping, road traffic and aviation.

In 2024, the largest operator on Finnish railways was VR Group Plc, which transported both passengers and goods. Other goods transport operators (other than shunting) also included North Rail Oy, Fenniarail Oy and FoxRail Logistics, and heritage train operators also carried out passenger traffic. Other operators included local shunting operators, track maintenance companies as well as operators that moved rolling stock on tracks closed to other traffic.

The Safety Investigation Authority, which operates in conjunction with the Ministry of Justice, was responsible for investigating rail accidents in Finland.

Rail transport tasks at Traficom are handled by the Railway Transport department (until 30 September 2024, Rail Transport service area). The Railway Transport department is responsible for permit, oversight, regulatory and registration tasks in rail transport, national and international exertion of influence in the rail sector, as well as stakeholder cooperation. In the organisational change that took place on 1 October 2024, the four teams that had previously operated in isolation were replaced by three units as the previously separate transport and rolling stock teams were combined into a single unit. After the reorganisation, the units managed the following tasks:

- The rail transport processes unit was particularly responsible for coordination and development tasks related to oversight and permit management (including risk management), safety monitoring and analysis, reliability and cyber security, eastbound traffic, safety culture, human and organisational factors, and the rail transport operating system and quality.
- The rail transport operation and rolling stock unit was responsible for permit, oversight and registration tasks related to rail transport operators, urban rail transport, educational institutions in the railway sector, competence demonstration examiners and drivers, as well as for permit, oversight and registration tasks related to rolling stock.
- The railway network unit was responsible for the permit and oversight tasks related to the operation of infrastructure managers.

At the end of 2024, Traficom had approximately 1,100 employees and operated in 15 cities. At the end of 2024, 33 Traficom employees worked exclusively with rail transport matters. Traficom continued to develop its competence management in 2024, and this also affected rail transport. Russia's prolonged war of aggression in Ukraine continued to have a significant impact on the transport system, and preparedness, reliability and cyber security were consequently emphasised in the department's work. Additionally, the Railway Transport department had its own

development projects in progress, relating to matters such as oversight and the management of operator information. The department also worked actively on the Digirail project.

Advocacy related to the railway system was particularly visible in working groups operating under the European Union Agency for Railways. There was a wide range of participation and influence in the work led by the European Union Agency for Railways. This was reflected in aspects such as the finalisation of the work on technical specification on the interoperability of rolling stock and preparation for the entry into force of the CSM ASLP Regulation⁶.

3 Status of railway safety

3.1 Safety of train traffic

Accidents in train traffic

The safety of train traffic remained at a good level in 2024 – no collisions between trains, or collisions between trains and other rolling stock, occurred during the year. There was one derailment in train traffic in 2024. It occurred in Tampere freight yard in January as a freight train that had started moving was derailed by a stop block left on the track.

The number of collisions due to obstacles reported in train traffic was 60 in 2024, which is very similar to the previous year's figure. In earlier years, great fluctuation has been seen in annual numbers of collisions due to obstacles, largely resulting from changes in reporting practices. Slightly more than one half of the collisions due to obstacles in 2024 included collisions with banks of snow left by a snow plough at level crossings. The next largest number of reported collisions were due to trees falling onto the track. Other obstacles that trains collided with included contact lines hanging loose and ice blocks on the track.

In addition to these cases, a few collisions with snow banks have been reported as occurrences at level crossings, and a few collisions due to obstacles were also reported in the category 'Other accident or incident'.

⁶ CSM ASLP Regulation = An EU Regulation that provides a common approach to the assessment of the safety level and safety performance achieved by railway operators. Read more: <https://www.era.europa.eu/domains/safety-management/common-safety-methods-csms/common-safety-methods-assessment-safety-level>

In addition to these, numerous collisions occurred in train traffic due to objects and items maliciously placed on the track. For the number of these cases, see section 3.6 of this report.

Six fires in rolling stock occurred in train traffic in 2024, one of which was classified as a significant accident due to the resulting traffic interruption of more than six hours. The number of fires in rolling stock was slightly lower in 2024 than in previous years. During the five years preceding 2024, an average of ten fires in rolling stock occurred per year.

Incidents in train traffic

Accidents in train traffic are rare, which means that random variations play a major role in their yearly numbers. As a result, the development of the yearly number of accidents is not the best indicator for the development of safety in the short term. Incidents occur more frequently than accidents, which means that monitoring their number and severity makes it possible to obtain a clearer picture of the safety development trends than when looking at accidents. However, it is important to note that a change in the yearly number of reported incidents may indicate not only changes in the safety situation but also in the culture of reporting occurrences.

In 2024, there were 72 incidents meeting the criteria of the EU Common Safety Indicators in Finnish railways (Figure 3). The total number of incidents is very similar to the previous year's level (76 in 2023).

