# Safety Report 2007

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# A.1 SCOPE OF THE REPORT

The purpose of this safety report is to describe safety on the Swedish rail system as advocated in the EU Railway Safety Directive[1] (referred to below as the Safety Directive). In Sweden, the conditions for the rail system are primarily governed by the Railway Act[2]. Trams and metros are not covered by the report.

# A.2 SUMMARY

In accordance with the EU Safety Directive, all Member States must submit to the European Railway Agency (ERA) a report concerning the safety of the national rail system. This year's safety report, which deals with operation in 2006, is the first of its kind. It mainly follows the guidelines provided for the purpose by the ERA.

The rail system is subject not only to EU legislation but also to national law, in particular the Railway Act. The Safety Directive has been incorporated into Swedish law since 1 July 2007. This means that some of the requested information is not available for 2006. For example, neither safety certificates nor safety permits as required under Articles 10 and 11 respectively of the Safety Directive were issued in 2006.

In Sweden there are many railway undertakings and infrastructure managers. In 2006 there were 90 railway undertakings and 499 infrastructure managers holding permits to conduct railway operations.

The nature of the details to be stated in the safety report is such that the Swedish Rail Agency has requested information from the operators. This has been provided in the safety report of the operators. The Swedish Rail Agency has made use of its ability to grant exemptions from submitting a safety report. As result, there has been no need for the majority of the infrastructure managers to submit a safety report. The Swedish Rail Agency has received 162 safety reports.

It is evident from the received safety reports that there are many individual and interacting measures that contribute to enhancing and maintaining the safety of the rail system. Because the doors on a passenger carriage did not close, the Swedish Rail Agency had reason, in 2006, to decide to prohibit the company in question from using the particular type of carriage while awaiting investigation and correction of the problem. Railway undertakings and infrastructure managers have also taken steps to deal with accident risks in their operations. An example of an activity where infrastructure managers and railway undertaking have cooperated in order to achieve results is a project aimed at reducing the number of SPADs (signals passed at danger).

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[1] Directive 2004/49/EC

[2] The Railway Act (2004:519)

Since 2000, the number of people killed or seriously injured has been about 40 per year, if suicides are excluded. In 2006, about 51 significant accidents[3] occured. Of these accidents, eight could be attributed to the rail system in the form of train collisions and derailments. The majority of the accidents were level crossing accidents or accidents to persons. All the individuals who lost their lives (19) fell into these two accident categories. The number of seriously injured people (16) can also largely be attributed to level crossing accidents and accidents to persons.

In 2006, the Swedish Rail Agency has carried out development work concerning safety supervision of the rail system. This work is not complete but supervision has been changed, with the effect that supervision activities are now both risk-based and event-based. The safety supervision methods are also undergoing change, with a shift towards system auditing.

The main supervision activities of the operators take the form of inspections and function checks. Some major railway undertakings and infrastructure managers carry out audits in the form of both internal and external system reviews, in respect of engaged contractors.

The Swedish Accident Investigation Board made several recommendations to the Swedish Rail Agency in 2006 based on two incidents. In the first case, the recommendations were based on an investigation of a near collision and the Accident Investigation Board was unsure if a certain type of equipment was sufficiently safe. In the second case, the recommendations were the result of a level crossing investigation where it was determined that areas of responsibility among the authorities should be clarified.

From the statement in the safety report for the year, the Swedish Rail Agency concludes that the players in the rail system are well able to handle risks in the rail system in order to avoid accidents. On the other hand it is more difficult to exert influence and conduct concrete safety-enhancing activities when accident-affected areas border on other areas such as level crossings, which are a matter for players from both rail and road.

When the Swedish Rail Agency looks ahead with an eye to safety, priority goes above all to the continuing development of safety supervision towards risk-based surveillance, meaning, in simple terms, that the correct factors are monitored.

In July 2007, the Swedish government decided to set up a joint supervision agency for the four forms of transport: road, rail, air and sea. This may mean greater scope for cooperation between the various forms of transport, with a view to reducing the number of accidents such as those at level crossings.

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[3] Significant accident = an accident in which at least one rail-borne vehicle in motion was involved and in which at least one person was killed or seriously injured, or in which damage to materiel, tracks or other installations resulted in costs of at least one hundred and fifty thousand euro. Accidents having significant consequences for the environment or which significantly delay rail traffic are also included in this category. Incidents of suicides are excluded. See definitions, Appendix F.

# B INTRODUCTION

The Safety Directive stipulates that the national safety authority of each Member State should each year, by 30 September at the latest, submit a safety report to the European Railway Agency (ERA)[4]. The purpose of this safety report is to describe the national safety level and, pursuant to the Safety Directive, it should contain information on the development of railway safety, important changes in legislation and regulations concerning railway safety, the development of safety certification and safety authorisation, as well as results of and experience relating to the safety authority's supervision operations.

The Safety Directive also stipulates that the operators, i.e. railway undertakings and infrastructure managers, should submit to the safety authority before 30 June an annual safety report[5]. In accordance with the directive, this report should contain information on how the organisation's corporate safety targets are met, reporting of information relevant to common safety indicators, results of internal safety auditing and observations on deficiencies and malfunctions of railway operations that might be relevant for the safety authority.

## B.1 ERA working party concerning national safety report

Since autumn 2006, a working party consisting of representatives from interested Member States' safety authorities (including Sweden) has met under the auspices of the ERA, with the aim of preparing guidance and templates for the national safety report. The working party completed its work in February 2007.

In Sweden, a reference group of representatives from both railway undertakings and infrastructure managers contributed in spring 2007 their suggestions for the Swedish Rail Agency's guidance, containing instructions and definitions for the safety reports of the operators. In May, the operators received this guidance with a notice to draw up the 2007 safety report.

This year's safety report follows as closely as possible the ERA templates for the design of the safety report, including a record of the common safety indicators (CSIs).

## B.2 National law

Swedish rail is subject to the Railway Act[6]. In the Railway Regulation[7] the government has authorised the Swedish Rail Agency to issue prescriptive conditions in order to regulate the area in detail. The prescriptive conditions for the Swedish Rail Agency are published in the Swedish Rail Agency's Code of Statutes (JvSFS).

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[4] Directive 2004/49/EC, Chapter IV Article 18

[5] Directive 2004/49/EC, Chapter II, Article 9

[6] The Railway Act (2004:519)

[7] Railway Regulation (2004:526)

The Safety Directive, part of the Second Railway Package, was incorporated into Swedish law on 1 July 2007. This means that all reporting for this year's safety report that describes conditions in 2006 is based on legislation which entered into force on 1 July 2004. Therefore, not all the requested information has been provided; for instance, no safety certificates pursuant to Safety Directive Article 10 or safety authorisation of infrastructure managers pursuant to Article 11 were issued. Reporting of the CSIs has mainly been based on information gathered in accordance with the definitions proposed by the ERA itself. In certain cases, national definitions have been used, as shown in Annex C.

## B.3 Operators

It is the operators that are the main players of the railway sector, acting as railway undertakings and infrastructure managers. Those wishing to pursue railway operations in Sweden must apply for an authorisation for this purpose from the Swedish Rail Agency. Authorisations are reviewed in accordance with the terms in the Railway Act and granted to railway undertakings and infrastructure managers separately. Therefore, an organisation may have one or more authorisations; an infrastructure manager may, for example, in certain cases also be authorised for rail transport services. In Swedish law, infrastructure managers and railway undertakings are defined as follows[8]:

"Railway undertaking": any undertaking that on the basis of a licence or a particular authorisation provides traction and is involved in rail transport services.

"Infrastructure manager": any undertaking that manages a railway infrastructure and operates installations belonging to this infrastructure.

An interpretation of the definitions above reveals that in 2006 Sweden had 589 operators licensed to conduct railway operations.

| **Licence holders** | **2006** |
|---|---|
| Railway undertakings | 90 |
| Infrastructure managers | 499 |
| **Total** | **589** |

*Table 1: Information on number of operators in 2006, see list in Annexes A.2.1 and A.2.2.*

The railway sector can be divided into a rail market and an infrastructure market. Railway undertakings act on the rail market, upon which transport of passengers and goods transport is conducted. The largest player on the rail market originates from the time when all railway operations were in the hands of the state. In Sweden, the preconditions for transport of passengers differ from transport of goods. The transport of passengers is still regulated, and a state owned company has the exclusive right to operate interregional transport of passengers. In certain cases, a decision is taken to open a line for competition, and traffic is put out to tender or allocated by means of a service obligation. Regional and local transport of passengers is procured by the respective service operator. The transport of goods has been

[8] The Swedish Railway Act (2004:519), Chapter 1, Section 4

opened for competition but is still dominated by the company that was formerly part of the national railway administration.

The infrastructure market is strongly dominated by the state, which means that the dominant player is the infrastructure manager of the national rail installations. The rail network in Annex A.1 shows the geographical distribution of the state owned rail network. In 2006 there were 499 infrastructure managers. Of these, only twenty or so were major players in terms of number of kilometres of rail. The other infrastructure managers typically have smaller rail installations for their own use, for instance industrial companies with their own railway track linking them to the national rail installations, for transport of their own goods.

## B.4 Exempted operators

The Swedish Rail Agency may exempt smaller operators of railway networks not managed by the state and only used by infrastructure managers for transport of their own goods from the requirement to submit safety reports.

In this year's safety report, the opportunity has been taken to grant exemptions from submitting safety reports. As a result, 427 operators are exempted from the requirement to submit a safety report and the Swedish Rail Agency received 162 safety reports.

A large group not granted exemption is the 94 municipalities and ports licensed to conduct railway operations. Of these, 82 submitted safety reports, with a shortfall of 13%. Part of this shortfall can be attributed to the operator having reported that no railway operations were conducted in 2006.

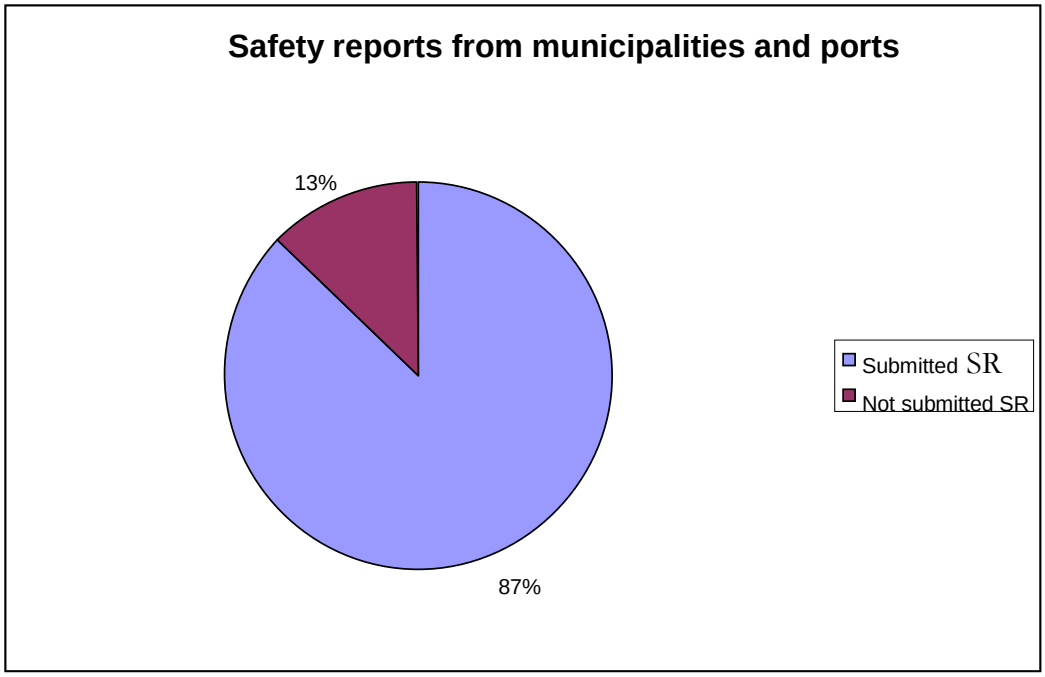



*Figure 1: Submitted and not submitted safety reports, respectively, from municipalities and ports required to submit reports.*

# C ORGANISATION

The Swedish Rail Agency is a central administrative authority established in connection with new rail legislation which entered into force on 1 July 2004. In this respect, Sweden has met the requirements of the Safety Directive which states that each Member State should have a safety authority which, independently from any infrastructure manager and railway undertaking, is charged with deciding on issuing safety certifications and safety authorisations, deciding on authorisations for placing in service of technical subsystems and components, and ensuring registration of items of rolling stock, for example. The Swedish Rail Agency also has a normative role and supervises the rail system.

The Swedish Rail Agency's mission is set out in a regulation[9] with instructions for the Swedish Rail Agency. Each year, the government specifies in its spending directive the conditions that apply to the Swedish Rail Agency's duties for the following financial year. The spending directive includes objectives for transport politics, requirements for the Swedish Rail Agency to renew its presentation of achievement to the government, and budgetary constraints.

The Swedish Rail Agency is headed by a director-general and the organisation is divided into five different units that mainly reflect the separation of the railway sector into inter alia railway undertakings and infrastructure managers. In addition to the railway undertakings unit and the infrastructure unit, which, inter alia, decide on authorisations, conduct safety supervision and review of authorisations, a technical unit handles issues concerning approval of technical subsystems, etc. The legal unit is charged with providing the Swedish Rail Agency's regulations. The analysis and administration unit has partly the character of an internal service unit bringing together everything that is not directly associated with its core mandate, such as personnel and finance administration, and IT issues. Analysis of accident data, such as production of this year's safety report, and telephone preparedness for accident reporting are other examples of areas of work that fall within the remit of the analysis and administration unit. Each unit is headed by a head of unit. The Swedish Rail Agency's annual report for 2006 shows that the Agency had 55 members of staff at the end of the year, of whom 35 were men and 20 were women. Annex B.1 contains the Swedish Rail Agency's organisational chart for 2006.

## C.1 Relationships of the Swedish Rail Agency

The Swedish Rail Agency is not a solitary authority exclusively in charge of the regulation of the whole rail system. There are several other national authorities in charge of their respective areas, such as the national Electrical Safety Board, the Board of Housing and the Rescue Services Agency. These authorities interact and exercise their official authority over the rail system players within their respective areas of responsibility. The figure below (Figure 2) demonstrates this with some of the national authorities which have an impact on the Swedish Rail Agency and the other rail system players, for example by having normative tasks in certain safety-related issues.

[9] Regulation (2004:527) with instructions for the Swedish Rail Agency

Swedac accredits companies that confirm that the technical subsystems meet the applicable TSIs.

The Rescue Services Agency has an overall and coordinating responsibility in its work to ensure a safer society. The Swedish Rail Agency cooperates with the Rescue Services Agency on, for example, supervision of the transport of dangerous goods.

The Swedish Rail Agency reports incidents to the Swedish Accident Investigation Board, which is an independent investigating body, pursuant to the Safety Directive. The Swedish Accident Investigation Board submits its recommendations to the Swedish Rail Agency which, acting as a safety authority, has to follow and take adequate measures in response to those recommendations. The Swedish Rail Agency also has to report back to the Swedish Accident Investigation Board on how their recommendations have been dealt with and the measures taken in response to them (see Section H of this report).

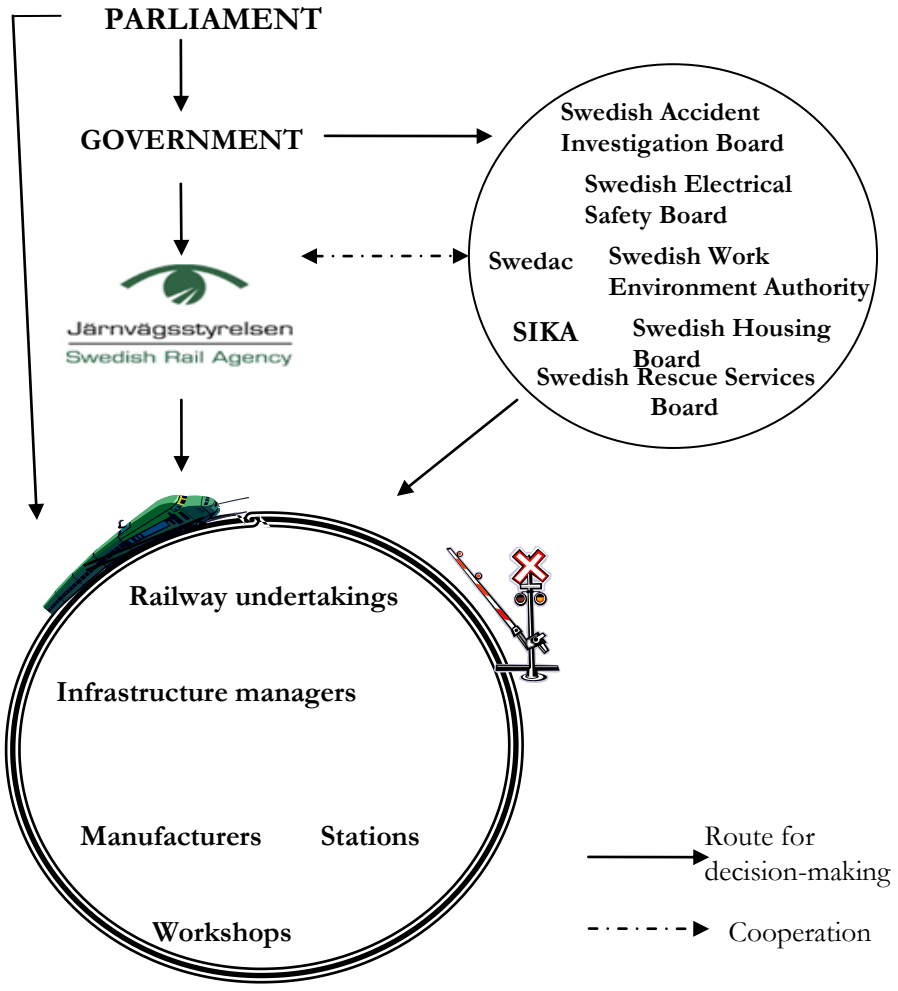



*Figure 2: National relationships of the Swedish Rail Agency (this figure replaces Annex B.2).*

The Swedish Rail Agency also cooperates with the Governmental Institute for Communication Analysis (SIKA). The Swedish Rail Agency submits statistical data to SIKA, which in turn submits accident statistics to Eurostat[10].

Continuously drawn arrows in the figure (Figure 2) represent routes for decision-making. These are therefore one-way, whereas the two-way broken line represents cooperation.

Not only railway undertakings and infrastructure managers are players in the rail system, but also manufacturers of technical systems such as vehicles, signalling, and signal-boxes. Vehicles need maintenance and repair, which is carried out by workshops sometimes also authorised as both railway undertaking and infrastructure manager. Manufacturers are not part of the Swedish Rail Agency's area of responsibility. On the other hand, the Swedish Rail Agency are responsible for authorising that subsystems may be put into service. Similarly, the operations of the workshops are not stipulated in the railway legislation, although there are rules affecting the workshops' maintenance work, e.g. the requirement that the safety management system of the infrastructure managers and railway undertakings also covers maintenance of vehicles and railway infrastructure.

# D DEVELOPMENT OF RAILWAY SAFETY

The work to maintain a high and constant safety level in rail operations involves all players in the rail system, as is described in Figure 2. The Swedish Rail Agency is for example currently following up the safety targets that the government has specified. In this, the Swedish Rail Agency is supported by, inter alia, activities in the form of safety supervision and regulations. The operators, in their turn, follow the prescribed rules and take measures when and where necessary.