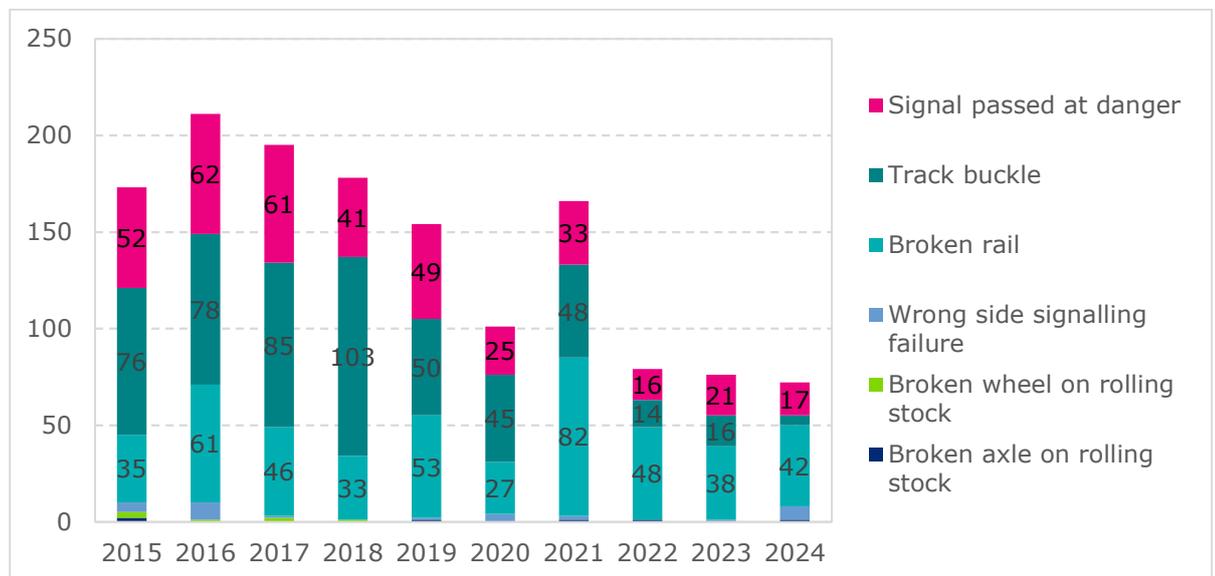


Figure 3. Number of incidents on railways by the precursor according to the EU Common Safety Indicators in 2015–2024. Numbers less than ten are not shown on the columns in the Figure.

In 2024, there were 17 cases of signal passed at danger in train traffic. Their number was slightly lower than in the year before. The number of cases of signal passed at danger in train traffic has decreased clearly in

recent years. Between 2019 and 2023, the average number of annual cases of signal passed at danger was 29, and before that (2015–2018), the corresponding figure was 54. The factors that have contributed to the reduction are not known. These incidents typically occur at low speeds, and the automatic train protection (ATP) device stops the rolling stock as soon as the signal has been passed. The risks associated with passing a signal at danger are higher when operating without ATP.

In 2024, the Finnish Transport Infrastructure Agency was notified of 42 broken rails and five track buckles. The number of broken rails was more or less at the same level as in the previous two years. For a few years now, the Finnish Transport Infrastructure Agency has systematically collected information on the causes of broken rails and the measures they require. As in previous years, the Finnish Transport Infrastructure Agency organised welding days for those who work in welding to improve the quality of welds, and maintenance also enhanced its supervision of matters related to welding. The work to develop ultrasonic inspection equipment that was started in 2022 also continued.

Five cases of track buckles were reported, which is clearly less than in previous years. All track buckles caused by hot weather reported in 2024 occurred in rails with wooden sleeper structures. Efforts to prevent buckles caused by heat have been made by improving the monitoring and control of rail temperatures. To this end, instructions for contractors and rail temperature forecasts have been developed, among other things. In this context, it should be noted that a large annual variation has been identified in the reporting of track buckles caused by heat and other track geometry errors. There may be errors in the classification of cases, and it is not certain if all cases have been reported as safety occurrences. Therefore, caution should be exercised considering the annual numbers of geometry errors and changes in the numbers.

3.2 Safety of shunting

Shunting refers to the moving and sorting of vehicles to support train traffic. More accidents and incidents usually occur in shunting work than in train traffic because, unlike in train traffic, technical safety systems play only a minor role in shunting, and the shunting staff is mainly relied on to ensure the safety of the work. Because of the low speeds involved, however, the consequences of shunting accidents are typically less serious than those occurring in train traffic. Nonetheless, extremely serious accidents may occur in shunting, too, because of the great masses of the vehicles and the potential of dangerous goods being present. One such accident happened in 2024 as a shunting foreman working at a round timber loading site lost his life when a shunting composition collided with a truck at the overpass of the loading site.

In 2024, 30 derailments and 25 collisions were reported in shunting. Five of the collisions occurred between rolling stock, while the rest were collisions due to various obstacles (such as a buffer stop or building door). In 2024, slightly fewer derailments and collisions were reported than in the year before.

In previous years, the safety of shunting has been examined based on statistics compiled by VR Group Plc, as VR handles a large part of shunting in Finland. In 2024, a decision was made to extend the examination to all operators, and the figures mentioned above consequently include all shunting incidents reported to Traficom – not only those that occurred in shunting work of VR Group Plc but also derailments and collisions during the shunting operations of others.

3.3 Safety of transport of dangerous goods

In 2024, around 2.2 million tons of dangerous goods were carried by rail in Finland. This was clearly more than in the year before, in which the volume of dangerous goods was approx. 1.75 million tonnes. When examined over a longer period, however, the volume of dangerous goods transported by rail remained at a relatively low level. As lately as the turn of the 2020s, around 5 million tonnes of dangerous goods were transported each year. The reasons for the reduced transport volumes include the COVID-19 pandemic and the start of Russia's war of aggression.

Most (86%) of the dangerous goods on Finnish railways are transported by VR Group Plc. In 2024, North Rail Oy transported dangerous goods in addition to VR Group Plc.

A total of five leaks associated with the transport of dangerous goods occurred in 2024, three on the state-owned railway network and two on a private network.

A train with a dangerous goods wagon was involved in one significant accident, in which a freight train collided with the contact line of a fallen electric railway pylon. This accident was classified as significant as it resulted in a traffic interruption of more than six hours on the main line. In addition to the significant accident, trains with dangerous goods wagons were involved in a few accidents and incidents in 2024. They did not result in leaks of dangerous substances, however.

The legislation on the transport of dangerous goods was amended in 2023. Under section 33 of the new Act on the Transport of Dangerous Goods⁷, the

⁷ Act on the Transport of Dangerous Goods (541/2023). Available in Finnish: <https://www.finlex.fi/fi/lainsaadanto/saaduskokoelma/2023/541>

infrastructure manager must, together with railway undertakings and other operators in the area, draw up an internal emergency plan for the loading and unloading sites or temporary storage areas of dangerous goods, which is approved by Traficom. In 2024, only one internal emergency plan was approved due to the small number of applications. This situation was probably influenced by the 18-month transition period after the entry into force of the Act.

3.4 Safety of work on tracks

Track work refers to work carried out on the tracks or in their vicinity that may affect the safety of train traffic. In fact, the safe coordination of track work and train traffic has been a key challenge to railway safety for a number of years.