Hence, the national safety level is dependent on a strong and well functioning chain, from the government via the Swedish Rail Agency all the way to the operators. The national safety level is therefore described in the form of the objectives and safety-enhancing activities that are implemented by both the Swedish Rail Agency and the operators.

## D.1 National safety

### D.1.1 Safety targets

The targets set by the Swedish government in a spending directive to the Swedish Rail Agency require the Swedish Rail Agency to contribute towards ensuring socio-economically effective and long-term sustainable transport services for the public and businesses throughout the country. In the safety targets for its spending authorisation, the government has specifically required the Swedish Rail Agency to work towards greater safety in the rail, tram and metro systems. Each year, the Swedish Rail Agency monitors the number of people killed and seriously injured on

[10] The European statistics authority

the railways. In the annual reports for 2005 and 2006, the total number of people killed and seriously injured (including suicides) per million train kilometres on the state owned railway infrastructure was compared with the number of measures taken in the form of prohibitions and injunctions relative to the number of audits accomplished[11].

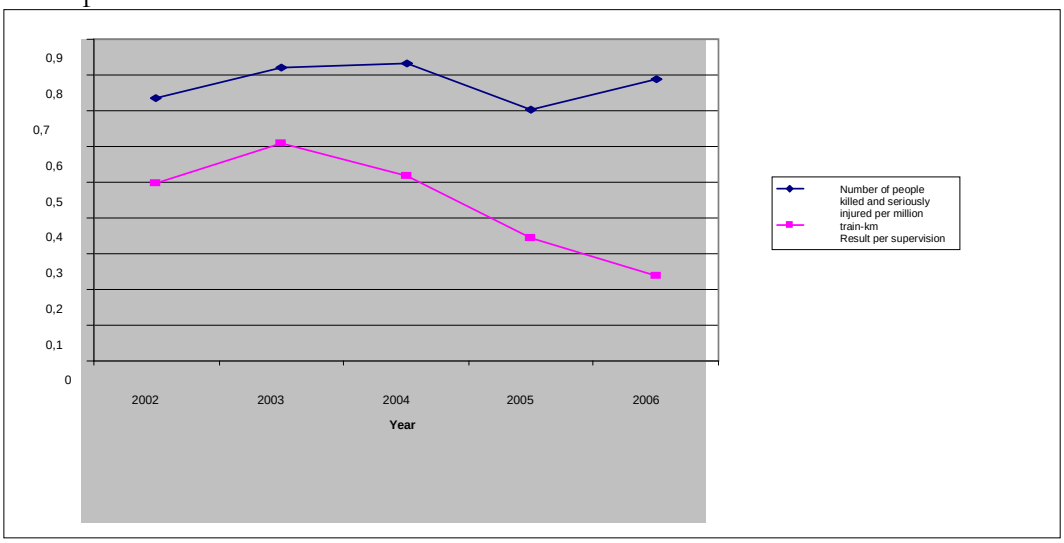



*Figure 3: Safety-related key ratios for the rail system.*

Relative to the volume of traffic but also in real terms, the number of people killed and seriously injured fell somewhat in 2005 compared to 2004; it was the number of suicides that fell. In 2006, the same number of people died or were seriously injured (104)[12] as in 2004. However, the volume of traffic was higher in 2006 than in 2004[13].

### D.1.2 Safety-enhancing activities

In Sweden, the supervision of the railway sector's players has since 1996 been aimed at checking that the operators have a well functioning self-regulation system and are able to take appropriate measures when a deficiency occurs. Hence, as part of its supervisory activities, the Swedish Rail Agency checks the operators' compliance

[11] The data in the annual report for 2006 also includes trams and metros, hence, the figures are not comparable.

[12] Of these, 19 persons were killed, 16 were seriously injured, 65 were suicides and 4 were attempted suicides that resulted in serious injury.

[13] The volume of traffic for 2002 – 2005 is based solely on the number of train kilometres run on the state owned railway infrastructure. For the safety report, the railway undertakings reported their respective train kilometres run in 2006. This resulted in an increased number of train kilometres to 132 million train kilometres as compared to the 128 million train kilometres on the state owned railways.

with the current regulatory framework and that they have the organisation, routines, burden-sharing, finances, etc., to ensure they can continue to meet the requirements of their licences.

The measures/actions that the Swedish Rail Agency has a mandate to take include prohibitions with or without penalty, injunctions and ultimately suspension of licences. It is the operators that take actual measures to reduce the number of unwanted events (accidents, incidents and other deficiencies). The Swedish Rail Agency monitors that the operators take appropriate action.

In 2006, an event occurred in response to which the Swedish Rail Agency prohibited the use a particular type of carriage. This prohibition was later rescinded when the company in question showed that the malfunction had been corrected.

| **Safety-enhancing activity** | **Accident/incident or other deficiency initiating the activity** | | |
|---|---|---|---|
| | **Date** | **Place** | **Description of the event** |
| Prohibition on the use of class WL4 carriages | 20 April 2006 | Stockholm central station – Boden central station | On the Stockholm – Boden line, the on-board train crew discovered that a door was not shut when in the closed position on a class WL4 carriage. Since this malfunction had existed before, the Swedish Rail Agency decided to withdraw all carriages of the same class from operations for the company in question. |

*Table 2: Event leading to safety-enhancing activities.*

## D.2 Safety of the operators

The majority, approximately 91%, of the operators who submitted a safety report have not experienced any serious events that led to anyone being killed or seriously injured.

Apart from the CSIs, the safety reports include information on:

- The safety targets of the operations
- Actions taken with a view to increase the level of safety
- How work on the safety audits was conducted, specified in section G of this report.

The Swedish Rail Agency has received 162 safety reports from various operators. The majority of the safety reports received (102) fall into the category of operators with railway operations as an ancillary activity. In this case, this group of operators also includes undertakings that are engaged in a main activity other than railways and use the railway mainly for transporting their own or in some cases others' goods.

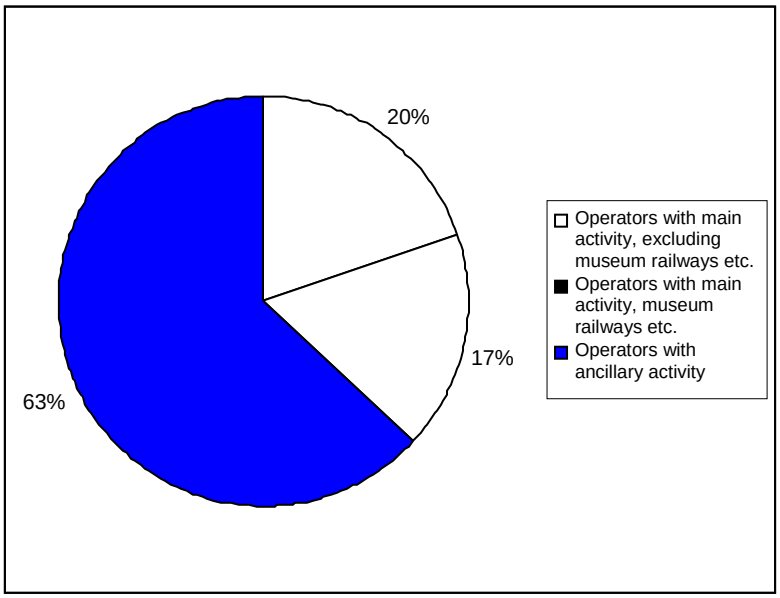



*Figure 4: Operators with railway operations as main or ancillary activity, respectively.*

Apart from the major players (32), the group of operators with railway operations as main activity in this case also includes smaller operators (28), such as museum railways and workshops, which makes this group still relatively large.

### D.2.1 Safety targets

32 operators have railway operations as their main activity (museum railways and workshops excluded). In this group, all operators have specified their safety targets. These targets are often expressed in terms of no-one being killed or seriously injured through their own organisation's activities. Answers in the safety reports also include examples of quantitative targets, such as a reduced number of SPADs (signals passed at danger) and derailments, or a specified maximum number, e.g. no more than 4 derailments at shunting movements or maximum of 30 wrong loadings of trailers, swap bodies or containers, no more than one unwanted event per 100,000 train kilometres covered.

Of all the safety reports received, 98 operators specified their safety targets (60%). The smaller operators specified targets for occupational health and safety and targets for their own operations, for example. In general, it can be observed that uniform guidance is required on how to correctly express safety targets. Within the ERA, work is in progress to formulate safety targets for the European railways.

### D.2.2 Safety-enhancing activities

Of the safety reports received, 76 operators (48%) indicated that they have taken safety-enhancing measures due to an occurrence, without any serious consequence necessarily being associated with the occurrence. Less serious occurrences such as incidents and events with an effect that was not as serious as it could have been, have also led to the implementation of safety-enhancing activities.

The table below (Table 3) shows the most typically reported event categories leading to safety-enhancing activities being implemented. The table shows that derailments (the term covers events at marshalling yards, depots, etc.) and stop signal passed at danger (SPAD) are most typical.

| Occurrence | Number of safety reports reporting the occurrence | Activities |
|---|---|---|
| Derailment. | 22 | Education, information, maintenance. |
| Stop signal passed at danger[14]. | 16 | Dialogue with the crew, information and education, changed routines. A cooperation project has been initiated between the players concerned. |
| All incidents. | 14 | Education, information, maintenance. |
| Collision or impact. | 13 | Education, information. |
| Technical fault/ material defect. | 11 | Management of deficiencies. Monitoring that faults and defects are corrected and maintenance is performed. |
| Fire. | 5 | Maintenance, information, education, a fire risk analysis. |

*Table 3: Examples of event categories that, according to most reports, led to safety-enhancing activities.*

The safety-enhancing activities mentioned in the table are typical also for other event categories. Occurrences are discussed at subsequent refresher training or information meetings with crew/contractor. An individual conversation with the person concerned is often also held where the event concerns inappropriate usage. Occasionally, new internal instructions have been written and passed on to the employees. Common activities also include maintenance and improved enforcement of planned maintenance.

Fire is an event category that is also mentioned, and there is one case where a railway undertaking performed a fire risk analysis to reduce this type of events.

The state owned infrastructure manager and railway undertakings concerned ran a joint project in 2006 to reduce the number of SPADs (signals passed at danger). A project was also run with the state owned infrastructure manager and other organisations concerned that was aimed at reducing the number of level-crossing accidents (level crossing OLA). This project was completed in 2006 and a number of improvement measures were identified, such as: improving the crossing protection system, removing level crossings, increasing the number of multi-level crossings and informing the public about level crossings.

The table below (Table 4) shows examples of events which caused the state owned infrastructure manager to implement safety-enhancing activities.

[14] SPAD

| Occurrence | Description | Consequence | Activities |
|---|---|---|---|
| Driving on switch | Trailing point in wrong position or facing point not closing | Derailment | Information and review during refresher training and during management review. Follow-up of measured values. |
| SPAD | Stop signal passed at danger | Collision | Information and review during refresher training and during review by the management. Follow-up of measured values. |
| Landslip at Ånn, 30 July 2006 | Railway and road embankments undermined by an unusually large stream flow. Railway embankment collapsed immediately behind a passenger train. | Could have had very serious consequences. | Development of a method for assessing risks in cases of undermined railway embankment. |
| Collision at Hok, 2003 | A goods train was let out into the path of a passenger train, colliding with it at stand-still at the platform | Could have had very serious consequences. | Reinforcement of the system with dispatch of trains through forced MobiSIR, electronic dispatch journal and ERTMS regional. |
| LPG train accident at Borlänge, 2000 | Goods train exceeding line speed, derailed in a switch curve | Could have had very serious consequences. | Elimination of ATC islands. |
| Heat and unintended braking on various occasions | Heat and unintended braking can lead to derailment on the line at high speeds | May have very serious consequences | More and better detectors. |

*Table 4: Events that triggered safety-enhancing activities of a more country-wide character by the state owned infrastructure manager.*

## D.3 Common safety indicators

This section presents comments on the common safety indicators (CSIs). The idea is that CSIs should be presented as an average value based on values for five years. Since 2006 is the first year information has been collected this way, it is not possible to present an average value for five years. The value presented in this report therefore only refers to 2006 unless otherwise stated in the text or figures. The CSIs consist of data on accidents and deficiencies which have occurred set against the number of train kilometres or, in certain cases, kilometres travelled. Definitions used for the information collected are specified in Annex F. In most cases, the definitions in the Safety Directive were used, except in certain cases where national definitions were used, as shown in the table in Annex C. Some basic information on the rail

system's volume of traffic, track lengths, level crossings, crossing protection system etc. was also collected for the purposes of e.g. calculating safety indicators. All data collected are shown in Annex C.

### D.3.1 Accidents

51 significant accidents occurred in 2006.

One calculated indicator is the total number of accidents per million train kilometres. For 2006, this was 0.39 accidents per million train kilometres. In the indicator "number of accidents per million train kilometres", an accident is defined as a significant accident, as shown by the definitions in Annex F.

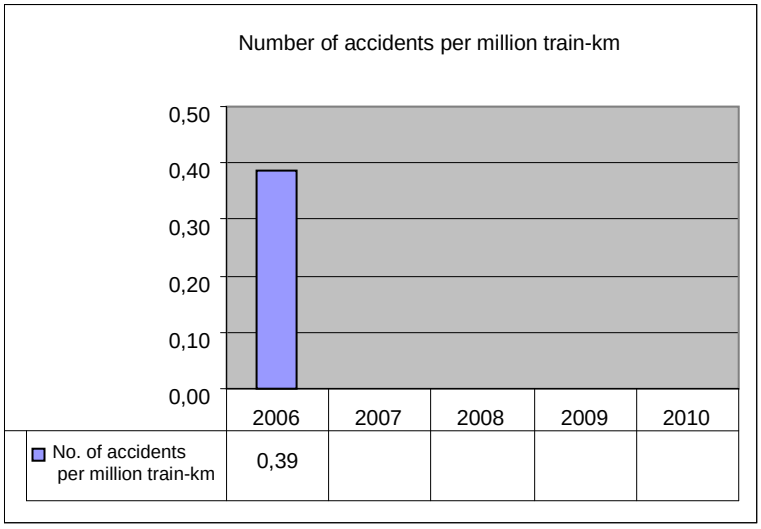



*Figure 5: Graph for total number of accidents per million train kilometres (2006).*

Accidents are in turn subdivided into the following accident categories: train collisions, train derailments, level-crossing accidents, accidents to persons, fires and others.

The accident categories with the greatest numbers of accidents reported are level-crossing accidents (16), accidents to persons (17) caused by rolling stock in motion. Accidents reported in these accident categories have in most cases led to people being killed or seriously injured. Train derailments (5), train collisions (3) fires ( 3) and others (7) were in most cases reported due to their serious consequences in terms of the cost of damage and/or major traffic disturbances. They did not, however, lead to anyone being killed in 2006. The number of accidents in these categories is low and each significant accident in the form of a train collision or train derailment has a major impact on the statistical data.

No passengers have been killed by a derailment or collision since 1990. Several of the accidents classified as "others" also involve collisions and derailments but with shunting movements.

The accidents that still occur too frequently are level-crossing accidents and accidents to persons caused by rolling stock in motion. These accidents are mainly due to two factors. Level-crossing accidents were caused by road users who were not aware of

an approaching train or the crossing protection system's danger signals. Accidents to persons caused by rolling stock in motion were mainly due to unauthorised persons on the track. Besides these accidents, an additional number of 69 suicides took place.

### D.3.2 People killed and seriously injured

This group of indicators shows the number of people killed and seriously injured.

The indicator "people killed per million train kilometres" is 0.14 per million train kilometres. This means that 1.4 persons were killed for every 10 million train kilometres travelled. In 2006, approximately 132 million train kilometres were travelled in Sweden.

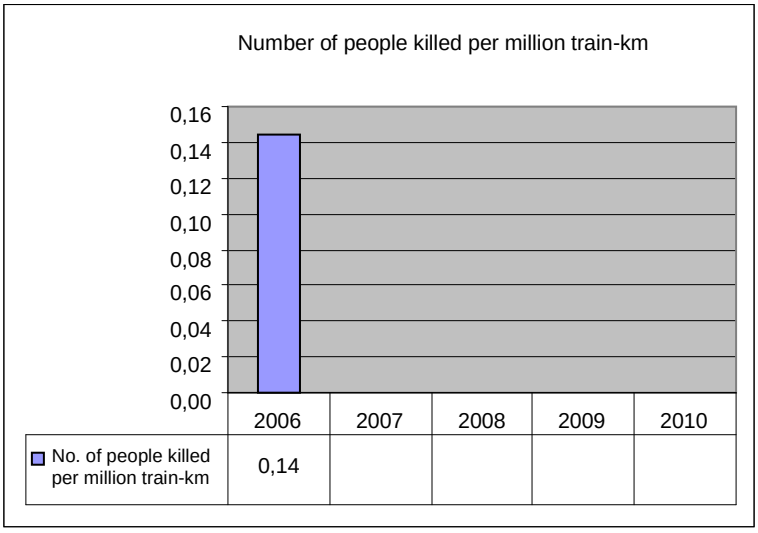



*Figure 6: Indicator "number of people killed per million train kilometres" (2006).*

The indicator "number of people injured per million train kilometres" is 0.12 per million train kilometres, as shown by the graph below. Here, injured (people) means seriously injured people, as is clear by the definition in Annex F.

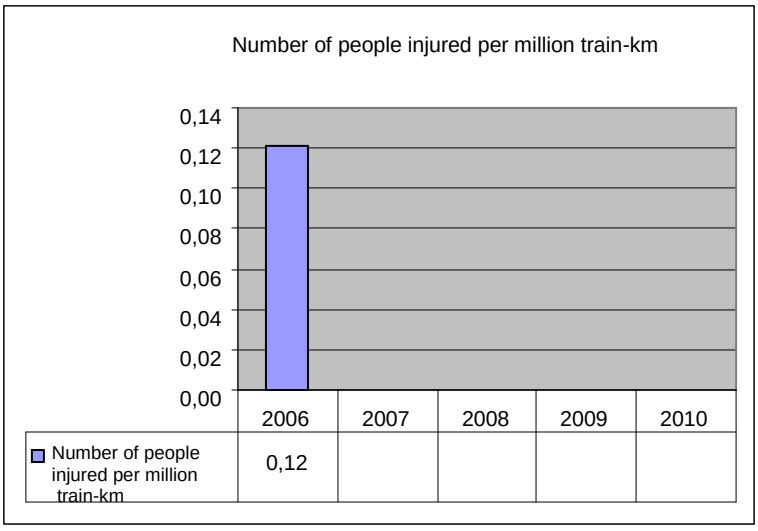



*Figure 7: Indicator "number of people injured per million train kilometres" (2006).*

In 2006, 16 persons were seriously injured. Some uncertainty attaches to this figure because Sweden has so far used a national definition to determine when a person should be considered seriously injured. In accordance with this national definition, a person is seriously injured if the injury led to at least 14 days' sick leave. In line with the indicator's definition of serious injury, this person should have been hospitalised for at least 24 hours as a result of the accident.

### Trend in the number of people killed and seriously injured

The number of people killed and seriously injured on the railways has in recent years been about 40 per year excluding suicides. The graph below shows the number of people killed and seriously injured in significant accidents and suicides.

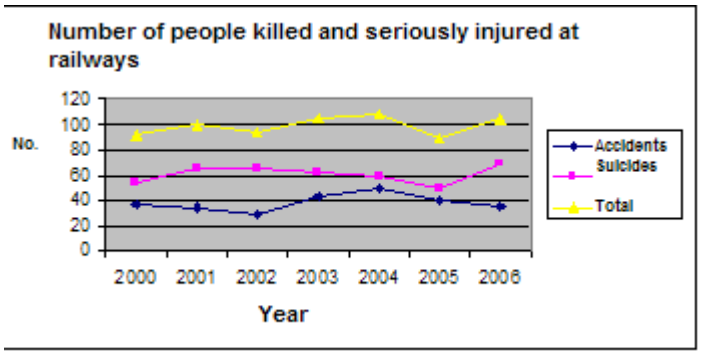



*Figure 8: Number of people killed and seriously injured 2000 – 2006.*

Of the 35 persons seriously injured or killed in significant accidents in 2006, seven were children[15], two girls and five boys. Of the remaining 28, eight were women and 20 men.

In the level-crossing accidents, it was the users of the level crossing, i.e. road users, that were killed (9) or seriously injured (8). Accidents to persons mainly involved unauthorised persons on the track being struck or run over. In these accidents, ten persons were killed and four were seriously injured. No passengers were killed or seriously injured during derailments, fires, level-crossing accidents or collisions. It is worth noting that an accident to a person involving a person struck or run over by a train is almost always lethal. In level-crossing accidents, however, it is often a matter of chance whether these will result in no personal injury (for example when a vehicle's interior is left undamaged in the accident) or in various degrees of personal injury.

## D.3.3 Technical safety of infrastructure

This group of indicators shows the percentage of tracks fitted with ATP (Automatic Train Protection) and the percentage of level crossings with automatic or manual crossing protection systems.

[15] Children are people under 18 years of age.

71% of tracks have ATP. The majority of traffic is therefore on tracks which are extremely safe in technical terms.

The indicator under this heading with the largest impact on accidents in 2006 is the existence of level crossings. The state owned infrastructure manager has for several years worked actively on improving safety in level crossings, with a resultant downward trend for the number of serious level-crossing accidents. One of the measures used was to remove level crossings without an active crossing protection system and replace these with level crossings with an automatic crossing protection system. Of all the level crossings, 34% are fitted with some kind of crossing protection system.

### D.3.4 Deficiencies

This indicator combines all reported events relating to broken rails, track geometry faults, broken axles and wheels, unauthorised or illicit SPADs (signals passed at danger) and wrong-side signalling failures. 556 deficiencies were reported and the indicator gives a value of 4.20 deficiencies per million train kilometres.

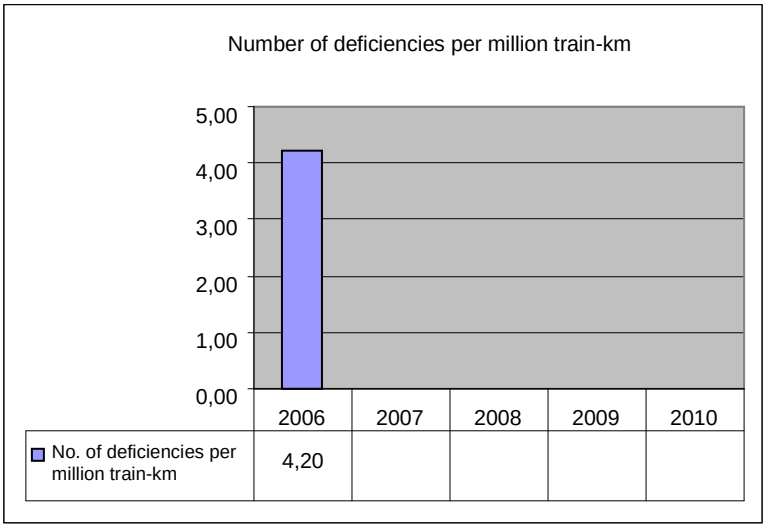



*Figure 9: Indicator number of deficiencies per million train kilometres (2006).*

In this category of events, two types of deficiency clearly dominate: broken rails (256) and SPADs (194). Another large group is track geometry faults, with 80 deficiencies reported. It should be noted that the Swedish Rail Agency's safety report includes all incidents involving broken rails, i.e. also those on railway sidings. The number of broken rails on railway tracks is therefore lower. These events are reported in this way because the reporting requirement also includes broken rails on railway sidings. Also to be noted is the fact that the number of other deficiencies was low. Eight wrong-side signalling failures, eight broken wheels, and ten broken rails were reported.

The number of unreported cases is unclear because not all deficiencies are reported when they occur. A possible reason for this is that a deficiency is not always as clear-cut as an accident, with the effect that those involved do not always think of reporting e.g. a SPAD. However, it is important to continue to monitor the deficiencies as they can presage serious accidents.

### D.3.5 Costs and working hours lost as a consequence of accidents

This indicator is an attempt to measure the total costs arising in the rail system as a consequence of accidents. Costs are expressed in million euro[16] and are related to the number of train kilometres travelled (in million train kilometres).

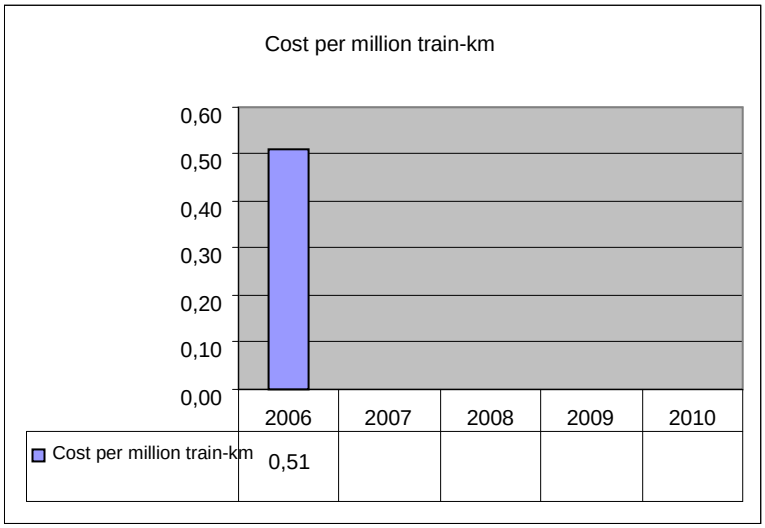



*Figure 10: Indicator for costs caused by accidents per million train kilometres (2006).*

The reporting operators stated that these data are very unreliable. Since this is the first year the indicators have been reported, not all systems are yet adjusted for fully reliable reporting. However, the systems are currently being developed and improved. For these reasons it is not possible to draw any conclusions from the information reported.

Operators with railway operations as an ancillary activity report a disproportionately large number of working hours, e.g. a major industry with one railway track devotes only a fraction of its working hours to railway operations but is obliged to report the total working time. As a result, indicators based on information on working hours will not be comparable to those from operators with railway operations as their main activity.

### D.3.6 Management of safety

The key ratio used in this year's safety report is the relationship between the number of planned (325) and the number of performed (319) audits in 2006. It is difficult to see how this key ratio will provide an acceptable basis for drawing any conclusions regarding the level of the operators' safety management systems. Some of the questions and comments submitted to the Swedish Rail Agency on this point have shown that the operators found it difficult to interpret and understand what constitutes a reportable audit. The ERA working party on CSIs has also discussed the topic of new indicators for safety management systems.

[16] For calculating costs in euro, an exchange rate of 1 EUR = 9.30 SEK was used.

# E IMPORTANT CHANGES IN THE LEGISLATION AND REGULATORY FRAMEWORK

In 2006 no important changes to the railway legislation took place. The Swedish Rail Agency published ten new sets of provisions, one regulating the approval of technical systems, while the other nine concerned technical specifications for interoperability (TSIs), incorporated into Swedish law (in the form of the Swedish Rail Agency's Code of Statutes, JvSFS) (see specification in Annex D) pursuant to EU provisions.

# F DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

Safety Directive 2004/49/EC was not incorporated into Swedish law until 1 July 2007, and no safety certificates or authorisations were therefore issued in 2006 pursuant to the Safety Directive. Information sought in the ERA guidance is, as far as possible, presented below.

## F.1 National law

1.1. Starting date for issuing safety certificates in accordance with Article 10 of Safety Directive 2004/49/EC was 1 July 2007.

1.2. Starting date for issuing safety authorisations in accordance with Article 11 of Safety Directive 2004/49/EC was 1 July 2007.

1.3. Railway undertakings and infrastructure managers have access to national safety rules or other relevant legislation on the Swedish Rail Agency's homepage on the Internet[17]. The Swedish Rail Agency also publishes a manual containing relevant legislation and its own provisions (this manual is also available on the homepage).

## F.2 Numerical data

The Railway Safety Directive came into force in Sweden on 1 July 2007 and there are therefore no numerical data for 2006. Relevant numerical data are presented in Annex E.

## F.3 Procedural aspects

### 3.1 Safety certificates Part A

Queries relating to experience with the granting of safety certificates are not dealt with here, except the query relating to fees, which could be of interest as a matter of principle, since no safety certificates were issued in 2006 pursuant to Article 10 of the Safety Directive. These queries can be found in Annex G.

[17]The Swedish Rail Agency's web address: www.jvs.se

3.1.5. Does the NSA charge a fee for granting safety certificate part A?
*Answer:* No, but this is currently being looked into.

### 3.2 Safety certificates Part B

Queries relating to experience with the granting of safety certificates are not dealt with here, except the query relating to fees, which could be of interest as a matter of principle, since no safety certificates were issued in 2006 pursuant to Article 10 of the Safety Directive. These queries can be found in Annex G.

3.2.3. Does the NSA charge a fee for granting safety certificate part B?
*Answer:* No, but this is currently being looked into.

### 3.3 Safety authorisations

Queries regarding experience with the issuing of safety authorisations are not dealt with here, except the query regarding fees, which could be of interest as a matter of principle, since no safety authorisations pursuant to Article 11 of the Safety Directive were issued in 2006. These queries can be found in Annex G.

3.3.6. Does the NSA charge a fee for granting safety authorisations?
*Answer:* No, but this is currently being looked into.

# G SAFETY SUPERVISION

## G.1 Safety supervision by the Swedish Rail Agency

An overall aim of the Swedish Rail Agency is that all safety supervision should preferably be conducted in the form of safety audits with the purpose of examining the operators' safety management systems.

In order to identify which operators should be supervised, the methodology has increasingly turned towards a risk perspective. The following two criteria are indicative of how supervision activities are conducted:

- Operations where an accident could have a major impact and the probability of such an accident happening is not negligible.
- Operations with a high probability of an accident happening, the consequences of which would not be acceptable.

Furthermore, the aim is to conduct preliminary planning of supervision activities. Planning is re-evaluated every three months on the basis events which have occurred. Planning now also allows for a quick launch of a renewed supervision, if an event should indicate the need for it. Supervision has thus become both risk and event controlled to enable quick reaction to changes in the rail system.

Since this approach was still being developed in 2006, supervision activities followed the procedures applicable at the time, presented in tables 5-7 below.

All audits are carried out by the Swedish Rail Agency's own staff. According to the documentation for the 2006 annual report, approximately 12 administrators (7.95 full-time equivalents) handle safety supervision. An average of 13,515 working hours went into the process of safety supervision in 2006. This corresponds to approximately 16% of the Swedish Rail Agency's total capacity (administrative staff included in the total workforce).

In 2006, no inspections or audits were carried out on the basis of requirements in the Safety Directive since the it had not been incorporated into national law.
On the other hand, the Swedish Rail Agency implemented both inspections and audits on the basis of the legislation applicable at the time. The tables below specify the number of supervision activities.

**Number of inspections completed by the Swedish Rail Agency**

| | | Issued safety certificates Part A | Issued safety certificates Part B | Issued safety authorisations | Other activities (to be specified) |
|---|---|---|---|---|---|
| 3. Number of inspections by RU/IM in 2006 | Planned | | | | Inspections 200<br>Business meetings 20<br>Thematic inspections 6 |
| | Carried out | | | | Inspections 165<br>Business meetings 42<br>Thematic inspections 4 |

*Table 5: Numbers of inspections planned and accomplished, 2006.*

A comparison between the number of accomplished and the number of planned inspections reveals 211 completed and 226 planned inspections, a performance rate of 93.4%.

**Number of audits completed by the Swedish Rail Agency**

| | | Issued safety certificates Part A | Issued safety certificates Part B | Issued safety authorisations | Other activities |
|---|---|---|---|---|---|
| 4. Number of audits by RU/IM in 2006 | Planned | 0 | 0 | 0 | 5 |
| | Carried out | 0 | 0 | 0 | 3 |

*Table 6: Numbers of audits planned and accomplished, 2006.*

In 2006, 3 audits were accomplished while the number of planned audits was 5, a performance rate of 60%.

| | | Number |
|---|---|---|
| RESULTS | Prohibitions | 5 |
| | Injunctions | 8 |
| | Remarks | 38 |
| | Prosecutions | 0 |

*Table 7: Aggregation of results from supervision activities, 2006.*

According to Table 7, supervision activities accomplished in 2006 resulted in 51 prohibitions, injunctions or remarks, with remarks as the most typical result from supervision activities.

## G.2 Supervision by operators themselves

In exceptional cases, audits have been conducted in accordance with the definition of the Safety Directive[18]. According to the operators' own accounts of their audits, these mainly consist in planned inspections and function checks, which were sometimes unannounced. Reference is often made to checks on the working environment (inspections) or to the organisation's regular quality management system. Municipalities and other smaller infrastructure managers often transfer the inspection of their rail installation to an external contractor. The contractor inspecting the installation can be an established operator with railway operations as its main activity.

An aggregation of the safety reports' information on audits accomplished shows that a total of 91 operators had planned to conduct 325 audits in 2006. The data indicate 319 audits accomplished, a performance rate of 98%.

A relatively large number of operators did not plan or conduct any audit at all (71). All these belong to the group of operators with railway operations as an ancillary activity.

# H RECOMMENDATIONS FROM THE SWEDISH ACCIDENT INVESTIGATION BOARD AND CONCLUSIONS

## H.1 Recommendations from the Swedish Accident Investigation Board

In 2006, the Swedish Rail Agency worked on recommendations from the Swedish Accident Investigation Board concerning two separate events. One was a near-miss at Ljung station on 12 May 2004, and the other a level-crossing accident in Nosaby in southern Sweden on 10 September 2004.

Recommendations resulting from the near-miss in Ljung on 12 May 2004 focused on the technical standard of the interlocking at the station. The interlocking function

[18] see Annex F, paragraph 32

fully complied with the specifications for the interlocking type at the time of the event, but the Swedish Accident Investigation Board showed in its inquiry that it is questionable whether this older type of interlocking is sufficiently safe. In view of the recommendations, the Swedish Rail Agency requested from the infrastructure manager concerned a record of the measures they planned to take in response to the recommendations. The infrastructure manager has developed an action programme that will inter alia examine the presence of interlockings assessed not to reach acceptable standards. This mainly concerns smaller stations on lines where trains are dispatched manually.

The recommendations concerning the near-miss in Nosaby on 10 September 2004 indicate an unclear division of responsibility for the supervision of level crossings. A level crossing is a junction of two forms of traffic, road and rail. The Swedish Accident Investigation Board recommends the Swedish Rail Agency to collaborate with the Road Traffic Inspectorate on working towards clarifying the responsibility for supervision as regards level-crossing issues. To this end, the Swedish Rail Agency monitored a project (the OLA project) aimed at reducing the number of level crossings.

## H.2 Conclusions and priorities

### H.2.1 The operators' safety reports

The main impression from the operators' safety reports is that railway undertakings as well as infrastructure managers are thorough and sincere in their safety work. This is clear not least from the operators' accounts of implemented safety audits and inspections. A great number of inspections and extensive maintenance work are conducted, both in terms of installations and vehicles, staff training and topicality and documentation of internal instructions. This is the work that forms the basis for a sustainable rail system.

The analysis of the CSIs also shows that the safety level in the rail system is high. Relatively few accidents occur in which people are killed or seriously injured. Statistical data indicate that accidents where people are seriously injured or killed fall into the category of level-crossing accidents and accidents to persons. In both these cases, the rail system encounters other parts of society. These are also the situations where responsibility is unclear and liability proceedings are difficult to institute.

### H.2.2 Conclusions and priorities of the Swedish Rail Agency

On the basis of the safety report 2007 and on the aggregated experience from railway accidents, the Swedish Rail Agency considers that the rail system's players are well able to check and follow up risks associated with train derailments and train collisions. No or relatively few significant accidents take place within these areas.

There are also occurrences that indicate the need to further develop the methods used for identifying risks in the rail system. An example of this is landslip accidents, which indicate that risks are constantly changing according to environmental change,

e.g. climate. Similarly, the technical development of more sophisticated signalling such as ERTMS may create new situations that could require the performance of safety assessments in new areas. The Swedish Rail Agency is actively working on developing working methods that, at an early stage, indicate existing or emerging safety risks.

The Swedish Rail Agency has therefore prioritised work on reshaping safety supervision. It will focus on identifying safety risks within the rail system, aiming supervision activities towards areas where safety standards may have been eroded. Event-based supervision is an example of a working method allowing activities of a safety-enhancing character, for example work on supervision or provisions, to be performed after risk assessment.

As regards level-crossing accidents, the safety report data reveal the need to strengthen the cooperation between players from different forms of transport on safety. On 19 July 2007, the government published a decision with this in mind, under which the authorities of the four forms of transport (road, rail, sea and rail) are to be merged into a single board of transport. This should create the conditions for a clear supervision mandate.