The majority of track work in Finland is carried out on the state-owned railway network, which is managed by the Finnish Transport Infrastructure Agency. The Finnish Transport Infrastructure Agency reviews the development of safety occurrences in track maintenance by occurrence group. The starting point for the changes presented in Table 2 is the number of safety occurrences in 2017, which is used as a basis for comparison with the numbers for 2021, 2022, 2023 and 2024. Table 2 shows a positive development in the safety of track maintenance compared to 2017: the annual number of safety occurrences in track maintenance has decreased in almost all occurrence areas based on the comparison of the status in 2017 and 2024. A closer look shows, however, that this positive trend took a slight turn for the worse in 2023 (a decrease of -44% in 2023 vs. -52% in 2022), whereas the positive trend was back in 2024 (-55% in 2024). The number of occurrences increased compared to the previous year in the following categories: (i) collisions during track work or collisions due to obstacles due to track work, and (ii) errors in safety guard operations. In other occurrence groups, the number of occurrences decreased from the previous year.

Table 2. Development of the number of safety occurrences in track maintenance from 2017 to 2021, 2022, 2023 and 2024 by occurrence group (Annual Railway Safety Report 2024 of the Finnish Transport Infrastructure Agency).

Occurrence group	Change			
	2017 → 2021	2017 → 2022	2017 → 2023	2017 → 2024
Collisions during track work or collisions due to obstacles due to track work	-60%	0%	-80%	0%
Working without a track work permit and unauthorised passing of the track work area	-44%	-40%	-30%	-33%
Errors involving the track work location and the opening of the track work site to traffic, other mistakes in the actions of the person in charge of track work	-54%	-66%	-47%	-71%
Error in safety guard operation	-52%	-60%	-76%	-68%
Speed limit and automatic train protection (ATP) errors	-61%	-64%	-52%	-55%
All occurrences	-50%	-52%	-44%	-55%

In its safety report, the Finnish Transport Infrastructure Agency reviews the development of track work safety through the number of key occurrences and the success rate of work on tracks (Figure 4). The success rate is calculated by dividing the number of key occurrences by the track work permits granted⁸. The success rate in 2024 was very similar to the rates in the previous three years – although the number of safety occurrences decreased slightly from the previous year. As we can see in Figure 4, there was a positive trend in safety of track work in 2017–2021. In recent years, however, this positive trend in safety has almost stalled.

⁸ In 2024, 155,454 track work permits were issued.

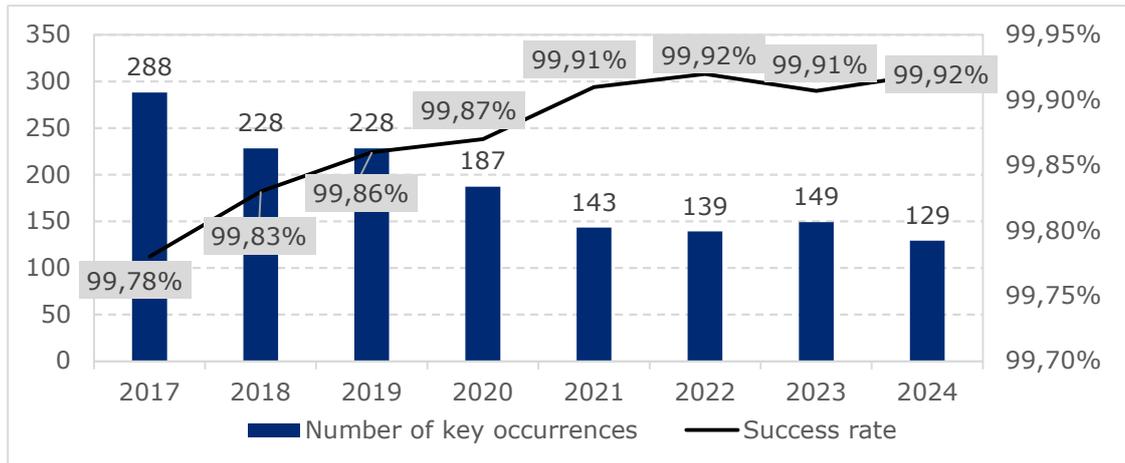


Figure 4. Developments in track work safety (number of key occurrences & success rate) in 2017–2024 (Annual Railway Safety Report 2024 of the Finnish Transport Infrastructure Agency).

The most common safety occurrences during track work include track work protection errors, neglecting to follow safety guidelines, unauthorised passing of the track work area, working without a track work permit, and errors involving the track work location and the opening of the track work site to traffic. The occurrence numbers were mainly very similar to those in previous years. An increase was observed in neglecting to follow safety guidelines and track work protection errors. Track work protection errors have shown an increasing trend for several years now, and as a result, a small working group was set up by the Finnish Transport Infrastructure Agency and Fintraffic Raide Oy in 2023 to put together proposals for measures aiming to improve the safety of track work and traffic management related to it. This group also continued its work in 2024.

The most serious track work accident occurred in Tikkurila in August as a track worker was hit by a passenger train and died of their injuries. This accident was investigated by the Safety Investigation Authority⁹.

3.5 Level crossing safety

A positive trend in level crossing safety continued. There were 11 level crossing accidents in 2024, which is the smallest annual number of these accidents in the monitoring history (Figure 5). Another positive finding in addition to this achievement was that 2024 was the first year with no fatalities in level crossing accidents. Personal injuries were not avoided altogether, however, as one person sustained serious and six persons

⁹ <https://turvallisuustutkinta.fi/fi/index/tutkintaselostukset/raideliikenneonnettomuuksien-tutkinta/tutkintaselostuksetvuosittain/2024/selvitysratatyontekijanallejaannistatikkurilassa29.8.2024.html>

minor injuries in level crossing accidents in 2024. Apart from one, the level crossing accidents occurred on the state-owned railway network.