## Annex A.1: The state owned rail network


*Source: Järnvägens framtidsplaner* ("Future plans for the railways") 2004 – 2015, p. 75, Swedish Rail Administration.
(www.banverket.se)

## Annex A.2.1: List of active infrastructure managers 2006

For a website address with a published railway description, please see the Swedish Rail Administration's homepage: www.banverket.se Click on the link *Banportalen*.

| Name | Address | Post code | Place |
|---|---|---|---|
| Aarhus Karlshamn Sweden AB | V. Kajen | 374 82 | Karlshamn |
| AB Banankompaniet | Box 27294 | 102 53 | Stockholm |
| AB Banankompaniet | Skeppsgatan 3B | 721 32 | Västerås |
| AB Bohmans Fanerfabrik | Box 544 | 572 25 | Oskarshamn |
| AB Borlänge Energi | Box 834 | 781 28 | Borlänge |
| AB Elektrokoppar | Box 914 | 251 09 | Helsingborg |
| AB Gustaf Kähr | Box 805 | 384 28 | Blomstermåla |
| AB Hannells Industrier | Box 174 | 311 22 | Falkenberg |
| AB Karl Hedin Emballage | Box 84 | 775 26 | Krylbo |
| AB Motala Verkstad | Box 950 | 591 29 | Motala |
| AB O Hallqvist Återvinning | Box 204 | 665 25 | Kil |
| AB Rundvirke | Box 6 | 820 26 | Marmaverken |
| AB Sandvik Materials Technology | | 811 81 | Sandviken |
| AB SkandiaTransport | Box 50 | 261 22 | Landskrona |
| AB Stabsvecia Södra Vi | Box 40 | 590 80 | Södra Vi |
| AB Storstockholms lokaltrafik | | 105 73 | Stockholm |
| AB Strängbetong | Örnvägen 20 | 890 51 | Långviksmon |
| AB Strängbetong | Box 500 | 736 25 | Kungsör |
| AB Strängbetong | Box 137 | 430 20 | Veddige |
| AB Svenska Shell, Distribution | Gustavslundsvägen 8 | 167 80 | Bromma |
| AB Wibe | Box 401 | 792 27 | Mora |
| AB Västerbottens Fodercentral | Box 76 | 913 22 | Holmsund |
| ABB Automation Technologies AB | Box 865 | 971 26 | Luleå |

| Name | Address | Post code | Place |
|---|---|---|---|
| ABB Fastighet AB | Box 6350 | 721 57 | Västerås |
| ABetong Precon AB | Hästhagen | 340 30 | Vislanda |
| AerotechTelub Internservice AB | Box 360 | 831 25 | Östersund |
| Akzo Nobel Base Chemicals AB | Box 503 | 663 29 | Skoghall |
| Akzo Nobel Salt AB | Box 357 | 401 25 | Gothenburg |
| Akzo Nobel Surface Chemistry AB | | 444 85 | Stenungsund |
| Akzo Nobel Surface Chemistry AB | Box 13028 | 850 13 | Sundsvall |
| Almer Oil Company AB | Cisternvägen | 805 95 | Gävle |
| Alstom Transport AB | Gamla Brogatan 34 | 111 20 | Stockholm |
| Arctic Paper Håfreströms AB | Fack | 464 82 | Åsenbruk |
| Arctic Paper Munkedals AB | Stampgatan 14 | 411 01 | Gothenburg |
| Arizona Chemical | Box 66 | 820 22 | Sandarne |
| Armstrong World Industries AB | Box 5 | 913 21 | Holmsund |
| Assi Domän Nord Trä AB, Lövholmen | Box 740 | 941 28 | Piteå |
| A-Train AB (Arlanda Express) | Box 130 | 101 22 | Stockholm |
| Axel Bergkvist AB | Box 401 | 793 13 | Insjön |
| Bergs kommun | Box 73 | 840 40 | Svenstavik |
| Bergslagernas Järnvägssällskap (BJs) | Bergslags-Lärje | 415 02 | Gothenburg |
| Billerud AB Gruvöns Bruk | Box 500 | 664 28 | Grums |
| Billerud Karlsborg AB | | 952 83 | Karlsborgsverken |
| Billerud Skärblacka AB | Skärblacka Bruk | 617 10 | Skärblacka |
| Blåsbälgen 1 Fastighets AB | c/o Ax Fast AB | 164 94 | Kista |
| Bläse Industrimuseum | Fleringe | 620 34 | Lärbro |
| Bläster och lack i Luleå AB | Betongvägen 34 | 973 45 | Luleå |
| Bodafors Trä AB | Box 111 | 570 21 | Malmbäck |
| Bodens kommun | Stadshuset | 961 86 | Boden |
| Boliden Bergsöe AB | Box 132 | 261 22 | Landskrona |
| Boliden Mineral AB, Rönnskärsverken | Smältverk, Rönnskär | 932 81 | Skelleftehamn |
| Bombardier Transportation Sweden AB | Att. Christoffer Wendel | 721 73 | Västerås |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Botniabanan AB | Strandgatan 7 | 891 33 | Örnsköldsvik |
| Boxholm Timber AB | Box 12 | 590 10 | Boxholm |
| Brinova Trelleborg AB | c/o Brinova Fastigheter | 252 27 | Helsingborg |
| Brogårdsand AB | Box 117 | 566 22 | Habo |
| Bromölla kommun | Box 18 | 295 21 | Bromölla |
| Brunnsta Industrihus KB2 | c/o Celero Support | 631 85 | Eskilstuna |
| Bruza Timber AB | Bellö | 570 32 | Hjältevad |
| Bräcke kommun, Bräcke | Box 190 | 840 60 | Bräcke |
| Bröderna Edstrand AB | Box 8980 | 402 74 | Gothenburg |
| Bröderna Edstrand AB | Box 6054 | 600 06 | Norrköping |
| Bröderna Edstrand AB | Box 225 | 201 22 | Malmö |
| BS Mekaniska Verkstads AB | Box 84 | 521 84 | Falköping |
| Burlövs kommun | Box 53 | 232 21 | Arlöv |
| Banverket | | 781 85 | Borlänge |
| Bäckstaken Umeå AB | Box 1221 | 901 22 | Umeå |
| Callans Trä AB | Öhlingsholm | 841 97 | Erikslund |
| Casco Products AB | Box 13000 | 850 13 | Sundsvall |
| Casco Products AB | Box 422 | 681 29 | Kristinehamn |
| Cementa AB | Box 47328 | 100 74 | Stockholm |
| Cementa AB | Box 33 | 541 21 | Skövde |
| Cerealia Foods AB | | 153 81 | Järna |
| Chiquita Sweden AB | Stångjärnsgatan 10 | 753 23 | Uppsala |
| Coca-Cola drycker Sverige AB | | 136 87 | Haninge |
| Coop Norden Sverige AB Logistics | | 197 25 | Bro |
| Coop Sverige AB, DT Växjö | Box 1215 | 351 12 | Växjö |
| Coop Sverige DistributionsFastigheter AB | Box 15 200 | 104 65 | Stockholm |
| Coor Service Management | Avd 63411 TB3 | 405 08 | Gothenburg |
| Copenhagen Malmö Port AB | Box 566 | 201 25 | Malmö |
| Cremo Produktions AB | Box 188 | 432 24 | Varberg |

| Name | Address | Post code | Place |
|---|---|---|---|
| Danafjord Fastigheter AB | | 405 08 | Gothenburg |
| Danisco Sugar AB | Stationsvägen 5 | 270 22 | Köpingebro |
| Danisco Sugar AB | Örtofta Sockerbruk | 241 93 | Eslöv |
| Danisco Sugar AB, Arlövs Sockerbruk | Box 32 | 232 21 | Arlöv |
| DHL Express (Sweden) AB | Box 206 | 201 22 | Malmö |
| DHL Rail AB; Trelleborg | Box 57 | 231 21 | Trelleborg |
| DHL Solutions Sweden AB | Box 444 | 551 16 | Jönköping |
| Dila logistik AB | Box 162 | 551 13 | Jönköping |
| Domsjö Fabriker AB | Domsjö fabriker | 891 86 | Örnsköldsvik |
| Dow Sverige AB | Box 783 | 601 17 | Norrköping |
| Draka Kabel Sverige AB | | 571 88 | Nässjö |
| E.ON Gas Sverige AB | Box 84 | 374 22 | Karlshamn |
| E.W Nilsson | Box 145 | 631 03 | Eskilstuna |
| EFTEC AB | Box 149 | 281 22 | Hässleholm |
| Eka Chemicals AB | | 445 80 | Bohus |
| Eka Chemicals AB Albyfabrikerna | Albyfabrikerna | 841 44 | Alby |
| Ekefors Skrothandel AB | Ekefors | 514 94 | Sjötofta |
| Electrolux Floor Care And Light Appliances | Box 401 | 542 24 | Mariestad |
| El-Giganten Logistik AB | Box 577 | 175 26 | Järfälla |
| Elon Elkedjan Logistic AB | Box 22094 | 702 31 | Örebro |
| Ericsson Network Technologies AB | Box 731 | 791 29 | Falun |
| Ericsson Network Technologies AB | | 824 82 | Hudiksvall |
| Esab AB | Box 55 | 284 21 | Perstorp |
| Eskilstuna kommun, Serviceavdelningen/Trafikservic | | 631 86 | Eskilstuna |
| Eskilstuna kommunfastigheter AB | Box 5035 | 630 05 | Eskilstuna |
| Eslövs kommun | | 241 80 | Eslöv |
| EuroMaint Rail AB | Box 1555 | 171 29 | Solna |
| EuroShuttle A/S | Essingeringen 24 B | 112 64 | Stockholm |
| Eurosteel Nybro AB | Box 827 | 382 28 | Nybro |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Fagersta Stainless AB | Box 508 | 737 25 | Fagersta |
| Falkenbergs kommun | Stadsbyggnadskontoret | 311 80 | Falkenberg |
| Falköpings kommun | | 521 81 | Falköping |
| Fastighets AB Polaris | Stadshuset | 931 85 | Skellefteå |
| Fastighets AB Ångturbinen | Friledningsgatan 7 | 721 37 | Västerås |
| Fastighets AB, Mixtura | Knut Påls väg 8 | 256 69 | Helsingborg |
| Findus Sverige AB | | 267 81 | Bjuv |
| Fläkt Woods AB | Fläktgatan 1 | 551 84 | Jönköping |
| Fortum Service Industripartner AB | Transportavdelningen | 691 80 | Karlskoga |
| Fortum Värme | | 115 77 | Stockholm |
| Frigoscandia Distribution AB | Box 912 | 251 09 | Helsingborg |
| Fundia Armering AB | Box 119 | 301 04 | Halmstad |
| Föreningen Böda Skogsjärnväg | Grankulla 1473 | 380 75 | Byxelkrok |
| Föreningen för Landabanan | att: Göran Malm Hesselby | 821 41 | Bollnäs |
| Föreningen Gotlandståget | jernvägsstationen | 620 24 | Dalhem |
| Föreningen Nynäshamns järnvägsmuseum (NJM) | Nynäsgårds lokstall | 149 43 | Nynäshamn |
| Förvaltnings AB Ellipsen | Västkustvägen 21 | 211 24 | Malmö |
| Förvaltnings AB Smålandsbanan (FAS) | c/o I Qvarnström, | 593 33 | Västervik |
| G E Healthcare | Björkgatan 30 | 751 84 | Uppsala |
| Gamla Varvet AB | Stora Varvsgatan 14 | 211 19 | Malmö |
| Gestamp Hardtech AB | Box 828 | 971 25 | Luleå |
| Granngården AB | Box 727 | 941 28 | Piteå |
| Green Cargo AB | Box 39 | 171 11 | Solna |
| Greif Sweden AB, Div. Plåtemballage | Box 174 | 137 23 | Västerhaninge |
| Grängesbergsbanornas Järnvägsmuseum (GBBJ) | Box 82 | 772 22 | Grängesberg |
| Gåsgruvan Kalcit AB | Högbergsvägen 55 | 682 40 | Filipstad |
| Gällö Såg AB | Gällö såg | 840 50 | Gällö |
| Gävle kommun, Tekniska kontoret | | 801 84 | Gävle |

| Name | Address | Post code | Place |
|---|---|---|---|
| Gävle Lagerhus AB | Fredriksskans | 805 95 | Gävle |
| Gävle stål AB | Box 14 | 801 02 | Gävle |
| Göteborgs Hamn AB | Anläggningsavdelningen | 403 38 | Gothenburg |
| Göteborgs spårvägar AB | Box 424 | 401 26 | Gothenburg |
| Göteborgs stad, Trafikkontoret | Box 2403 | 403 16 | Gothenburg |
| HA Industri Göteborg AB | Importgatan 47 | 422 46 | Hisings Backa |
| HA Industri Stockholm AB | Box 8245 | 163 08 | Spånga |
| HA Industri Trading AB | Indiska Oceanen | 418 34 | Gothenburg |
| Hallsbergs Terminal AB | Hallsbergs Kommun | 694 80 | Hallsberg |
| Halmstads Hamn och Stuveri AB | Box 1 | 301 02 | Halmstad |
| Halmstads kommun | Box 153 | 301 05 | Halmstad |
| Haninge kommun | Tekniska kontoret | 136 81 | Haninge |
| Hargs Hamn AB | Hamnen | 742 50 | Hargshamn |
| Helsingborg stad, Tekniska förvaltningen | Gåsebäcksvägen 4 | 252 27 | Helsingborg |
| Helsingborgs Hamn AB | Box 821 | 251 08 | Helsingborg |
| Hercules AB | Box 622 | 251 06 | Helsingborg |
| Hessels Stål AB | 5:e Tvärgatan 1-3 | 802 84 | Gävle |
| Holmen Paper AB | Bravikens Pappersbruk | 601 88 | Norrköping |
| Holmen Paper AB | | 763 81 | Hallstavik |
| Hudiksvalls kommun, Tekniska Förvaltningen | | 824 80 | Hudiksvall |
| Hultsfreds kommun | Box 500 | 577 26 | Hultsfred |
| Husqvarna AB | Torsviksfabriken Box 502 | 562 28 | Norrahammar |
| Hydro Polymers AB | | 444 83 | Stenungsund |
| Håbo Fastighets AB | Box 24 | 746 21 | Bålsta |
| Härjedalens kommun, Tekniska kontoret | Medborgarhuset | 842 80 | Sveg |
| Härjedalens Miljöbränsle AB | Södra Hantverksg 4 | 842 31 | Sveg |
| Härnösands kommun | Härnösands hamn | 871 80 | Härnösand |
| Hässleholms kommun, Tekniska kontoret | Kringelvägen 42 | 281 41 | Hässleholm |
| Hässleholms Lokstall | Kraftgatan 6 | 234 31 | Lomma |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Höganäs Halmstadverken | Box 619 | 301 16 | Halmstad |
| ICA Fastighets AB | Stensborgsgatan 4 | 721 84 | Västerås |
| ICA Fastighets AB | Sjöhagsvägen 3 | 721 84 | Västerås |
| ICA Fastighets AB | Box 263 | 651 07 | KARLSTAD |
| ICA Handlarna AB | Box 1223 | 901 22 | Umeå |
| Iggesund Paperboard AB | Holmen | 825 80 | Iggesund |
| IKEA AB Förvaltning | Box 700 | 343 81 | Älmhult |
| IKEA AB Förvaltning | Box 640 | 251 06 | Helsingborg |
| IKEA Fastigheter AB | Box 700 | 343 81 | Älmhult |
| IKEA Fastigheter AB | Box 640 | 251 06 | Helsingborg |
| IL Recycling Returpapper AB | Box 5388 | 102 49 | Stockholm |
| Imatra Kilsta AB | Box 428 | 691 27 | Karlskoga |
| Imerys Mineral AB | Ekonomivägen 3-5 | 436 33 | Askim |
| Impregna AB | Box 76 | 771 22 | Ludvika |
| Industrial Quality Recycling AB (IQR) | Stallbackavägen 26 | 461 38 | Trollhättan |
| Industrispår i Ystad AB | Dragongatan 51 | 271 39 | Ystad |
| Inlandsbanan AB (IBAB) | Box 561 | 831 27 | Östersund |
| Interfleet Technology | Box 35 | 171 11 | Solna |
| ISS TraffiCare AB | Box 905 | 170 09 | Solna |
| Itab Fastigheter i Nässjö AB | Box 9054 | 550 09 | Jönköping |
| Jernhusen Verkstäder AB | Box 703 | 851 21 | Sundsvall |
| Jämtlands läns museum | Box 709 | 831 28 | Östersund |
| Järnmalmer AB | Box 2079 | 403 12 | Gothenburg |
| Järnvägsföreningen Dellenbanans vänner AB | c/o Nordins, Tingsvägen 1 | 820 60 | Delsbo |
| Järnvägssällskapet Åmål-Årjängs Järnvägs (JÅÅJ) | Stenbecksgatan 10 | 662 32 | Åmål |
| Jästbolaget AB | Box 7003 | 192 07 | Sollentuna |
| Jönköpings kommun | | 551 89 | Jönköping |
| Kalix kommun | Nygatan 4 | 952 81 | Kalix |

| Name | Address | Post code | Place |
|---|---|---|---|
| Kalmar Hamn | Box 810 | 391 28 | Kalmar |
| Kalmar kommun, gatu- och parkkontoret | Box 611 | 391 26 | Kalmar |
| Kalmar Veterantåg (KV) | Box 331 | 391 23 | Kalmar |
| Kamewa AB, södra verken | Box 1010 | 681 29 | Kristinehamn |
| Kappa Förenade Well | Box 4036 | 800 04 | Gävle |
| Kappa Förenade Well | Box 1104 | 241 26 | Eslöv |
| Kappa Mittpac AB | Box 76 | 840 60 | Bräcke |
| Karl Ljungberg & CO AB | Box 2014 | 281 02 | Hässleholm |
| Karlshamn Kraft AB | Box 65 | 374 21 | Karlshamn |
| Karlshamns hamn AB | Box 8 | 374 21 | Karlshamn |
| Karlshamns kommun | Tubbarydsvägen 6 | 374 33 | Karlshamn |
| Karlskoga Industrifastighets AB | Box 305 | 591 26 | karlskoga |
| Karlskrona kommun, tekniska förvaltningen | Ö. Hamngatan 7 B | 371 83 | Karlskrona |
| Karlstads kommun, Tekniska verken | | 651 84 | Karlstad |
| Kemetyl AB | Box 533 | 136 25 | Haninge |
| Kemira Kemi AB | Box 902 | 251 09 | Helsingborg |
| KF Avtalsfastigheter | c/o KF Fastigheter, Box | 104 65 | Stockholm |
| KF Dagligvaruterminal Umeå | Box 3015 | 903 02 | Umeå |
| KGK Fastighet Lunda AB | | 191 81 | Sollentuna |
| Kils kommun, Tekniska förvaltningen | Box 88 | 665 23 | Kil |
| Klippans kommun | | 264 80 | Klippan |
| Konstruktionssvets AB | Box 161 | 444 22 | Stenungsund |
| Konsum Värmland, lagercentralen | Timmergatan 4 | 651 15 | Karlstad |
| Korsnäs AB | | 801 81 | Gävle |
| Korsnäs Frövi AB | Korsnäs Frövi AB | 718 80 | Frövi |
| Kraft Foods Sverige AB, Gevaliarosteriet | Box 615 | 801 26 | Gävle |
| Kramfors kommun | | 872 80 | Kramfors |
| Kristianstads kommun, mark- och exploateringskonto | V. Boulevarden 13 | 291 32 | Kristianstad |
| Kristinehamns kommun, Tekniska förvaltningen | Tekniska förvaltningen | 681 84 | Kristinehamn |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Krokoms kommun | | 835 80 | Krokom |
| Kubikenborg Alminium AB (Kubal) | | 851 76 | Sundsvall |
| Kumla kommun | | 692 80 | Kumla |
| Kundvagnen Fastigheter Grön AB | Box 809 | 781 28 | Borlänge |
| Kuusakoski Sverige AB | Svedjevägen 6 | 931 36 | Skellefteå |
| Kuusakoski Sverige AB | Cementvägen 3 | 973 45 | Luleå |
| Köpings kommun, Tekniska kontoret | Köping | 731 85 | Köping |
| Landskrona kommun | Tekniska verken | 261 80 | Landskrona |
| Landskrona Varvet AB | Box 746 - Varvsudden | 261 27 | Landskrona |
| Lantmännen Mills AB | Box 100 | 595 21 | Mjölby |
| Lantmännen Mills AB | Box 446 | 751 06 | Uppsala |
| Latexia Sverige AB | Box 1023 | 820 21 | Vallvik |
| LignoTech Sweden AB | Wargöns Bruk | 468 82 | Vargön |
| Lilla Edets kommun | | 463 80 | Lilla Edet |
| Lindberg & Son AB | Box 5171 | 102 44 | Stockholm |
| Lindbergs i Forsbacka AB | Box 5171 | 102 44 | Stockholm |
| Linköpings kommun, Gatuenheten | Drottninggatan 45 | 581 81 | Linköping |
| Ljungafors fastigheter AB | Industriområde 2 | 840 10 | Ljungaverk |
| LKAB, Produktion/Järnväg | Box 821 | 971 25 | Luleå |
| Lucchini Sweden AB | Box 210 | 735 23 | Surahammar |
| Luleå Hamn | Strömörvägen 9 | 974 37 | Luleå |
| Luleå kommun, Mark- och exploateringsavdelningen | | 971 85 | Luleå |
| Lundstam Åkeri & Återvinning AB | Box 5003 | 831 05 | Östersund |
| Lycksele kommun | Box 505 | 921 81 | Lycksele |
| Lysekils Hamn ny | Hamnkontoret | 453 80 | Lysekil |
| Löfbergs Lila Fastigheter AB | Box 1501 | 651 21 | Karlstad |
| M2 Fastigheter Hamn-City AB | Garnisonsgatan 25 | 254 66 | Helsingborg |
| Malmbanans vänner | Arcusvägen 95 | 975 94 | Luleå |