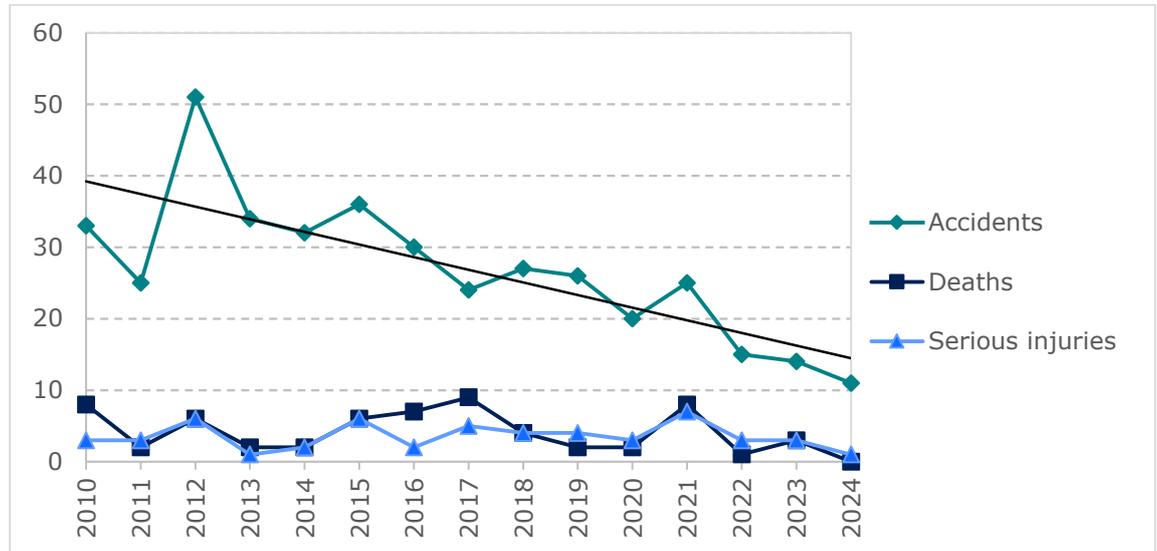


Figure 5. Numbers of level crossing accidents and resulting casualties in 2010–2024.

Level crossing accidents in 2024 mainly occurred on routes with large numbers of passive level crossings and where railcars are used. With one exception, the accidents occurred at passive level crossings, and railcars were involved in seven level crossing accidents.

In all level crossing accidents leading to personal injuries, the other party to the accident was a road vehicle (passenger car, truck or ambulance). Apart from one, all persons injured in level crossing accidents were either drivers or passengers of a road vehicle. One railcar passenger also sustained minor injuries.

In addition to the cases discussed above, two level crossing accidents not included in the statistics took place at level crossings with restricted use (including some port or factory areas). At the overpass of Kurkimäki round timber loading site, a shunting composition pushing empty timber wagons collided with the trailer of an articulated timber truck that was crossing an overpass. The shunting foreman who had been directing the shunting composition died in the accident. The case was investigated by the Safety Investigation Authority¹⁰. Another case not included in the statistics was a collision between a locomotive and a van in a factory area that resulted in minor material damage.

The railway infrastructure manager, i.e. the Finnish Transport Infrastructure Agency, plays a key role in improving the safety of level

¹⁰ Investigation report: https://turvallisuustutkinta.fi/material/sites/otkes/otkes/fo6mlfrur/R2024-01_Kurkimaki_Tutkintaselostus.pdf

crossings. Efforts to improve level crossing safety have in recent years focused on the programme for removing and improving level crossings launched in 2018. This programme is led by the Finnish Transport Infrastructure Agency, and Traficom's role is to approve rail plans for the removal of level crossings. In addition to the level crossing programme, safety at level crossings has been improved in connection with other projects and through track maintenance measures. According to the Finnish Transport Infrastructure Agency, 81 level crossings were removed, the safety of 19 level crossings was improved, and warning systems were added to four level crossings in 2024.

A register-based study on the status of level crossings commissioned by the Finnish Transport Infrastructure Agency was completed in 2024. The Finnish Transport Infrastructure Agency also published two guidelines related to level crossings as well as level crossing principles that guide the removal and improvement measures of level crossings and the Agency's work in level crossing matters.

A three-year level crossing campaign led by the Finnish Transport Infrastructure Agency was launched in June 2024 to remind road users of safe action at level crossings. The campaign strives to reach road users through a number of channels (social media, cinemas, radio, etc.) using slightly different campaign materials¹¹.

3.6 Personal injuries in railway accidents

Four people died in railway accidents in 2024 (Figure 6). This is the same number as the year before and very similar to that in the period 2018–2020. In 2017 and 2021, the number of fatalities was clearly higher than in other years, which was related to a higher number of fatalities in level crossing accidents compared to other years. All persons who lost their lives in railway accidents in 2024 were accidentally run over by a train. Two of the fatalities occurred while the persons in question were performing their work duties, one in shunting and the other in track work.

¹¹ Further information: <https://vayla.fi/-/tasoristeyskampanja-pysayttavan-huonot-vitsit-muistuttavat-vakavasta-aiheesta>



Figure 6. Number of people who died in railway accidents by type of accident in 2017–2024.

One person was seriously injured in a railway accident in 2024 (Figure 7). This person was a lorry driver who was injured when the lorry collided with a railcar at a level crossing. While the number of seriously injured persons was clearly lower than in previous years, conclusions cannot be drawn on the development of safety based on the figures for an individual year alone.

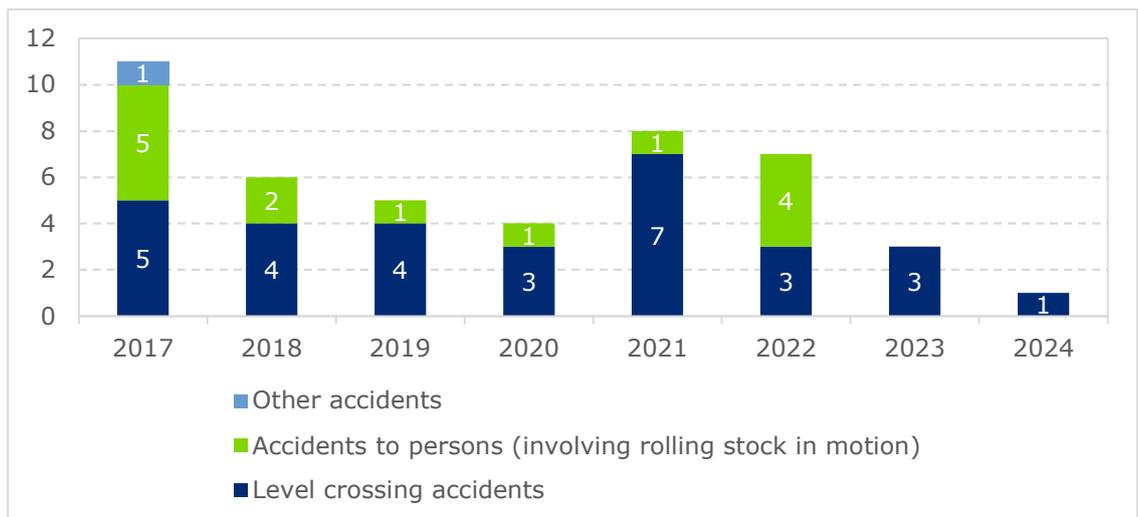


Figure 7. Number of people who sustained serious injuries in railway accidents by type of accident in 2017–2024.

Table 3 shows the safety occurrences related to trespassing on railway premises in 2020–2024 compiled by the Finnish Transport Infrastructure Agency. Almost invariably, accidents involving a person trespassing on railway premises and rolling stock in motion lead to the death of that person. Most of these are deliberate. The yearly number of persons being run over by a train has remained at a very similar level for several years, and there is no clear trend visible. In 2021, there were slightly fewer cases of a person being run over than before, but in 2022, the number returned to the previous level. The annual numbers of reports of incidents relating to persons and rolling stock in motion, trespassing on railway premises and vandalism vary greatly. It would appear that changes in the numbers of reported incidents reflect a change in the reporting rate of the cases in question rather than in the frequency of the incidents themselves. In 2024,

Traficom and Finnish Transport Infrastructure Agency trainees produced a study on cases of trespassing on railway premises in 2023–2024 (including incidents involving persons and rolling stock in motion, vandalism and other types of trespass). For the purposes of this study, key railway operators were asked to actively report any incidents related to trespassing they observed in early autumn 2024. While the reporting campaign lasted a few weeks, active reporting also continued after this. This is why the numbers for 2024 are considerably higher than in previous years. In this context, it should be noted that the case numbers in 2024 give a more realistic picture of the prevalence of incidents than in previous years. The increased reporting rate nevertheless indicates that trespassing on railway premises is considerably more common than our statistics suggest.

Table 3. Safety occurrences related to trespassing on railway premises in 2020–2024 (Annual Railway Safety Report 2024 of the Finnish Transport Infrastructure Agency).

Accidents leading to personal injuries and trespass	2020	2021	2022	2023	2024
Accident involving persons and rolling stock in motion	56	38	59	59	65
Incident involving persons and rolling stock in motion	9	19	53	59	189
Trespassing on railway premises	194	254	82	75	519
Other personal injury ¹	32	10	9	1	2
Vandalism	394	251	166	161	248
Total	685	572	369	355	1023

¹ Includes all other accidents involving personal injury associated with the railway system excluding accidents involving a person being run over.

The prevention of cases of persons being run over by a train and the related cases of trespassing on railway premises as well as unauthorised crossing of the tracks is regularly discussed among the operators in various cooperation groups. In 2019, a cooperation group aiming to prevent persons being run over by a train convened by Traficom started its work; its goals include improving the exchange of information between the different actors and promoting the implementation of research and preventative measures related to the topic. In 2024, the cooperation group started working on national online training for railway operators on identifying and encountering a suicidal person in rail traffic. The plan is to make the online training available to operators in 2025.

4 Changes to legislation

The Rail Transport Act (1302/2018) was complemented in 2024, addressing the needs for more specific provisions highlighted by the Commission in the context of the review of Railway Safety Directive implementation.

In 2024, Traficom issued three regulations on rail transport in total. The regulation on operation and traffic management contains the national regulations applicable to Finnish railway system permitted by the TSI OPE, whereas the regulation on a railway undertaking's licence specifies, for example, the minimum liability insurance amounts. Traficom additionally repealed an outdated and unnecessary regulation on the energy subsystem of the railway system.

As in previous years, Traficom informed stakeholders about regulatory amendments, e.g. by organising cooperation group meetings and an information session to ensure that the drafting process would be as open and transparent as possible. Traficom also organised for the first time a safety information session at which issues concerning safety culture, self-monitoring, risk management and similar were addressed. Due to the current security situation, the focus of stakeholder discussions was on developing operational reliability and cyber security as well as topical regulatory issues. Cooperation with stakeholders was again good and necessary to further develop both operations and regulation and take the security situation into account.

5 Certificates and authorisations

5.1 Safety certificates and authorisations

Safety certificates

In 2024, the ERA issued two single safety certificates to the following railway undertakings (Traficom was involved in checking national requirements as part of the application): Railcare Group and Hector Rail (these certificates concern cross-border traffic in Tornio).

Safety authorisations

In 2024, safety authorisations were granted to four railway infrastructure managers: Finnish Transport Infrastructure Agency (renewal of authorisation), Port of Kemi (renewal of authorisation), KIP Infra Oy (new authorisation) and Raideinfra Oy (new authorisation).

5.2 Authorisations for placing in service or on the market of rolling stock

Since mid-2019, Traficom has mainly granted authorisations for placing vehicles on the market in accordance with the new Directive that are processed at the One-Stop Shop (OSS) of the European Union Agency for Railways. For vehicles governed by national regulation, authorisations for placing in service may also still be issued. However, many authorisations

based on national regulation were also granted via the OSS. No rolling stock authorisations were revoked in 2024.