| Name | Address | Post code | Place |
|---|---|---|---|
| Malmtrafik i Kiruna AB (MTAB) | LKAB FK | 981 86 | Kiruna |
| Malmö stad, fastighetskontoret | | 205 80 | Malmö |
| Malmö stad, gatukontoret | | 205 80 | Malmö |
| Malmö-Limhamns Järnvägs AB | Box 30022 | 200 61 | Limhamn |
| Map Sverige AB | Box 553 | 136 25 | Haninge |
| Marieholms järnvägsspår ekonomiska förening | c/o Fracht Sweden AB | 415 02 | Gothenburg |
| MEFOS - Metallurgical Research Institute AB | Box 812 | 971 25 | Luleå |
| Metsä Tissue AB | Pauliström | 570 19 | Pauliström |
| Metsä Tissue AB | Katrinefors bruk | 542 88 | Mariestad |
| Midwaggon AB | Bultgatan 1 | 841 31 | Ånge |
| Mindab Assidomän, Bergslagens Trä AB | Timmervägen 1 | 774 68 | Horndal |
| Mjölby kommun, Tekniska kontoret | | 595 80 | Mjölby |
| Moelven Valåsen AB | Box 404 | 691 27 | Karlskoga |
| Moelven Värmlands Trä AB | Box 136 | 661 23 | Säffle |
| Mondi Packaging Dynäs AB | | 873 81 | Väja |
| Mondi Packaging Örebro AB | Box 926 | 701 30 | Örebro |
| Mora kommun | | 792 80 | Mora |
| Motorn Tre Fastighetsförvaltning AB | Annebergsvägen 3 | 645 41 | STRÄNGNÄS |
| Museiföreningen Anten-Gräfsnäs Järnväg (AGJ) | Box 300 | 441 26 | Alingsås |
| Museiföreningen Gefle-Dala jernväg (MfGDJ) | Centralplan | 791 31 | Falun |
| Museiföreningen Munkedals Jernväg | Östra Åtorpsvägen 18 | 455 31 | Munkedal |
| Museiföreningen Stockholm-Roslagens Järnvägar ULJ | Box 3076 | 750 03 | Uppsala |
| Museiföreningen Wadstena Fogelsta Järnväg | Järnvägsstationen | 592 30 | Vadstena |
| Museiföreningen Östra Skånes Järnvägar (mfÖSJ) | V.Storgatan 89 | 291 54 | Kristianstad |
| Museiföreningen Östra Södermanlands Järnväg (ÖSlJ) | Box 53 | 647 22 | Mariefred |
| Museispårvägen Malmköping AB (MUMA) | Falkenberggatan 2 | 115 21 | Stockholm |
| Museisällskapet Jädraås-Tallås Järnväg (JTJ) | Jädraås station | 816 91 | Jädraås |
| Mälarenergi AB | Box 14 | 721 03 | Västerås |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Mälarhamnar AB | Gamla Hamnvägen | 731 23 | Köping |
| Mälarhamnar AB | Seglargatan 3 | 721 32 | Västerås |
| Möbeldirekten AB | Box 4304 | 102 67 | Stockholm |
| Mönsterås kommun, tekniska kontoret | Box 54 | 383 22 | Mönsterås |
| Naturbränsle i mellansverige AB | Box 1931 | 791 19 | Falun |
| NCC Roads AB, Sverige Öst | Box 745 | 194 27 | Upplands Väsby |
| Nerikes Allehanda | | 701 92 | Örebro |
| Neste LPG AB | Ortviksvägen 4 | 856 33 | Sundsvall |
| Nilsson Group AB | Box 508 | 432 19 | Varberg |
| Nora Bergslags Veteranjernväg (NBVJ) | Box 52 | 713 22 | Nora |
| Nordic Paper Seffle AB | Box 61 | 661 29 | Säffle |
| Nordisk Carbon Black AB | Kusthamnsgatan 1 | 211 24 | Malmö |
| Nordkalk AB | Box 901 | 731 29 | Köping |
| Norrköpings kommun | Tekniska nämnden | 601 81 | Norrköping |
| Norrlandspojkarna Fastighet AB | Heffnersvägen 1 | 856 33 | Sundsvall |
| Norrskog Wood Products AB | Box 213 | 831 23 | Östersund |
| Norske Skog Jämtland AB | Box 106 | 830 47 | Trångsviken |
| Notvikens Fastighet AB | Timotejstigen 9 | 954 35 | Gammelstad |
| Nybro kommun, tekniska kontoret | | 382 80 | Nybro |
| Nässjö järnvägsmuseum | Box 7 | 571 21 | Nässjö |
| Nässjö kommun | | 571 80 | Nässjö |
| Ohs bruks järnvägs museiförening (OBJ) | Box 179 | 351 04 | Växjö |
| OMYA AB | Kalendegatan 18 | 211 35 | Malmö |
| Osby kommun | Gatukontoret | 283 80 | Osby |
| Oscarson Skog AB | Stampuddsvägen 7 | 863 33 | Sundsbruk |
| Oskarshamns Hamn AB | N Strandgatan 50 | 572 32 | Oskarshamn |
| Osram Aktiebolag | Box 504 | 136 25 | Haninge |
| Outokumpu Stainless AB | | 644 80 | Torshälla |

| Name | Address | Post code | Place |
|---|---|---|---|
| Outokumpu Stainless AB | Box 74 | 774 22 | Avesta |
| Outokumpu Stainless AB | | 693 81 | Degerfors |
| Ovako Bar AB | | 777 80 | Smedjebacken |
| Ovako Bar AB | Box 5 | 590 10 | Boxholm |
| Ovako Forsbacka AB | Box 100 | 818 03 | Forsbacka |
| Ovako Steel AB | Box 77 | 712 80 | Hällefors |
| Ovako Steel AB | | 813 82 | Hofors |
| Oxelösunds Hamn AB | Box 1200 | 613 24 | Oxelösund |
| Pacwire AB | | 860 35 | Söråker |
| Pergo (Europe) AB | Box 1010 | 231 25 | Trelleborg |
| Perstorp Fastighets AB | | 284 80 | Perstorp |
| Perstorps kommun | | 284 84 | Perstorp |
| Piteå kommun | Öjagatan 95 | 943 31 | Öjebyn |
| Posten Sverige AB | Produktion Brevnätet | 105 00 | Stockholm |
| Preem Raffinaderi AB | Box 48084 | 418 23 | Gothenburg |
| Procordia Food AB | | 241 81 | Eslöv |
| Procordia Food AB | Viagatan 17 | 692 82 | Kumla |
| Procordia Food AB | Åbyvägen 11 | 701 31 | Örebro |
| Ramnäs Bruk AB | Box 14 | 730 60 | Ramnäs |
| Rexam Beverage Fosie AB | Box 9016 | 200 39 | Malmö |
| Rexam Glass Limmared AB | | 514 83 | Limmared |
| Rohm and Haas Nordiska AB | Box 45 | 261 22 | Landskrona |
| Rottneros Rockhammar AB | | 718 81 | Frövi |
| Rottneros Rockhammar AB | Rottneros Bruk | 686 94 | Rottneros |
| Ruukki Sverige AB, Virsbo | Box 100 | 730 61 | Virsbo |
| Saab Automobile AB | | 461 80 | Trollhättan |
| Saint Gobain Isover AB | Box 501 | 260 50 | Billesholm |
| Saint Gobain Isover AB | Gunnebovägen 1 | 860 35 | Söråker |
| Sandviken Energi AB | Gävlevägen 96 | 811 40 | Sandviken |
| SAPA Industriservice AB | | 621 81 | Finspång |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Sapa Profiler AB | Fack | 574 81 | Vetlanda |
| SCA Graphic Sundsvall AB | Östrands massafabrik | 861 81 | Timrå |
| SCA Hygiene Paper AB, Edet bruk | | 463 81 | Lilla Edet |
| SCA Hygiene Products AB | Box 243 | 311 23 | Falkenberg |
| SCA Packaging Munksund AB | | 941 87 | Piteå |
| SCA Packaging Sweden AB | Box 504 | 331 25 | Värnamo |
| SCA Packaging Sweden AB | Box 241 | 542 23 | Mariestad |
| SCA Skog AB Virke Nord | Box 783 | 941 28 | Piteå |
| SCA Skog AB | | 851 88 | Sundsvall |
| SCA Timber AB | Box 100 | 873 80 | Bollstabruk |
| SCA Timber AB | Box 783 | 941 28 | Piteå |
| Scana Steel Björneborg AB | Kristinehamnsvägen 1 | 680 71 | Björneborg |
| Scandinavian Distripoint AB | c/o Göteborgs Hamn AB | 403 38 | Gothenburg |
| ScanDust AB | Box 204 | 261 23 | Landskrona |
| Scania CV AB | | 151 87 | Södertälje |
| ScanPole Sverige AB | Åsavägen 10 | 690 45 | Åsbro |
| Schenker Logistics AB | | 551 90 | Jönköping |
| Shell Raffinaderi AB | Box 8889 | 402 72 | Gothenburg |
| Siemens industrial Turbomachinery AB | | 612 83 | Finspång |
| Siljan Timber AB | Box 435 | 792 27 | Mora-Noret |
| SJ PP AO SL Pendeltrafik | | 105 50 | Stockholm |
| Skanska Sverige AB | Div Asfalt & Betong avd | 380 30 | Rockneby |
| Skara-Lundsbrunns järnvägar (SkLJ | Tullportagatan 1 | 532 30 | Skara |
| Skellefteå kommun, Tekniska kontoret | Skeppargatan 16 | 931 85 | Skellefteå |
| Skellefteå Lastbilsstation | Hallvägen 8 | 931 36 | Skellefteå |
| SKF Sverige AB | Fastighetsförvaltningen | 415 50 | Gothenburg |
| Skrotfrag | Ö Nyebrovägen | 424 38 | Angered |

| Name | Address | Post code | Place |
|---|---|---|---|
| Skånska Järnvägar AB | Brösarps stationsväg 3 | 277 55 | Brösarp |
| Skånska Makadam AB | Vramsvägen 1 | 265 32 | Åstorp |
| Smalspåret i Hultsfred AB | c/o Callvik, | 141 59 | Huddinge |
| Smurfit Kappa Kraftliner Piteå | | 941 86 | Piteå |
| Smurfit Munksjö Lagamill AB | Box 43 | 285 21 | Markaryd |
| Smurfit Munksjö Packaging AB | Box 826 | 382 28 | Nybro |
| Smurfit Packaging AB | Box 693 | 601 15 | Norrköping |
| SSAB Oxelösund AB | | 613 80 | Oxelösund |
| SSAB Tunnplåt AB | | 781 84 | Borlänge |
| SSAB Tunnplåt AB Ämnen Luleå | | 971 88 | Luleå |
| Stena Aluminium AB | Box 44 | 343 21 | Älmhult |
| Stena Gotthard Fragmentering AB | Box 1009 | 301 10 | Halmstad |
| Stena Gotthard Återvinning AB | Box 39 | 860 30 | Sörberge |
| Stena Gotthard Återvinning AB | Spårvägen 16 | 901 31 | Umeå |
| Stena Gotthard Återvinning AB | Box 4088 | 400 40 | Gothenburg |
| Stena Gotthard Återvinning AB | Kungsgatan 81 | 632 21 | Eskilstuna |
| Stena Scanpaper AB | Allevägen 1 | 291 62 | Kristianstad |
| Stena Scanpaper AB | Box 137 | 631 03 | Eskilstuna |
| Stena Scanpaper AB | Box 4088 | 400 40 | Gothenburg |
| Stena Stål AB | Kvekatorpsvägen 31 | 311 32 | Falkenberg |
| Stena Stål AB | Skeppsgatan 1 | 721 32 | Västerås |
| Stensele Såg i Storuman AB | Gamla Vilhelminavägen 2 | 923 21 | Stensele |
| Stiftelsen Dal-Västra Värmlands Järnväg (DVVJ) | Box 14 | 666 21 | Bengtsfors |
| Stockholms hamn AB | Box 27314 | 102 54 | Stockholm |
| Stockholms kultursällskap för ånga och järnväg | Box 35 | 191 21 | Sollentuna |
| Stockholms stad, gatu och fastighetskontoret | Box 8311 | 104 20 | Stockholm |
| Stora Enso Fine Paper AB | Nymölla bruk | 295 80 | Nymölla |
| Stora Enso Fors AB | | 774 89 | Fors |
| Stora Enso Hylte AB | att: Anders Magnusson | 314 81 | Hyltebruk |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Stora Enso Kvarnsveden AB | | 781 83 | Borlänge |
| Stora Enso Packaging Boards, Skoghalls bruk | Box 501 | 663 29 | Skoghall |
| Stora Enso Pulp | Box 4 | 817 21 | Norrsundet |
| Stora Enso Pulp AB | | 814 81 | Skutskär |
| Stora Enso Timber AB | Box 502 | 820 20 | Ljusne |
| Structo AB | Box 1003 | 688 29 | Storfors |
| Strömsunds kommun | Box 500 | 833 24 | Strömsund |
| STT Svensk Tågteknik AB | Gölgatan 8A | 574 34 | Nässjö |
| Sundsvalls Hamn AB | Box 805 | 851 23 | Sundsvall |
| Sundsvalls kommun | Gatu och Markavd. | 851 85 | Sundsvall |
| Surahammars Bruk AB | Box 201 | 735 23 | Surahammar |
| Swedish Match Distribution AB,Solna | | 171 89 | Solna |
| Swedspan AB | Box 502 | 577 26 | Hultsfred |
| Swedwire AB | Box 170 | 432 24 | Varberg |
| SweMaint AB | Utbyvägen 151 | 415 07 | Gothenburg |
| Svenska Lantmännen Ek. för. | Box 905 | 601 19 | Norrköping |
| Svenska Lantmännen Ek.för | Box 1743 | 701 17 | Örebro |
| Svenska Lantmännen Ek.för. | | 311 83 | Falkenberg |
| Svenska Statoil AB Gasol/LPG | Torkel Knutssons gata 24 | 118 88 | Stockholm |
| Sveriges Järnvägsmuseum | Box 407 | 801 05 | Gävle |
| SWT Swedtrac Sverige AB | Box 7092 | 170 07 | Solna |
| Sydkraft Mälarvärme AB | Box 1822 | 701 18 | Örebro |
| Sydkraft Sakab | Box 904 | 692 85 | Kumla |
| Sydskånes Avfallsaktiebolag | Box 50344 | 202 13 | Malmö |
| Sydåtervinning AB | Sturkögatan 2 | 211 24 | Malmö |
| SÅBI Pellets AB | Götafors ind.omr. | 567 92 | Vaggeryd |
| Sågverkens Trädprodukter AB | Storsjöstråket 15 | 831 34 | Östersund |
| Säffle kommun | | 661 80 | Säffle |

| Name | Address | Post code | Place |
|---|---|---|---|
| Sällskapet Ostkustbanans Vänner (OKBv) | Box 458 | 851 06 | Sundsvall |
| Söderberg & Haak Maskin AB | Box 504 | 245 25 | Staffanstorp |
| Söderhamns Stuveri & Hamn AB | Box 5082 | 826 05 | Söderhamn |
| Södertälje Hamn AB | Box 2016 | 151 02 | Södertälje |
| Södertälje kommun | Samhjällsbyggnadskontoret | 151 89 | Södertälje |
| Södra Cell | | 383 25 | Mönsterås |
| Södra Cell AB | Mörrums Bruk | 375 86 | Mörrum |
| Södra Cell Värö | Värö Bruk | 430 24 | Väröbacka |
| Sölvesborgs Stuveri & Hamn AB | Yttershamnen | 294 35 | Sölvesborg |
| Tankmobil AB | Box 54 | 271 22 | Ystad |
| Tarkett AB | | 289 89 | Hanaskog |
| Terminal West AB | Box 18 | 432 21 | Varberg |
| Terramet Stålcenter AB | Box 45 | 551 12 | Jönköping |
| Tetra pak Business Support AB | Ruben Rausings Gata | 221 86 | Lund |
| Tetra Pak Packaging Material AB | Box 502 | 686 28 | Sunne |
| TGOJ trafik AB | Gredbyvägen 3-5 | 632 21 | Eskilstuna |
| Thule Trailers AB | Industrigatan 16 | 553 02 | Jönköping |
| Tibnor AB | Box 909 | 731 29 | Köping |
| Tibnor AB | Box 4260 | 102 66 | Stockholm |
| Tibnor AB Stockholm | Box 4260 | 102 66 | Stockholm |
| Tibnor Sundsvall AB | Box 770 | 851 22 | Sundsvall |
| Timrå kommun | Kultur och Teknik | 861 82 | Timrå |
| Tjärnviks Trä AB | Gryttje 1372 | 820 77 | Gnarp |
| Transportstaden Örebro AB C/O Brinnova Fastigheter | Verksatadsgatan 13 | 252 27 | Helsingborg |
| Trelleborgs Hamn AB | Box 51 | 231 21 | TRELLEBORG |
| Tågåkeriet i Bergslagen AB (TÅGAB) | Bangårdsgatan 2 | 681 30 | Kristinehamn |
| Uddevalla Hamnterminal AB | Box 543 | 451 21 | Uddevalla |