In 2024, rolling stock authorisations were granted to the following four applicants:

- Plasser & Theurer, Export von Bahnbaumaschinen, Gesellschaft m.b.H: First authorisation, 1 pc
- VR Group Plc: Authorisations for placing on the market based on conformity to a type (19)
- Fenniarail Oy: First authorisation 1 + 1 authorisation for placing on the market based on conformity to a type 1 pc
- Mer Mec S.p.A.: New authorisation, 1 pc
- Siemens Mobility GmbH: New authorisation, 1 pc
- Kreate Oy: New authorisation, 1 pc

5.3 ECMs

In 2024, there were three certified Entities in Charge of Maintenance (ECM) of rolling stock in Finland. In addition, there are two ECMs operating in Finland that maintain rolling stock solely for their own operations and are not required certification based on a derogation under the ECM Regulation (779/2019/EU). In addition to the above, there are six ECMs responsible for the maintenance of heritage rolling stock that are not required to have certification based on a national derogation (Rail Transport Act, 1302/2018, section 74).

No new ECM certificates or maintenance certificates were issued in 2024. The ECM certificates and maintenance certificates of two operators were renewed in 2024. No critical deviations were reported in the re-certification processes.

In 2024, a part of the operation involved railway traffic between Finland and Russia, which took place within the framework of an agreement on a direct international rail link between the two countries. Under this agreement, the freight wagons used in traffic between the countries are inspected at the border crossing before being used on the Finnish rail network. As vehicles approved and registered in Russia do not have an ECM determined under EU regulation, three railway undertakings in Finland (VR Group Plc, Fenniarail Oy and North Rail Oy) have been granted a derogation from the ECM obligations under Article 15 of the Railway Safety Directive.

5.4 Train driving licences

In 2024, Traficom issued 57 new train driving licences and renewed 67 licences. Three duplicate licences were issued, and two licences were updated/amended. Ten licences were revoked. The reason for revocation was the failure of drivers to meet the medical requirements.

In total, 3,045 train driving licences have been issued in Finland by the end of 2024, and 2,111 licences were valid at the end of 2024.

5.5 Authorisations for placing structural subsystems in service

In 2024, Traficom granted 39 authorisations for placing fixed structural subsystems in service, which is similar to previous years' levels. Railway projects during which subsystems were upgraded or renewed to the extent that an authorisation for placing them in service was required varied in scope and complexity. They ranged from comprehensive track improvement projects to smaller-scale sites limited to individual tracks. During 2024, no authorisations for placing in service were granted to new track routes in Finland.

Authorisations for placing structural subsystems in service are processed as laid down in the Interoperability Directive (2016/797/EU), the national Rail Transport Act (1302/2018) and the Government Decree on the interoperability of the railway system (284/2019).

5.6 Information exchanges between Traficom and operators

An effort has been made to keep the threshold for information exchanges between Traficom and railway operators low. Channels for liaising with the operators include information events organised by Traficom (e.g. for railway undertakings and railway infrastructure managers), one-to-one meetings between Traficom and operators, and direct discussions between Traficom's public officials and operator representatives as well as joint events and sessions for parties involved in the sector. Among others, Traficom organised four information/discussion events aiming to advance safety management system competence in 2024 (for more information on these events, see Chapter 7.1). Traficom holds regular one-to-one cooperation meetings and engages in safety dialogues with the largest operators to discuss topical issues and other themes the operators wish to address. Similar events may also be organised with smaller operators upon request. There is also a great deal of less formal cooperation whenever necessary and, for example, in connection with supervision. The contacts with VR Group Plc and the Finnish Transport Infrastructure Agency are particularly regular.

Traficom coordinates cooperation groups on various topics for discussing topical issues and sharing information about them. These include the network for human and organisational factors in rail transport, the cooperation group on risk management in rail transport, the rail transport safety and analysis group, the group on preventing accidents to persons involving rolling stock in motion, the cooperation group for matters related to rolling stock and the cooperation group concerning matters related to operation and competences. In addition to the cooperation groups, there were also discussions with stakeholders with practical questions concerning safety authorisations, safety certificates and other licences.

6 Monitoring

6.1 Strategy, plan and decision-making

The three-year rail transport oversight strategy is the top-level document guiding the oversight of rail transport; it describes and guides the planning and implementation of Traficom's rail transport oversight and describes the key principles affecting it. The oversight strategy specifies e.g. the objectives of the oversight, its principles, oversight arrangements, focus areas and methods of oversight as well as the execution of oversight. The oversight implemented in 2024 was guided by the rail transport oversight strategy drawn up for 2022–2024; its key objective was that the rail transport oversight implemented by Traficom promotes safe and responsible operation in the Finnish rail transport system.

Based on the oversight strategy for 2022–2024, an oversight plan was drawn up for 2024 to follow up on the progress of oversight work. The oversight plan included focus areas that guided the practical oversight work. The oversight plan additionally specified the annual oversight measures and other measures complementing the oversight and described how the realisation of the oversight plan is assessed and monitored.

In the plan for 2024, as the targets for the year were set that:

- 75 audits or inspections (including all operator groups) would be conducted;
- methods to supplement the oversight would be used 19 times (safety dialogues, observation of safety culture and surveys)

The starting point of the rail transport oversight carried out by Traficom is verifying the functioning of safety management systems. When planning and developing rail transport oversight, needs that have emerged in discussions with the national safety authorities of other EU Member States, among other things, will be taken into account.

As in the year before, the focus areas of rail transport oversight in 2024 were: 1) reliability (including cyber security), 2) key safety risks in rail traffic, 3) safety culture and 4) availability of the railway network and rolling stock. The focus areas were taken into account on an operator-specific basis when planning the oversight measures.

Traficom's key oversight measures are audits and inspections. During the audit, Traficom strives to arrive at a shared view with the audited organisation of the audit observations and possible deviations.

Methods supplementing the oversight include safety dialogues, assessment of the characteristics of safety culture, safety discussions, monitoring of the operator's service provider and surveys. The primary focus of oversight is on auditing railway undertakings' and infrastructure managers' safety management systems and inspecting their operations. In addition, Traficom also monitors the operation of ECMs, the educational institutions in the field as well as the operation of railway doctors and psychologists.

The realisation of the rail transport oversight plan is monitored quarterly by Traficom. This includes assessing if any additional measures are needed to implement the plan.

In addition to the oversight by Traficom, the operators are required to carry out self-monitoring; its application is described in more detail in section 7.3 of this safety report.

6.2 Oversight results

In 2024, Traficom audited the safety management systems of six railway infrastructure managers and conducted ten inspections of infrastructure managers of private sidings based on national legislation. The one-to-one interaction during audits is generally experienced as useful, and it creates good preconditions for developing the operations. Key factors leading to deviations identified in the audits included shortcomings in self-monitoring, internal audits and management reviews (no reviews were conducted, or their meaning had been misunderstood). Regarding private sidings, planning and implementation of self-monitoring were identified as a particular challenge. The repair backlog of the railway network did not come up as much last year as in previous years.

Traficom conducted safety management system audits on six railway undertakings in 2024. During the audits, the safety situation was mainly discussed openly, and the operators brought up the safety challenges encountered by them. In the case of railway undertakings, deviations included the conduct of internal audits (small operators, in particular, have found organising independent and objective internal audits a challenge), completion of demonstrations for additional certificates associated with

verifying competence, rolling stock management (including maintenance and keeping the rolling stock register up to date), risk management and self-monitoring.

Rolling stock experts and the results of the rolling stock inspections were used in some of the audits. In 2024, rolling stock supervision had a particular focus on GOST rolling stock (7 sites). Shortcomings were found in such areas as the use and loading of wagons. Other rolling stock supervision mainly comprised commissioning inspections of new rolling stock and a few individual inspections (such as inspections of wheel profiles).

Three audits of certified entities in charge of maintenance (ECM) were conducted in 2024. One deviation related to the outsourcing of maintenance work and definition of responsibilities was reported as part of the oversight.

Fifteen inspections of transport of dangerous goods were carried out in 2024, 12 of which targeted the state-owned railway network and three private sidings. One of these inspections was conducted jointly with TUKES. The inspections focused on documentation related to the transport of dangerous goods, temporary storage areas and, in particular, the usability of rescue routes, access to fire-fighting water, and first extinguishing and other fire-fighting equipment at these sites. Based on the inspection visits, the situation of key issues affecting safety was relatively good. Challenges in temporary storage (unauthorised storage or failing to meet the conditions for temporary storage) and the usability of rescue routes were identified as common development areas. Operators should also remember that it would be advisable to appoint a substitute for the railway safety adviser.

In 2024, seven reliability audits were carried out. The audits were regarded as necessary, and they were felt to increase the operators' understanding of the importance of addressing operational reliability. The operators' levels of preparedness varied greatly and, for example, seeing rail transport system reliability and preparedness as a whole from the perspective of the operators' own activities was identified as a challenge. The content of the regulation on preparedness planning¹² has also not been understood properly, which is why a separate guideline was issued on drawing up preparedness plans for rail transport¹³. While operators have participated in exercises led by the rescue department, few of them independently organise drills for emergency situations. Efforts have consequently been

¹² Regulation issued by the Finnish Transport and Communications Agency Traficom on 15 May 2020, Organisation of preparedness planning in the transport system (TRAFICOM/308489/03.04.04.00/2019).

¹³ <https://www.traficom.fi/sites/default/files/media/regulation/Ohje%20valmiussuunnitelman%20laati-miseksi%20raideliikenteess%C3%A4.pdf>

made during the audits to highlight the content-related objectives of exercises and their importance. Audit findings indicate that operators have shortcomings in such areas as self-monitoring and risk management related to operational reliability. The levels of critical track material stocks also vary. The fact that some operators experience track maintenance as an important national preparedness issue is deemed a very positive finding.

Three cyber security audits were conducted in 2024. Traficom sees investing in cyber security as an important part of developing rail traffic safety, and supervision related to cyber security is consequently also developed continuously.

6.3 Supervisory cooperation with national railway authorities in other EU Member States

Traficom did not carry out cooperation related to oversight with the railway authorities of other EU Member States in 2024. However, Traficom participated actively in ERA-led work aimed at developing supervision by national safety authorities. In addition, Traficom discussed the development of railway operations in the Tornio-Haparanda area and the official functions related to them with the Swedish national safety authority and monitored compliance with the set requirements in railway operations in the area in question.

7 Application of Common Safety Methods

7.1 Application of the Common Safety Method for safety management systems

There is variation in the level of safety management of railway operators, because the field of railway operators in Finland is diverse and consists of operators of very different sizes. A special feature of Finland compared to other European countries is that there is one infrastructure manager that is significantly larger than the other operators in Finland, and one railway undertaking that is significantly larger than others. In addition, the Finnish Rail Transport Act allows a private siding manager to follow the notification procedure instead of applying for a safety authorisation. A private siding manager following the notification procedure is expected to have a safety control system rather than a safety management system. This approach reduces the responsibilities, obligations and tasks of smaller infrastructure managers.

The level of operators' safety management is greatly influenced by factors such as the resources available for safety work, the role of railway operations on the scale of the organisation as a whole, and general interest in investing in the safety of the railway system. While the safety

management system documentation of large operators, in particular, is mostly of a fairly high quality, the challenges associated with safety management are often very similar regardless of the operator size. These challenges include risk-based development of operations and introducing the practices described in the system at the level of practical operation.

The starting point for developing the safety management system should be identifying and managing the key safety risks of the undertaking's railway operations, rather than building a safety management system that meets the regulatory requirements. From this point of view, it would be important for the person/body responsible for developing and updating the safety management system to have access to all key safety information and a good knowledge of the undertaking's daily railway operations. This is why the procedures of the safety management system should be integrated into other systems guiding the undertaking's operations, ensuring that the undertaking's personnel are aware of the requirements and correct practices that apply to them.

Small railway operators often have relatively limited resources for safety activities and less special expertise in railway safety management than large ones. However, a low organisation structure enables closer cooperation between the management and employees and may make the flow of information and practical implementation of practices smoother in a small organisation than a large one. In large organisations, challenges may be posed by the complexity of operations and taking safety management practices from the management level to the level of practical work.