Annex A.2.1 List of infrastructure managers

| Name | Address | Post code | Place |
|---|---|---|---|
| Umeå Hamn AB | Box 83 | 913 22 | Holmsund |
| Umeå kommun, Samhällsbyggnadskontoret | | 901 84 | Umeå |
| Unilever Bestfoods AB | Box 156 | 751 04 | UPPSALA |
| Unilever Bestfoods AB/Slotts | Box 156 | 751 04 | Uppsala |
| Univar AB | Box 48 | 401 20 | Gothenburg |
| Univar AB | Box 4072 | 203 11 | Malmö |
| Uppsala kommun, Gatu & Trafikkontoret | | 753 75 | Uppsala |
| Ursvikens Mekaniska Verkstads AB | Mekanvägen 71 | 932 82 | Ursviken |
| Waggeryd Cell AB | Box 7 | 567 21 | Vaggeryd |
| Vagnmakarens samfällighetsförening | c/o Gävle-Dala Inkasso AB | 801 37 | Gävle |
| Vallviks Bruk AB | | 820 21 | Vallvik |
| Varbergs kommun | | 432 80 | Varberg |
| Wasabröd AB | | 682 82 | Filipstad |
| Vattenfall AB Värme Norden | Box 600 | 753 82 | Uppsala |
| Vattenfall Eldistribution AB | | 191 97 | Sollentuna |
| Vectus LTD | Box 570 | 752 37 | Uppsala |
| Vetlanda kommun, gatukontoret | | 574 80 | Vetlanda |
| Vida Alvesta AB/Tongen 17 | Box 100 | 342 21 | Alvesta |
| Vida Hestra AB | Box 119 | 330 27 | Hestra |
| Vilhelmina kommun | | 912 81 | Vilhelmina |
| VLT Press AB | Box 873 | 721 23 | Västerås |
| Volvo Personvagnar AB, Karosskomponenter | | 293 80 | Olofström |
| Volvo Powertrain Corporation | Volvo Division, Facility | 541 87 | Skövde |
| Volvo Wheel Loaders AB | Box 303 | 671 83 | Arvika |
| Vopak Logistics Nordic AB | Brännoljegatan, | 418 34 | Gothenburg |
| Vopak Logistics Nordic AB | Brännoljegatan 12 | 418 34 | Gothenburg |
| Vossloh Nordic Switch System AB | Box 1512 | 271 00 | Ystad |
| VTAB | | 405 02 | Gothenburg |

| Name | Address | Post code | Place |
|---|---|---|---|
| Vänerhamn AB | Stuvargatan 1 | 652 21 | Karlstad |
| Värnamo kommun | Tekniska Kontoret | 331 83 | Värnamo |
| Västerberslagens Värme AB | Box 860 | 771 28 | Ludvika |
| Västerbottens-Kuriren AB | | 901 70 | Umeå |
| Västerviks kommun | | 593 80 | Västervik |
| Västerås stad, fastighetskontoret | | 721 87 | Västerås |
| Yara AB | Box 908 | 731 29 | Köping |
| Yara AB | Box 516 | 261 24 | Landskrona |
| Yara AB | Kommendantvägen | 602 38 | Norrköping |
| Ystad Hamn Logistik AB | Hamntorget 2 | 271 39 | Ystad |
| Ystads kommun, Teknik och Fastighet | Tekniska förvaltningen | 271 80 | Ystad |
| Zamia Fastighets AB/ Norrvidden Fastigheter AB | Box 179 | 851 03 | Sundsvall |
| Åhus Hamn & Stuveri AB | Krangatan 2 | 296 32 | Åhus |
| Åkers Sweden AB | | 640 60 | Åkers styckebruk |
| Åre Kommun, Tekniska Avdelningen | Box 201 | 830 05 | Järpen |
| Älmhults kommun | Box 500 | 343 23 | Älmhult |
| Älmhults Terminal AB | Box 500 | 343 23 | Älmhult |
| Älvsbyns kommun | Storgatan | 942 85 | Älvsbyn |
| Ättehögen Ö:a 3 KB | Box 27106 | 102 52 | Stockholm |
| Örebro kommun, tekniska förvaltningen | Box 33 300 | 701 35 | Örebro |
| Öresundsbrokonsortiet | Vester Sögade 10 | DK160 1 | Copenhagen |
| Östersunds kommun | Nämndkontoret | 831 82 | Östersund |

## Annex A.2.2: List of active railway undertakings 2006

| Name | Address | Post code | Place |
|---|---|---|---|
| AB Motala Verkstad | Box 950 | 591 29 | Motala |
| AB Sandvik Materials Technology | | 811 81 | Sandviken |
| AB SkandiaTransport | Box 50 | 261 22 | Landskrona |
| AB Storstockholms lokaltrafik | | 105 73 | Stockholm |
| ABetong Precon AB | Hästhagen | 340 30 | Vislanda |
| Alstom Transport AB | Gamla Brogatan 34 | 111 20 | Stockholm |
| A-Train AB (Arlanda Express) | Box 130 | 101 22 | Stockholm |
| Axel Bergkvist AB | Box 401 | 793 13 | Insjön |
| Bergslagernas Järnvägssällskap (BJs) | Bergslags-Lärje | 415 02 | Gothenburg |
| Billerud AB Gruvöns Bruk | Box 500 | 664 28 | Grums |
| Billerud Skärblacka AB | Skärblacka Bruk | 617 10 | Skärblacka |
| Bläse Industrimuseum | Fleringe | 620 34 | Lärbro |
| Boliden Mineral AB, Rönnskärsverken | Smältverk, Rönnskär | 932 81 | Skelleftehamn |

| Name | Address | Post code | Place |
|---|---|---|---|
| Bombardier Transportation Sweden AB | Att. Christoffer Wendel | 721 73 | Västerås |
| Copenhagen Malmö Port AB | Box 566 | 201 25 | Malmö |
| Danisco Sugar AB, Arlövs Sockerbruk | Box 32 | 232 21 | Arlöv |
| Dow Sverige AB | Box 783 | 601 17 | Norrköping |
| Ekefors Skrothandel AB | Ekefors | 514 94 | Sjötofta |
| EuroMaint Rail AB | Box 1555 | 171 29 | Solna |
| Föreningen Böda Skogsjärnväg | Grankulla 1473 | 380 75 | Byxelkrok |
| Föreningen Gotlandståget | Hesselby jernvägsstationen | 620 24 | Dalhem |
| Föreningen Nynäshamns järnvägsmuseum (NJM) | Nynäsgårds lokstall | 149 43 | Nynäshamn |
| Green Cargo AB | Box 39 | 171 11 | Solna |
| Grängesbergsbanornas Järnvägsmuseum (GBBJ) | Box 82 | 772 22 | Grängesberg |
| Göteborgs spårvägar AB | Box 424 | 401 26 | Gothenburg |
| Göteborgs stad, Trafikkontoret | Box 2403 | 403 16 | Gothenburg |
| Holmen Paper AB | | 763 81 | Hallstavik |

Annex A.2.2 List of railway undertakings

| Name | Address | Post code | Place |
|---|---|---|---|
| Imerys Mineral AB | Ekonomivägen 3-5 | 436 33 | Askim |
| Industrial Quality Recycling AB (IQR) | Stallbackavägen 26 | 461 38 | Trollhättan |
| Inlandsbanan AB (IBAB) | Box 561 | 831 27 | Östersund |
| Interfleet Technology | Box 35 | 171 11 | Solna |
| ISS TraffiCare AB | Box 905 | 170 09 | Solna |
| Järnvägsföreningen Dellenbanans vänner AB | c/o Nordins, Tingsvägen 1 | 820 60 | Delsbo |
| Järnvägssällskapet Åmål-Årjängs Järnvägs (JÅÅJ) | Stenbecksgatan 10 | 662 32 | Åmål |
| Kalmar Veterantåg (KV) | Box 331 | 391 23 | Kalmar |
| Korsnäs AB | | 801 81 | Gävle |
| Korsnäs Frövi AB | Korsnäs Frövi AB | 718 80 | Frövi |
| Malmbanans vänner | Arcusvägen 95 | 975 94 | Luleå |
| Malmtrafik i Kiruna AB (MTAB) | LKAB FK | 981 86 | Kiruna |
| Malmö-Limhamns Järnvägs AB | Box 30022 | 200 61 | Limhamn |
| Midwaggon AB | Bultgatan 1 | 841 31 | Ånge |

| Name | Address | Post code | Place |
|---|---|---|---|
| Museiföreningen Anten-Gräfsnäs Järnväg (AGJ) | Box 300 | 441 26 | Alingsås |
| Museiföreningen Gefle-Dala jernväg (MfGDJ) | Centralplan | 791 31 | Falun |
| Museiföreningen Munkedals Jernväg | Östra Åtorpsvägen 18 | 455 31 | Munkedal |
| Museiföreningen Stockholm-Roslagens Järnvägar ULJ | Box 3076 | 750 03 | Uppsala |
| Museiföreningen Wadstena Fogelsta Järnväg | Järnvägsstationen | 592 30 | Vadstena |
| Museiföreningen Östra Södermanlands Järnväg (ÖSlJ) | Box 53 | 647 22 | Mariefred |
| Museispårvägen Malmköping AB (MUMA) | Falkenberggatan 2 | 115 21 | Stockholm |
| Museisällskapet Jädraås-Tallås Järnväg (JTJ) | Jädraås station | 816 91 | Jädraås |
| Nora Bergslags Veteranjernväg (NBVJ) | Box 52 | 713 22 | Nora |
| Nordic Paper Seffle AB | Box 61 | 661 29 | Säffle |
| Nordkalk AB | Box 901 | 731 29 | Köping |
| Norrköpings kommun | Tekniska nämnden | 601 81 | Norrköping |
| Nässjö järnvägsmuseum | Box 7 | 571 21 | Nässjö |
| Ohs bruks järnvägs museiförening (OBJ) | Box 179 | 351 04 | Växjö |

Annex A.2.2 List of railway undertakings

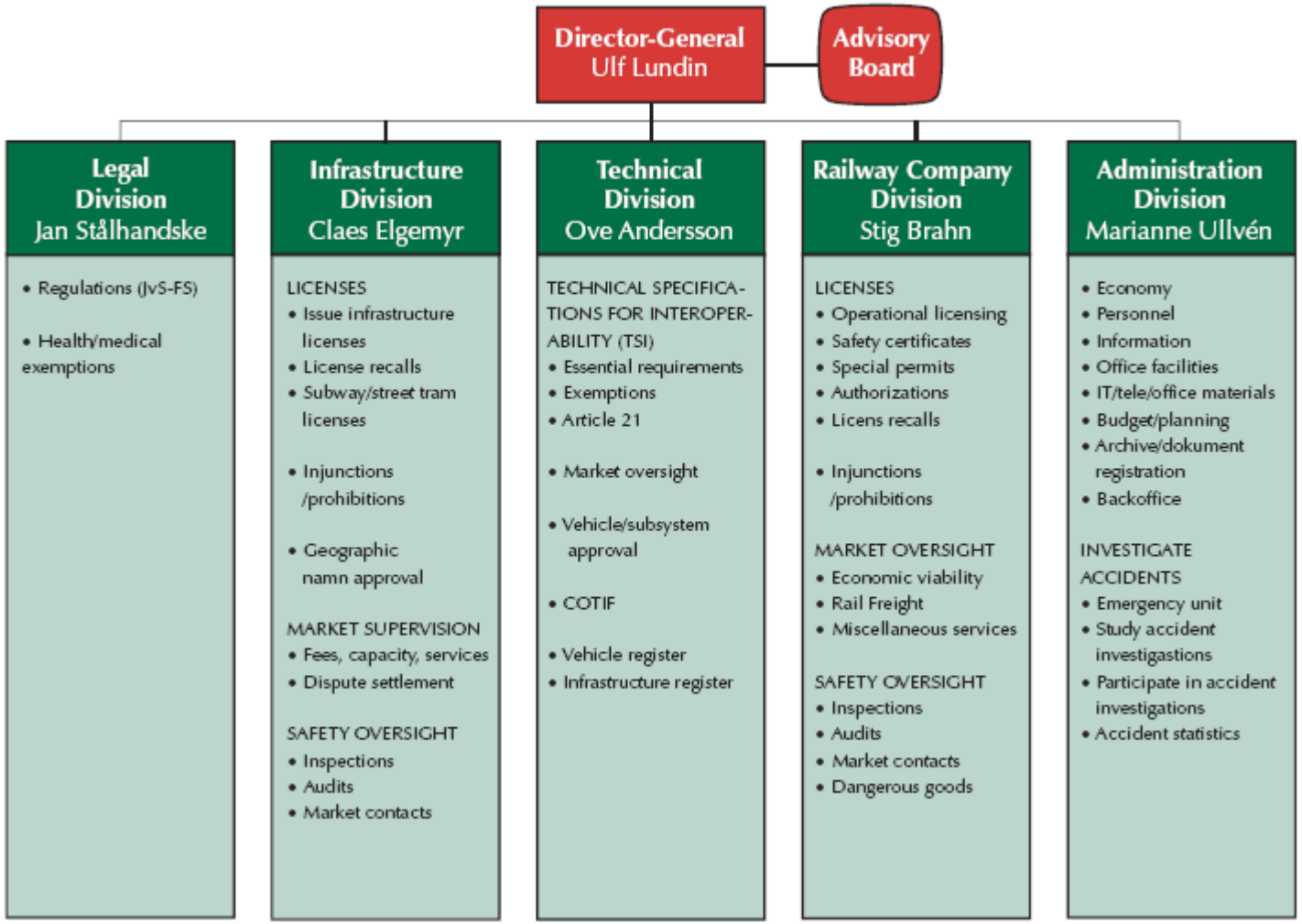
| Name | Address | Post code | Place |
|---|---|---|---|
| Outokumpu Stainless AB | | 693 81 | Degerfors |
| Ovako Bar AB | | 777 80 | Smedjebacken |
| Perstorp Fastighets AB | | 284 80 | Perstorp |
| Rexam Glass Limmared AB | | 514 83 | Limmared |
| Ruukki Sverige AB, Virsbo | Box 100 | 730 61 | Virsbo |
| Saint Gobain Isover AB | Gunnebovägen 1 | 860 35 | Söråker |
| Sandviken Energi AB | Gävlevägen 96 | 811 40 | Sandviken |
| SCA Hygiene Paper AB, Edet bruk | | 463 81 | Lilla Edet |
| Scana Steel Björneborg AB | Kristinehamnsvägen 1 | 680 71 | Björneborg |
| ScanPole Sverige AB | Åsavägen 10 | 690 45 | Åsbro |
| Shell Raffinaderi AB | Box 8889 | 402 72 | Gothenburg |
| Skara-Lundsbrunns järnvägar (SkLJ | Tullportagatan 1 | 532 30 | Skara |
| Skånska Järnvägar AB | Brösarps stationsväg 3 | 277 55 | Brösarp |
| Smalspåret i Hultsfred AB | c/o Callvik, | 141 59 | Huddinge |

| Name | Address | Post code | Place |
|---|---|---|---|
| SSAB Oxelösund AB | | 613 80 | Oxelösund |
| SSAB Tunnplåt AB | | 781 84 | Borlänge |
| SSAB Tunnplåt AB Ämnen Luleå | | 971 88 | Luleå |
| Stena Gotthard Återvinning AB | Box 4088 | 400 40 | Gothenburg |
| Stiftelsen Dal-Västra Värmlands Järnväg (DVVJ) | Box 14 | 666 21 | Bengtsfors |
| Stockholms kultursällskap för ånga och järnväg | Box 35 | 191 21 | Sollentuna |
| Stora Enso Fine Paper AB | Nymölla bruk | 295 80 | Nymölla |
| Stora Enso Fors AB | | 774 89 | Fors |
| Stora Enso Packaging Boards, Skoghalls bruk | Box 501 | 663 29 | Skoghall |
| STT Svensk Tågteknik AB | Gölgatan 8A | 574 34 | Nässjö |
| Surahammars Bruk AB | Box 201 | 735 23 | Surahammar |
| SweMaint AB | Utbyvägen 151 | 415 07 | Gothenburg |
| Svenska Statoil AB Gasol/LPG | Torkel Knutssons gata 24 | 118 88 | Stockholm |
| Sveriges Järnvägsmuseum | Box 407 | 801 05 | Gävle |

Annex A.2.2 List of railway undertakings

| Name | Address | Post code | Place |
|---|---|---|---|
| SWT Swedtrac Sverige AB | Box 7092 | 170 07 | Solna |
| Sällskapet Ostkustbanans Vänner (OKBv) | Box 458 | 851 06 | Sundsvall |
| TGOJ trafik AB | Gredbyvägen 3-5 | 632 21 | Eskilstuna |
| Tågåkeriet i Bergslagen AB (TÅGAB) | Bangårdsgatan 2 | 681 30 | Kristinehamn |
| Vossloh Nordic Switch System AB | Box 1512 | 271 00 | Ystad |
| Yara AB | Box 908 | 731 29 | Köping |
| Åkers Sweden AB | | 640 60 | Åkers styckebruk |

## Annex B.1.1 The Swedish Rail Agency's organisation chart 2006




Latest version of organisation chart taken from the Swedish Rail Agency's home page: www.jvs.se

## Annex C. Statistical data, common safety indicators (CSIs)

### Back translation of a Swedish translation of an ERA form for data on common safety indicators (CSIs)

| Field No | Data code | Description of data | Data format | Data | Def. |
|---|---|---|---|---|---|
| **0. Details on reporting country** | | | | | |
| 01 | CC | Reporting country | Format: ISO standard with two letters in accordance with ISO 3166 alpha-2. | SE | |
| 02 | YY | Information concerning year | Format: YYYY, four digits | 2006 | |
| **1.1a. Number of accidents, total and broken down by accident categories** | | | | | |
| 1 | N00 | Total number of accidents | Numerical value | 51 | 1. |
| 2 | N01 | Number of train collisions including train impact with objects within the clearance gauge | Numerical value | 3 | 1. |
| 3 | N02 | Number of train derailments | Numerical value | 5 | 1. |
| 4 | N03 | Number of level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 16 | 1. |
| 5 | N04 | Number of accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 17 | 1. |
| 6 | N05 | Number of fires in rolling stock | Numerical value | 3 | 1. |
| 7 | N06 | Number of other accidents | Numerical value | 7 | 1. |
| **1.1a. Total number of suicides** | | | | | |
| 8 | N07 | Total number of suicides | Numerical value | 69 | 1. |
| **1.1b. Number of accidents relative to train kilometres (millions), total and broken down by accident categories** | | | | | |
| 9 | N10 | Total number of accidents relative to train kilometres | Numerical value (number per million train-km) | 0,386 | |
| 10 | N11 | Number of train collisions including train impact with objects within the clearance gauge relative to train | Numerical value (number per million train-km) | 0,023 | |

| | | | | | |
|---|---|---|---|---|---|
| | | kilometres | | | |
| 11 | N12 | Number of train derailments relative to train kilometres | Numerical value (number per million train-km) | 0,038 | |
| 12 | N13 | Number of level-crossing accidents including accidents involving pedestrians at level crossing relative to train kilometres | Numerical value (number per million train-km) | 0,121 | |
| 13 | N14 | Number of accidents to persons caused by rolling stock in motion relative to train kilometres, with the exception of suicides | Numerical value (number per million train-km) | 0,129 | |
| 14 | N15 | Number of fires in rolling stock relative to train kilometres | Numerical value (number per million train-km) | 0,023 | |
| 15 | N16 | Number of other accidents relative to train kilometres | Numerical value (number per million train-km) | 0,053 | |
| **1.1b. Number of suicides relative to train kilometres (millions)** | | | | | |
| 16 | N17 | Number of suicides relative to train-km | Numerical value (number per million train-km) | 0,522 | |
| **1.2a. Total number of people seriously injured, in all accidents and broken down by accident categories** | | | | | 2. |
| 17 | TS00 | In accidents, total | Numerical value | 16 | |
| 18 | TS01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 19 | TS02 | In train derailments | Numerical value | 0 | |
| 20 | TS03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 8 | |
| 21 | TS04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 7 | |
| 22 | TS05 | In fires in rolling stock | Numerical value | 0 | |
| 23 | TS06 | In other accidents | Numerical value | 1 | |
| **1.2b. Total number of people seriously injured relative to train kilometres (millions), in all accidents and broken down by accident categories** | | | | | |
| 24 | TS10 | In accidents, total | Numerical value (number per million train-km) | 0,121 | |
| 25 | TS11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 26 | TS12 | In train derailments | Numerical value (number per million train- | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| | | | km) | | |
| 27 | TS13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,060 | |
| 28 | TS14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,053 | |
| 29 | TS15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 30 | TS16 | In other accidents | Numerical value (number per million train-km) | 0,008 | |
| **1.2a. Number of passengers seriously injured, total and broken down by accident categories** | | | | | 1. |
| 31 | PS00 | In accidents, total | Numerical value | 1 | |
| 32 | PS01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 33 | PS02 | In train derailments | Numerical value | 0 | |
| 34 | PS03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 35 | PS04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 1 | |
| 36 | PS05 | In fires in rolling stock | Numerical value | 0 | |
| 37 | PS06 | In other accidents | Numerical value | 0 | |
| **1.2b. Number of passengers seriously injured relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 38 | PS10 | In accidents, total | Numerical value (number per million train-km) | 0,008 | |
| 39 | PS11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 40 | PS12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 41 | PS13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 42 | PS14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,008 | |
| 43 | PS15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 44 | PS16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| **1.2c. Number of passengers seriously injured relative to passenger-km (billions), total and broken down by accident categories** | | | | | |
| 45 | PS20 | In accidents, total | Numerical value (number per billion passenger-km) | 0,103 | |
| 46 | PS21 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per billion passenger-km) | 0,000 | |
| 47 | PS22 | In train derailments | Numerical value (number per billion passenger-km) | 0,000 | |
| 48 | PS23 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per billion passenger-km) | 0,000 | |
| 49 | PS24 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per billion passenger-km) | 0,001 | |
| 50 | PS25 | In fires in rolling stock | Numerical value (number per billion passenger-km) | 0,000 | |
| 51 | PS26 | In other accidents | Numerical value (number per billion passenger-km) | 0,000 | |
| **1.2a. Number of railway staff seriously injured incl. staff of contractors, total and broken down by accident categories** | | | | | 1. |
| 52 | SS00 | In accidents, total | Numerical value | 1 | |
| 53 | SS01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 54 | SS02 | In train derailments | Numerical value | 0 | |
| 55 | SS03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 56 | SS04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |
| 57 | SS05 | In fires in rolling stock | Numerical value | 0 | |
| 58 | SS06 | In other accidents | Numerical value | 1 | |
| **1.2b. Number of railway staff seriously injured incl. staff of contractors relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 59 | SS10 | In accidents, total | Numerical value (number per million train-km) | 0,008 | |
| 60 | SS11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 61 | SS12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| 62 | SS13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 63 | SS14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 64 | SS15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 65 | SS16 | In other accidents | Numerical value (number per million train-km) | 0,008 | |
| **1.2a. Number of road users seriously injured on level crossing, total and broken down by accident categories** | | | | | 1. |
| 66 | LS00 | In accidents, total | Numerical value | 8 | |
| 67 | LS01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 68 | LS02 | In train derailments | Numerical value | 0 | |
| 69 | LS03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 8 | |
| 70 | LS04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |
| 71 | LS05 | In fires in rolling stock | Numerical value | 0 | |
| 72 | LS06 | In other accidents | Numerical value | 0 | |
| **1.2b. Number of road users seriously injured on level crossing relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 73 | LS10 | In accidents, total | Numerical value (number per million train-km) | 0,060 | |
| 74 | LS11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 75 | LS12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 76 | LS13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,060 | |
| 77 | LS14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 78 | LS15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 79 | LS16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| **1.2a. Number of unauthorised persons seriously injured, total and broken down by accident categories** | | | | | 1. |
| 80 | US00 | In accidents, total | Numerical value | 4 | |
| 81 | US01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 82 | US02 | In train derailments | Numerical value | 0 | |
| 83 | US03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 84 | US04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 4 | |
| 85 | US05 | In fires in rolling stock | Numerical value | 0 | |
| 86 | US06 | In other accidents | Numerical value | 0 | |
| **1.2b. Number of unauthorised persons seriously injured relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 87 | US10 | In accidents, total | Numerical value (number per million train-km) | 0,030 | |
| 88 | US11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 89 | US12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 90 | US13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 91 | US14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,030 | |
| 92 | US15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 93 | US16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.2a. Number of other persons seriously injured, total and broken down by accident categories** | | | | | 1. |
| 94 | OS00 | In accidents, total | Numerical value | 2 | |
| 95 | OS01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 96 | OS02 | In train derailments | Numerical value | 0 | |
| 97 | OS03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |

| | | | | | |
|---|---|---|---|---|---|
| 98 | OS04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 2 | |
| 99 | OS05 | In fires in rolling stock | Numerical value | 0 | |
| 100 | OS06 | In other accidents | Numerical value | 0 | |
| **1.2b. Number of other persons seriously injured relative to train-km (millions), total or broken down by accident categories** | | | | | |
| 101 | OS10 | In accidents, total | Numerical value (number per million train-km) | 0,015 | |
| 102 | OS11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 103 | OS12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 104 | OS13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 105 | OS14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,015 | |
| 106 | OS15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 107 | OS16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.3a. Total number of people killed, in all accidents and broken down by accident categories** | | | | | 1. |
| 108 | TK00 | In accidents, total | Numerical value | 19 | |
| 109 | TK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 110 | TK02 | In train derailments | Numerical value | 0 | |
| 111 | TK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 9 | |
| 112 | TK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 10 | |
| 113 | TK05 | In fires in rolling stock | Numerical value | 0 | |
| 114 | TK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Total number of people killed relative to train kilometres (millions), in all accidents and broken down by accident categories** | | | | | |
| 115 | TK10 | In accidents, total | Numerical value (number per million train-km) | 0,144 | |

| | | | | | |
|---|---|---|---|---|---|
| 116 | TK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 117 | TK12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 118 | TK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,068 | |
| 119 | TK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,076 | |
| 120 | TK15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 121 | TK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.3a. Number of passengers killed, total and broken down by accident categories** | | | | | |
| 122 | PK00 | In accidents, total | Numerical value | 0 | |
| 123 | PK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 124 | PK02 | In train derailments | Numerical value | 0 | |
| 125 | PK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 126 | PK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |
| 127 | PK05 | In fires in rolling stock | Numerical value | 0 | |
| 128 | PK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Number of passengers killed relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 129 | PK10 | In accidents, total | Numerical value (number per million train-km) | 0,000 | |
| 130 | PK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 131 | PK12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 132 | PK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 133 | PK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 134 | PK15 | In fires in rolling stock | Numerical value (number per million train- | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| | | | km) | | |
| 135 | PK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.3c. Number of passengers killed relative to passenger-km (billions), total and broken down by accident categories** | | | | | |
| 136 | PK20 | In accidents, total | Numerical value (number per billion passenger-km) | 0,000 | |
| 137 | PK21 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per billion passenger-km) | 0,000 | |
| 138 | PK22 | In train derailments | Numerical value (number per billion passenger-km) | 0,000 | |
| 139 | PK23 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per billion passenger-km) | 0,000 | |
| 140 | PK24 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per billion passenger-km) | 0,000 | |
| 141 | PK25 | In fires in rolling stock | Numerical value (number per billion passenger-km) | 0,000 | |
| 142 | PK26 | In other accidents | Numerical value (number per billion passenger-km) | 0,000 | |
| **1.3a. Number of railway staff killed incl. staff of contractors, total and broken down by accident categories** | | | | | |
| 143 | SK00 | In accidents, total | Numerical value | 0 | |
| 144 | SK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 145 | SK02 | In train derailments | Numerical value | 0 | |
| 146 | SK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 147 | SK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |
| 148 | SK05 | In fires in rolling stock | Numerical value | 0 | |
| 149 | SK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Number of railway staff killed incl. staff of contractors, total and broken down by accident categories** | | | | | |
| 150 | SK10 | In accidents, total | Numerical value (number per million train-km) | 0,000 | |
| 151 | SK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 152 | SK12 | In train derailments | Numerical value (number per million train- | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| | | | km) | | |
| 153 | SK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 154 | SK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 155 | SK15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 156 | SK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.3a. Number of road users killed on level crossing, total and broken down by accident categories** | | | | | 1. |
| 157 | LK00 | In accidents, total | Numerical value | 9 | |
| 158 | LK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 159 | LK02 | In train derailments | Numerical value | 0 | |
| 160 | LK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 9 | |
| 161 | LK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |
| 162 | LK05 | In fires in rolling stock | Numerical value | 0 | |
| 163 | LK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Number of road users killed on level crossing relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 164 | LK10 | In accidents, total | Numerical value (number per million train-km) | 0,068 | |
| 165 | LK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 166 | LK12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 167 | LK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,068 | |
| 168 | LK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 169 | LK15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 170 | LK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |

| | | | | | |
|---|---|---|---|---|---|
| **1.3a. Number of unauthorised persons killed, total and broken down by accident categories** | | | | | 1. |
| 171 | UK00 | In accidents, total | Numerical value | 10 | |
| 172 | UK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 173 | UK02 | In train derailments | Numerical value | 0 | |
| 174 | UK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 175 | UK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 10 | |
| 176 | UK05 | In fires in rolling stock | Numerical value | 0 | |
| 177 | UK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Number of unauthorised persons killed relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 178 | UK10 | In accidents, total | Numerical value (number per million train-km) | 0,076 | |
| 179 | UK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 180 | UK12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 181 | UK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 182 | UK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,076 | |
| 183 | UK15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 184 | UK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **1.3a. Number of other persons killed, total and broken down by accident categories** | | | | | 1. |
| 185 | OK00 | In accidents, total | Numerical value | 0 | |
| 186 | OK01 | In train collisions including train impact with objects within the clearance gauge | Numerical value | 0 | |
| 187 | OK02 | In train derailments | Numerical value | 0 | |
| 188 | OK03 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value | 0 | |
| 189 | OK04 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value | 0 | |

| | | | | | |
|---|---|---|---|---|---|
| 190 | OK05 | In fires in rolling stock | Numerical value | 0 | |
| 191 | OK06 | In other accidents | Numerical value | 0 | |
| **1.3b. Number of other persons killed relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 192 | OK10 | In accidents, total | Numerical value (number per million train-km) | 0,000 | |
| 193 | OK11 | In train collisions including train impact with objects within the clearance gauge | Numerical value (number per million train-km) | 0,000 | |
| 194 | OK12 | In train derailments | Numerical value (number per million train-km) | 0,000 | |
| 195 | OK13 | In level-crossing accidents including accidents involving pedestrians at level crossing | Numerical value (number per million train-km) | 0,000 | |
| 196 | OK14 | In accidents to persons caused by rolling stock in motion, with the exception of suicides | Numerical value (number per million train-km) | 0,000 | |
| 197 | OK15 | In fires in rolling stock | Numerical value (number per million train-km) | 0,000 | |
| 198 | OK16 | In other accidents | Numerical value (number per million train-km) | 0,000 | |
| **2.1a. Number of deficiencies, total and broken down by deficiency categories** | | | | | |
| 199 | 100 | Total number of deficiencies | Numerical value | 556 | |
| 200 | 101 | Total number of broken rails | Numerical value | 256 | 1. |
| 201 | 102 | Total number of track geometry faults | Numerical value | 80 | 1. |
| 202 | 103 | Total number of signalling failures leading to less certain signalling information than required | Numerical value | 8 | 1. |
| 203 | 104 | Total number of unauthorised SPADs (signals passed at danger | Numerical value | 194 | 1. |
| 204 | 105 | Total number of broken wheels on rolling stock (in service) | Numerical value | 8 | 1. |
| 205 | 106 | Total number of broken axles on rolling stock (in service) | Numerical value | 10 | 1. |
| **2.1b. Number of deficiencies relative to train-km (millions), total and broken down by accident categories** | | | | | |
| 206 | 110 | Total number of deficiencies and incidents | Numerical value (number per million train-km) | 4,203 | |
| 207 | 111 | Total number of broken rails | Numerical value (number per million train-km) | 1,935 | |
| 208 | 112 | Total number of track geometry faults | Numerical value (number per million train-km) | 0,605 | |

| | | | | | |
|---|---|---|---|---|---|
| 209 | 113 | Total number of signalling failures leading to less certain signalling information than required | Numerical value (number per million train-km) | 0,060 | |
| 210 | 114 | Total number of unauthorised SPADs (signals passed at danger | Numerical value (number per million train-km) | 1,466 | |
| 211 | 115 | Total number of broken wheels on rolling stock (in service) | Numerical value (number per million train-km) | 0,060 | |
| 212 | 116 | Total number of broken axles on rolling stock (in service) | Numerical value (number per million train-km) | 0,076 | |
| **3.1a. Total cost in euro for all accidents** | | | | | |
| 213 | C00 | Total cost for all accidents | Numerical value (euro) | 67 145 296,24 | |
| 214 | C01 | Cost for people killed | Numerical value (euro) | 35 775 161,29 | 2. |
| 215 | C02 | Cost for people injured | Numerical value (euro) | 8 724 086,02 | 2. |
| 216 | C03 | Cost for replacement or repair of damaged rolling stock and railway infrastructure | Numerical value (euro) | 21 078 726,56 | 1. |
| 217 | C04 | Cost for delays, disturbances and re-routing of traffic, including extra costs for staff and loss of future revenue | Numerical value (euro) | 1 567 322,37 | 1. |
| **3.1b. Costs in euro for all accidents relative to train-km (millions)** | | | | | |
| 218 | C10 | Total cost for all accidents | Numerical value (euro per million train-km) | 507 540,975 | |
| 219 | C11 | Cost for people killed | Numerical value (euro per million train-km) | 270 418,946 | |
| 220 | C12 | Cost for people injured | Numerical value (euro per million train-km) | 65 944,025 | |
| 221 | C13 | Cost for replacement or repair of damaged rolling stock and railway infrastructure | Numerical value (euro per million train-km) | 159 330,855 | |
| 222 | C14 | Cost for delays, disturbances and re-routing of traffic, including extra costs for staff and loss of future revenue | Numerical value (euro per million train-km) | 11 847,149 | |
| **3.2a. Total number of lost working hours for railway staff including the staff of contractors as a consequence of accidents** | | | | | |
| 223 | W00 | Total number of lost working hours for railway staff including the staff of contractors as a consequence of accidents | Numerical value | 2299 | 2. |
| **3.2b. Lost working hours relative to total number of hours worked for railway staff including the staff of contractors** | | | | | |
| 224 | W10 | Percentage of lost working hours relative to total number of working hours for railway staff including the staff of contractors | Numerical value | 0,015% | |
| **4. Indicators related to technical safety of infrastructure and its introduction** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 225 | T01 | Percentage of tracks with ATP in service | Numerical value (%) | 71% | 1 |
| 226 | T02 | Percentage of train-km on tracks with ATP in service | Numerical value (%) | N/A | |
| 227 | T03 | Total number of level crossings | Numerical value | 10 541 | |
| 228 | T04 | Total number of level crossings per line-km | Numerical value | 0,686 | |
| 229 | T05 | Percentage of level crossings with automatic or manual crossing protection | Numerical value (%) | 34% | |
| **5. Indicators relating to the management of safety** | | | | | |
| 230 | A01 | Total number of audits accomplished | Numerical value | 319 | |
| 231 | A02 | Percentage of audits accomplished compared to number planned | Numerical value (%) | 98% | |
| **6. Reference data** | | | | | |
| 232 | R01 | Number of train kilometres | Numerical value (million train-km) | 132,295 | |
| 233 | R02 | Number of kilometres travelled | Numerical value (billion travelling-km) | 9,716 | |
| 234 | R03 | Number of kilometres of rail (double-track lines considered separately) | Numerical value (km) | 15 360,000 | |
| 235 | R04 | Total number of hours worked | Numerical value | 15 163 144 | |
| **Definition used** | | | | | |

1. Safety Directive 2004/49/EC
2. National definition, see explanation in Annex F

## Annex D: List of all important changes in national law and other national regulatory frameworks

| | Legal reference | Date legislation enters into force | Reason for introduction (specify new law or amendment to existing legislation) | Description |
|---|---|---|---|---|
| **General national legislation on railway safety** | No change | | | |
| Legislation concerning NSA | No change | | | |
| Legislation concerning notified body, assessor, third parties' bodies for registration, examination etc. | No change | | | |
| | | | | |
| **National rules concerning railway safety** | No change | | | |
| Rules concerning national safety targets and methods | No change | | | |
| Rules concerning requirements for safety management systems and safety certifications of railway undertakings | No change | | | |
| Rules concerning requirements for safety management systems and safety authorisations for infrastructure | No change | | | |

Annex D. Important changes in national law and other national regulatory frameworks

| | **Legal reference** | **Date legislation enters into force** | **Reason for introduction** (specify new law or amendment to existing legislation) | **Description** |
|---|---|---|---|---|
| managers | | | | |
| Rules concerning requirements for wagon keepers, probably maintenance of vehicles. | No change | | | |
| Rules concerning requirements for maintenance of workshops | No change | | | |
| Rules concerning requirements for the authorisation (approval) of placing in service and maintenance of new or substantially altered rolling stock, including rules for exchange of rolling stock between railway undertakings, registration systems and requirements for testing activities (pilot phase). | Provisions published 2006:<br><br>JVsFS 2006:1 Provision concerning the approval of technical railway subsystems, etc. | | Transposition of EU decision concerning the technical specification for interoperability into the Swedish regulatory framework. | |
| | JVsFS 2006:2 Provisions concerning technical specification for interoperability for the subsystem "Infrastructure" for high-speed rail systems | | | |
| | JVsFS 2006:3 Provisions concerning technical specification for interoperability for the subsystem "Energy supply" for high-speed rail systems | | | |
| | JVsFS 2006:3 Provisions concerning technical specification for interoperability for the subsystem "Energy supply" for high-speed rail systems | | | |
| | JVsFS 2006:4 Provisions concerning technical specification for interoperability for the subsystem "Traffic control" for high-speed rail systems | | | |

Annex D. Important changes in national law and other national regulatory frameworks

| Legal reference | Date legislation enters into force | Reason for introduction (specify new law or amendment to existing legislation) | Description |
|---|---|---|---|
| JVsFS 2006:5 Provisions concerning technical specification for interoperability for the subsystem "Rolling stock" for high-speed rail systems | | | |
| JVsFS 2006:6 Provisions concerning technical specification for interoperability for the subsystem "Maintenance" for high-speed rail systems | | | |
| JVsFS 2006:7 Provisions concerning technical specification for interoperability for the subsystem "Operation" for high-speed rail systems | | | |
| JVsFS 2006:8 Provisions concerning technical specification for interoperability for the subsystem "Rolling stock" for conventional rail systems concerning noise | | | |
| JVsFS 2006:9 Provisions concerning technical specification for interoperability for the subsystem "Traffic control and signalling" for conventional rail systems | | | |
| JVsFS 2006:10 Provisions concerning technical specification for interoperability for the subsystem "Rolling stock" for conventional rail systems concerning wagons | | | |

Annex D. Important changes in national law and other national regulatory frameworks

| | **Legal reference** | **Date legislation enters into force** | **Reason for introduction** (specify new law or amendment to existing legislation) | **Description** |
|---|---|---|---|---|
| Common operating rules of the rail network, including rules related to the signalling system and control command system. | No change | | | |
| Rules setting out requirements for additional internal operating rules (company rules) that must be established by the infrastructure managers and railway undertakings. | No change | | | |
| Rules concerning requirements for staff executing safety-critical tasks, including selection criteria, medical fitness, language use/training and certification | No change | | | |
| Rules concerning the investigation of accidents and incidents, including recommendations | No change | | | |
| Rules concerning requirements for CSIs, including reporting and analysis. | No change | | | |

Annex D. Important changes in national law and other national regulatory frameworks

| | **Legal reference** | **Date legislation enters into force** | **Reason for introduction** **(specify new law or amendment to existing legislation)** | **Description** |
|---|---|---|---|---|
| Rules concerning requirements for authorisation of placing in service infrastructure (tracks, bridges, tunnels, ATC, radio, signalling, interlocking, level crossings, platforms etc.). | No change | | | |

# Annex E: The development of safety certification and authorisation

## E.1 Safety certification pursuant to Directive 2001/14/EC

| | | |
|---|---|---|
| Number of safety certificates issued under Directive **2001/14/EC** held by railway undertakings in 2006 being licensed | in own country | 12 |
| | in another Member State | |