While operators have gradually sharpened their focus on human and organisational factors (HOFs) in their operations, there is still room for improvement in their systematic consideration as part of other safety management. To support these development efforts, Traficom's supervision has for some years now also paid attention to the undertaking's operations with regard to safety culture. Efforts to develop the safety culture are supported by the national network on human and organisational factors (HOFs) in rail transport in which, among other things, good practices related to this theme are exchanged (see Chapter 8 for a detailed description).

In 2024, Traficom organised four information events aimed at operators to advance their safety management system competence. Participants at these events listened to talks and had discussions on such issues as safety management, risk management, self-monitoring, human and organisational factors, reporting of safety occurrences and the use of occurrence data as well as preparedness for various incidents. Such events were organised in different parts of Finland (Kuopio, Lappeenranta, Turku and Helsinki), and they were attended by around 40 to 50 people.

7.2 Application of the Common Safety Method for risk evaluation and assessment

In 2024, Traficom established a risk management cooperation group with the aim of developing risk management in the railway sector. The cooperation group discusses issues related to risk management procedures by theme together with operators and experts in the sector. The group meets three to four times a year, and it has started working actively.

The manager of the state-owned infrastructure assessed the significance of 58 changes in 2024, and 22% of them were found significant. In addition, the significance of 37 amendments to guidelines was assessed, none of which were deemed significant. For other operators, the share of significant changes is clearly lower. No significant changes concerning private sidings were identified.

In addition, the Common Safety Method for risk assessment was applied to changes related to rolling stock. Two changes to rolling stock that have a bearing on rolling stock authorisations were assessed as significant.

The operators have their own procedures for assessing the significance of a change. The infrastructure manager of the state-owned railway network and the largest railway undertaking have information systems for this purpose, and the assessments are produced directly in these systems. Smaller operators often have Excel-based procedures for assessing the significance of a change.

In oversight and discussions with operators, it has emerged that identifying the need to assess the significance of a change is challenging at times. It has also been recognised that when organisational changes or new functions are introduced, the need to assess the significance of the change is not always identified. Especially for small actors, the threshold for assessing a change as significant is very high – the reasons for this may include cost impacts and lack of competence.

Heavy reliance on the Common Safety Method has also come up in oversight. The operator may completely fail to recognise the need for risk management if the change is not significant. In addition, determining what is sufficient expertise for assessing a change (substance and methodological competence) and its risks has been found challenging.

Two assessment bodies in Finland conduct practically all assessments of compliance with the CSM Regulation (safety assessment report of an independent assessment body). However, foreign actors have also entered this market.

7.3 Application of the Common Safety Method for self-monitoring

Guidelines for operators on preparing safety reports (TRAFICOM/89239/03.04.02.01/2019) published by Traficom describe what operators should include in the report in terms of self-monitoring actions. As in previous years, the level of detail and scope of the reporting varies considerably between different operators (railway infrastructure managers and railway undertakings). While some operators report on their self-monitoring measures, the reports do not always indicate what the results of the monitoring were and how they were used to improve operations and safety. This is a clear development area for some operators.

Traficom's evaluation and monitoring results also indicate that the quality of self-monitoring varies between operators. Operators that have the resources to invest in the work on safety can carry out regular self-monitoring during the year. Smaller organisations with fewer resources often use external experts to carry out self-monitoring. In these cases, self-monitoring and its reporting are typically carried out once per year. This is not in line with the objective and the Regulation EU 1078/2012 on self-monitoring, according to which the monitoring should serve as a tool for improving safety and also support continuous improvement.

Traficom organised several information events in 2024, including four regional tours on self-monitoring. Following the PDCA model (*Plan-Do-Check-Act*) in the self-monitoring process was stressed at these events. Linking self-monitoring targets to the most significant risks associated with the operations and the importance of follow-up of their management measures were also emphasised.

In the view of Traficom, there is still room for development among the field of operators regarding whether self-monitoring is used proactively to develop safety and operations, or whether it is considered merely one requirement among others. Traficom will continue to support operators and promote the development of self-monitoring through evaluations, oversight and joint events.

7.4 Participation in EU-wide activities

Traficom did not participate in any EU projects during 2024.

8 Safety culture

8.1 Evaluation and monitoring of safety culture

In 2024, the safety culture of five companies was observed. All safety culture observations were made in connection with audits, and no

evaluations of safety culture were conducted separately in 2024 due to resource-related reasons. The observations made in connection with audits involved safety culture experts making observations during the audit, using a form that summarises the essential core of the ERA safety culture model in ten open-ended questions. The auditors are also interviewed using the same form after the audit. Two safety culture experts always participate in the observations.

Based on experiences in 2024, it was concluded that the observations should be supplemented with interviews as necessary. Two broader observations were set down in the oversight plan for 2025, in which interviews with employees and management were included to gain broader and more in-depth information.

Efforts will be made to further develop the reporting of observation results, with the aim of highlighting observations that the operator can use to target their development efforts. However, the observation also includes making entries on uncertain observations which may serve as signals of hidden or emerging safety culture risks. Positive observations are also reported.

8.2 Safety culture development projects

In 2024, Traficom commissioned a report from Teemu Reiman at Lilikoi Consulting and Kirsi Pajunen at Kipacon on the safety culture of operators of heritage rolling stock. A wide variety of interviewees (5) were selected for the report in order to represent the entire sector. The report provided an understanding of variations in the status of historical rolling stock operators' safety culture and proposals for measures that Traficom can use to support the development of the safety culture of operators in different areas.

In addition, Traficom commissioned five short information bulletins on safety culture, the safety culture model, and human and organisational factors for Traficom rail transport experts from Kirsi Pajunen at Kipacon. The information bulletins serve as basic induction material to safety culture and human and organisational factors (HOF).

8.3 Communication about safety culture development projects

The final report on the safety culture of heritage rolling stock operators was submitted to Traficom. The report is freely available to Traficom's rail transport experts. Among other things, the results of the report are used at stakeholder events for the operators, which will increasingly highlight themes related to the operators' safety management and safety culture.

The possibility of also offering information bulletins ordered to meet internal needs for use by the sector at large, with minor edits, is currently under consideration.

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