**E.2 Safety certification pursuant to Directive 2004/49/EC**

| | | **New** | **Updated/ amended** | **Renewed** |
|---|---|---|---|---|
| E.2.1. Number of valid safety certificates Part A held by railway undertakings 2006 being licensed | in own country | 0 | 0 | 0 |
| | in another Member State | 0 | 0 | 0 |

| | | **New** | **Updated/ amended** | **Renewed** |
|---|---|---|---|---|
| E.2.2. Number of valid safety certificates Part B held by railway undertakings in 2006 | in own country | 0 | 0 | 0 |
| | in another Member State | 0 | 0 | 0 |

| | | | Accepted | Rejected | Pending |
|---|---|---|---|---|---|
| E.2.3. Number of applications for **safety certificates Part A** submitted by railway undertakings in 2006 being registered | in own country | New certificates | 0 | 0 | 0 |
| | | Updated/amended certificates | 0 | 0 | 0 |
| | | Renewed certificates | 0 | 0 | 0 |
| | in another Member State | New certificates | 0 | 0 | 0 |
| | | Updated/amended certificates | 0 | 0 | 0 |
| | | Renewed certificates | 0 | 0 | 0 |

| | | | Accepted | Rejected | Pending |
|---|---|---|---|---|---|
| E.2.4. Number of applications for **safety certificates Part B** submitted by railway undertakings in 2006 being registered | in own country | New certificates | 0 | 0 | 0 |
| | | Updated/amended certificates | 0 | 0 | 0 |
| | | Renewed certificates | 0 | 0 | 0 |
| | in another Member State | New certificates | 0 | 0 | 0 |
| | | Updated/amended certificates | 0 | 0 | 0 |
| | | Renewed certificates | 0 | 0 | 0 |

## E.3 Safety authorisation pursuant to Directive 2004/49/EC

| | New | Updated/ amended | Renewed |
|---|---|---|---|
| E.3.1 Number of valid safety authorisations held by infrastructure managers in 2006 being registered in own country | 0 | 0 | 0 |

| | | Accepted | Rejected | Pending |
|---|---|---|---|---|
| E.3.2. Number of applications for safety authorisations submitted by infrastructure managers in 2006 being registered in own country | New authorisation | 0 | 0 | 0 |
| | Updated/amended authorisation | 0 | 0 | 0 |
| | Renewed authorisation | 0 | 0 | 0 |

## E.4. Procedural aspects - Safety certificate Part A

| | | New | Updated/ amended | Renewed |
|---|---|---|---|---|
| Mean time after having received all necessary information between the receipt of an application and the final delivery of a safety certificate Part A in 2006 for railway undertakings holding | a licence released by own country | 0 | 0 | 0 |
| | a licence released by another Member State | 0 | 0 | 0 |

## E.5. Procedural aspects - Safety certificate Part B

| | | New | Updated/ Amended | Renewed |
|---|---|---|---|---|
| Mean time after having received all necessary information between the receipt of an application and the final delivery of a safety certificate Part B in 2006 for railway undertakings holding | a licence released by own country | 0 | 0 | 0 |
| | a licence released by another Member State | 0 | 0 | 0 |

## E.6. Procedural aspects - Safety authorisations

| | | New | Updated/ amended | Renewed |
|---|---|---|---|---|
| Mean time after having received all necessary information between the receipt of an application and the final delivery of a safety authorisation in 2006 for infrastructure managers holding | a licence released by own country | 0 | 0 | 0 |
| | a licence released by another Member State | 0 | 0 | 0 |

## Annex F: Definitions used

# Common safety indicators (CSIs) – global definitions

**Accident**
An unwanted or unintended sudden event or a specific chain of such events which have harmful consequences; accidents are divided into the following categories: collisions, derailments, level-crossing accidents, accidents to persons caused by rolling stock in motion, fires and others (Directive 2004/49/EC Article 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, tracks, other installations or the environment, or extensive disruptions to traffic. Accidents in workshops, warehouses and depots are excluded (Regulation 1192/2003/EC[19]).

Accidents that have to be reported as CSIs consist in a combination of the terms above. In brief, this means that accidents that have to be reported as CSI should:

- be related to rolling stock in motion
- have led to at least one person being killed or seriously injured or led to considerable damage to stock, tracks or other installations or to extensive disruptions to traffic
- not have occurred in workshops, warehouses or depots
- be unwanted or unintended, i.e. excluding vandalism and sabotage, suicides being presented separately

The phrase *considerable damage to stock, tracks or other installations* means damage leading to costs of at least 150,000 euro (approximately 1.4 million SEK).

The phrase *extensive disruptions to traffic* means traffic completely blocked for at least six hours.

*Person killed* means any person killed immediately or dying within 30 days as a result of an accident (Regulation 1192/2003/EC).

*Person seriously injured* means any person who was hospitalised for more than 24 hours as a result of an accident (Regulation 1192/2003/EC).

*Comment: Seriously injured persons include those who spend more than 24 hours in hospital owing to the event.*

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[19] This definition is broadly in line with the definition of "significant accident" in Regulation 1192/2003/EC, which in Swedish has been translated as *allvarlig olycka* "serious accident". The reason that this document uses *betydande olycka* ("significant accident") is that the term "serious accident" of the Safety Directive (2004/49/EC) also has been translated as *allvarlig olycka* but with another significance. Furthermore, the term "stock" in the definition occurring in regulation 1192/2003/EC has been translated as *varor*, which seems illogical since "stock" in connection with railways usually refers to "rolling stock", i.e. *rullande materiel*. The Swedish Rail Agency has chosen *materiel*, since it in English only reads "stock". Furthermore, if one only follows the official Swedish translation (where "stock" is translated as *varor*), this would mean that damages to rolling material would not be included in the evaluation whether an accident can be considered as significant, i.e. as a "significant accident". **[Translator's note: this footnote relates really to the Swedish version of the document and is not really relevant to the English reader]**

*The national definition used in this year's safety report:* Seriously injured persons are those who are on sick leave for at least 14 days as a result of the accident.

If an accident leads to a secondary accident, e.g. a collision that leads to a fire, it should be reported according to the category of the primary accident. In the example, this means that even if the secondary accident had the greater impact, the accident should still be reported as a collision.

**Suicides**

One of the CSIs is suicides. These should be classified as follows:

A suicide that only leads to injuries or death to the person committing suicide is classified as suicide.

A suicide that leads to injuries to persons other than the person committing suicide should be classified within the relevant accident category, i.e. as a train collision, train derailment, level-crossing accident, accident to person caused by rolling stock in motion, fire or other.

This means for example that if someone commits suicide by staying in his or her car at a level crossing and the level-crossing accident results in the death of this person and the killing of a passenger, then this accident should be classified as a level-crossing accident.

*Comment: Report all suspected suicides as accidents to persons. In general, the Swedish Rail Agency has the final decision on whether an accident to a person should be classified as a suicide. The information from operators is therefore not to be taken at face value.*

## Deficiencies and incidents

Deficiencies from the normal is a collective term for anything that does not work as planned in an undertaking. The railway sector has traditionally separated deficiencies into incidents and deficiencies (or circumstances or other deficiencies). In the safety report, these terms are treated as follows.

**Incident**
Any occurrence, other than an accident, that could have caused an accident in slightly different circumstances. Examples are near collisions or near accidents to persons. Only the number of accidents is included in the CSIs. Incidents are therefore not reported here.

**Deficiency**
Any occurrence or circumstances, other than accident or near-miss, associated with the operation of trains and affecting the safety of operation. Deficiencies in the context of reported CSIs may presage accidents, and events to be reported are broken rails, track geometry faults (e.g. heat distortions), signalling failures leading to less certain signalling information than required, unauthorised or illicit SPADs (signals passed at danger), broken wheels and axles. It is the total number of deficiencies that is to be reported.

If any of these occurrences leads to a reportable event, this event should be reported both as an accident and as a deficiency. If for example a SPAD leads to a collision, this should be reported as 1 SPAD and 1 collision.

Financial consequences of accidents

As regards CSIs relating to the financial consequences of accidents, the total costs for the railway undertaking or infrastructure manager should be reported for all accidents, i.e. including both those classified as significant and those not classified as significant.

# Definitions of the common safety indicators (CSIs)

## Indicators associated with accidents

**1. Train**
One or more locomotives or multiple units, with or without carriages connected, running according to timetable under a given number designation. (Regulation 1192/2003/EC adjusted to also consider trains with a single locomotive.)

*Comment:*
*In this context, a goods train running according to timetable counts as a train.*

**2. Train collision, including impact with objects within the clearance gauge**
Train collisions are divided into two subgroups when the indicators are reported: **train collision** and **impact**.

**Train collision** refers to any type of collision between a train and another rail vehicle, e.g. between a train and

- the front part of another train
- the rear part of another train
- the part of another train that is within the clearance gauge
- a vehicle involved in a shunting movement

**Train impact** refers to collisions between a train and

- a solid object
- an object which is temporarily present within the clearance gauge (except objects dropped by a road-user at a level crossing)

*Comment:*
*A train collision leading to derailment should be reported as a train collision. The category "impact" also includes running over of animals if this leads to a significant accident. A collision only between vehicles which are not run as trains should be reported under the category of "others". Impact with an object which has been dropped by a road user on a level crossing should be reported as a "level-crossing accident".*

**3. Train derailment**
An accident involving at least one wheel leaving the rail.

*Comment:*
*An event where the train returns to the rails should also be reported if it leads to a significant accident. Derailments involving movements other than train movements should be reported as "others" if they cause a significant accident.*

**4. Level-crossing accident**
An accident occurring on a level crossing involving at least one rail vehicle and one or several road vehicles, pedestrians or bicyclists. A collision with an object which has been dropped on a level crossing by a road user should be reported as a level-crossing accident.

*Comment:*
*A collision with an object on a level crossing which has not been dropped by a road user should be reported as an impact and not as a level-crossing accident.*

**5. Accident to person caused by rolling stock in motion**
Accidents where one or more individuals are hit by a railway vehicle or by an object which is

attached to or which falls from a vehicle. This includes accidents involving individuals falling from a moving railway vehicle as well as accidents involving individuals falling inside a railway vehicle or getting hit by a loose object inside a railway vehicle.

**6. Suicide**
An act to deliberately injure oneself resulting in death, as recorded and classified as a suicide by the Swedish Rail Agency (Regulation 1192/2003/EC).

*Comment: Is to be reported as an accident to person. Suicide is determined by the Swedish Rail Agency.*

**7. Fire in rolling stock**
Accidents involving fires or explosions occurring inside a moving railway vehicle (including the cargo). Fires or explosions occurring when a train stops at an intermediate passenger interchange or during shunting at an intermediate passenger interchange should also be reported. Fires are deemed to be fires in passenger trains from the time a train is stationary at the platform and ready to receive passengers until the train reaches its final destination and all passengers have left the train.

*Comment: Fire also includes smoke production with a clearly defined core.*
*Neither arson fires nor fires occurring during siding or shunting at marshalling yards should be reported.*

**8. Other accident**
All accidents constituting "significant accidents" but which cannot be classified as a train collision, train derailment, level-crossing accident, accident to person caused by rolling stock in motion, fire or suicide.

*Comment:*
*The main types of accidents in this category are:*

*Collisions and derailments with locomotives other than train*

*Discharge of dangerous goods during transport*

*Loose objects not transported on the train and which shoot away from it, e.g. ballast, ice, etc.*

**9. Passenger**
A person travelling on the train and who is not part of the train crew. When accidents are reported, persons embarking/disembarking onto/from a moving train are also included in the category of "passengers". (Regulation 1192/2003/EC)

*Comment:*
*A person crossing the tracks at a station where this is not allowed is classified as "unauthorised", whereas in all other cases, this person is classified as "other". Individuals on the platform, for example waiting for a train, are classified as "other".*

**10. Railway staff**
A person who has employment associated with the railway and who is on duty when an accident occurs. This includes train crew and employees working on railway vehicles or railway infrastructure.

**11. Road user on level crossing**
A person using a level crossing to cross railway tracks either on/in a vehicle or on foot.

**12. Unauthorised person on railway premises**
A person who, without permission, is on railway premises where this is not allowed.

**13. Other person**
A person who is not classified as passenger, railway staff, road user on a level crossing or unauthorised person.

**14. Person killed**
A person killed immediately or dying within 30 days as a result of an accident, excluding suicides. (Regulation 1192/2003/EC with clarification concerning suicides.)

*Comment: Report all persons killed. The Swedish Rail Agency distinguishes suicides from people killed.*

**15. Person seriously injured**
A person who is hospitalised for more than 24 hours as a result of an accident, attempted suicides are presented separately. (Regulation 1192/2003/EC with clarification concerning attempted suicides)

*Slightly injured* person is a person who is injured as a result of an accident but where the injury is not serious.

## Indicators associated with deficiencies

All deficiencies mentioned below should be reported, i.e. not only those causing an accident.

**16. Broken rail**
A rail split into two or more parts, or a rail from which metal has come loose with a resulting gap of more than 50 mm length and more than 10 mm depth in the rail running surface.

**17. Track geometry fault**
All faults related to track geometry requiring immediate shut-down or reduction of speed in order to maintain safety.

**18. Signalling failure leading to less certain signalling information than required**
All faults of the signalling system (both railway infrastructure and rolling stock) leading to less restrictive signalling information than required.

*Comment:*
*This indicator refers to technical faults leading to signalling information allowing a higher speed than required or not showing a "stop" signal when so required. This indicator also includes faults concerning the display in the driver's cabin.*

**19. Unauthorised or illicit SPADs (signals passed at danger)**
Event where a part or all of the train has without authority passed the reserved route's end of movement.

*Comment:*
*Examples of SPADs:*

*unauthorised passing of main signal showing "stop"*

*unauthorised passing of end of movement for a route as indicated by cab information*

*unauthorised passing of an S-board or steadily held stop signal (flag or equivalent)*

*Events involving vehicles starting to roll uncontrollably and passing a stop signal are not included in this indicator, nor are SPADs resulting from a signal changing to "stop" too late for the driver to have time to stop.*

**20. Broken wheel**
A wheel fracture creating a risk of derailment or causing a derailment.

**21. Broken axle**
An axle fracture creating a risk of derailment or causing a derailment.

## Methods for calculating financial consequences

There is a lack of general methods for calculating the financial consequences of accidents. The general advice is to base calculations on own actual costs. In order for the Swedish Rail Agency to compare various operators' costs, it is preferable if the formula used (what is included in the sums) is presented for example in the last field of the form.

The European Railway Agency is currently revising the CSIs associated with the consequences of accidents. These indicators will be revised so as to ensure the measuring of socio-economic consequences of accidents and socio-economic benefits of the prevention of accidents. Until further notice, the below applies, however.

*Comment:*
*Indemnity or compensation recovered or considered to have been recovered from third parties such as motor vehicle owners involved in level crossing accidents should be deducted from the costs reported by the operator. Compensation recovered through insurance policies held by the operator should not be deducted.*

*Default values for accident costs may be used as a basis for the operator's reporting.*

**22. Costs related to people killed and injured**
A method is being developed for calculating the socio-economic consequences of people killed and injured in railway accidents.

For 2006, the number of people killed, seriously injured and slightly injured should be reported to the Swedish Rail Agency. The evaluation of costs will be conducted by the Swedish Rail Agency and will be based on statistical values.

*National definition:* Number of people killed multiplied by the recommended value for deaths in traffic.

*National definition:* Number of people injured multiplied by the recommended value for injured in traffic.

*Calculation method, including reference to source.*
The figures are based on calculated values for deaths and injuries from a socio-economic perspective, compiled by SIKA in *PM 2005:16*[20]. They also include costs for people who are slightly injured. The calculated values are then multiplied by the number of people killed and injured. The numbers of people seriously injured and killed are collected from the table in Annex C. The number of people slightly injured is based on the operators' safety reports. There is some uncertainty as to people slightly injured, since, to avoid duplication of reporting, these figures are only required from railway undertakings, with the effect that for example slightly injured staff members of infrastructure undertakings are not included. Nor are the figures on people who are slightly injured reported or checked for every single event, the way that those on people who are seriously injured or killed are. All figures on costs are converted into euro at an exchange rate of 9.3 SEK to 1 euro.

[20] *Kalkylvärden och kalkylmetoder* (ASEK) *En sammanfattning av Verksgruppens rekommendationer* ("Calculated values and calculation methods (ASEK) A summary of working party recommendations"), PM 2005:16, http://www.sika-institute.se/Doclib/Import/106/pm_2005_16.pdf p.11, 18 July 2007.

**23. Compensation for loss of or damage to property of passengers, staff or third parties**
The sum that, based on the operator's experience, has to be or was paid in compensation to passengers, staff or third parties due to their loss or damage owing to accidents.

**24. Compensation for damage to the environment**
The sum that, based on the operator's experience, must be or was paid for restoring a damaged area to its condition prior to a railway accident.

*Comment:*
*This indicator concerns accidents involving release of pollutants, both transported substances such as dangerous goods and other environmentally hazardous substances, for example fuel.*

**25. Costs for replacement or repair of railway infrastructure or rolling stock**
The costs for acquiring new railway infrastructure or rolling stock with the same functionality and technical performance as equipment that cannot be repaired, and the costs for restoring damaged railway infrastructure or rolling stock to the same level as they were before an accident. The costs should be estimated by the operator on the basis of his experience, and should include any costs for renting rolling stock during the period a vehicle is unavailable due to an accident.

**26. Costs for delays, disturbances and re-routing of traffic, including extra costs for staff and loss of future revenue**
A method is being developed for calculating the socio-economic consequences of delays resulting from accidents.

For 2006, the reporting is based on the costs that, on the basis of the operator's experience, the operator incurs for delays, re-routing and cancellation of traffic due to accidents. These include:

- compensation to passengers
- overtime worked by staff
- compensation to freight customers
- costs for replacement coaches
- loss of revenue due to cancelled trains

*Comment*
*Loss of revenue is only reported in those cases where it has not been possible to arrange replacement transport. For instance, if coaches replaced trains, the costs for the replacement coaches should be reported but not the loss of revenue.*

**27. Number of working hours of own staff and staff of contractors lost as a consequence of accidents**
The number of working hours that, on the basis of the operator's experience, was lost due to absence from work of own and contractors' staff resulting from their injury in accidents.

*Comment: Lost working hours should include hours absent from work. Assigning staff to other tasks as a result of an accident does <u>not</u> constitute lost working hours:*

*National definition:* Only physical injuries resulting from accidents are included.

**28. Total number of working hours in one year**
The number of working hours that, on the basis of the operator's experience, should have been completed by own and contractors' staff in all activities carried out by the operator during the year.

## Indicators relating to technical safety of railway infrastructure

This section concerns infrastructure managers only.

**29. ATP (Automatic Train Protection)**
ATP refers to a system which monitors the respect of signalling information and speed limits by means of speed monitoring and automatic emergency stop at stop signals. The infrastructure manager should specify which ATP systems are used.

The indicator consists of two parts:

Percentage of tracks with ATP in service

Percentage of train kilometres fitted with ATP on tracks

*Calculation method and reference to source*
This indicator is based on information on length of track and length of track with ATC from SIKA's statistics publication *Bantrafik_2005_Infrastruktur*[21]. The figure is based on data for 2005 since data for 2006 have not been provided for railway networks for the whole of Sweden. In this year's request for safety reports from operators, the total number of kilometres of track was not requested from infrastructure managers. Only the number of kilometres of track with ATC was requested from operators for the 2007 safety report.

**30. Level crossing**
A crossing on the same level between a road and a railway, assigned by the infrastructure manager and available to users of public or private roads.

- The indicator includes the following:
- Total number of level crossings
- Number of level crossings per line kilometre
- Number of level crossings with a crossing protection system that actively warns road users by means of sound, light or barriers.

*Comment*
*Platform crossings are not considered as level crossings.*

**31. Road**
Public or private road or street, footpaths and bicycle tracks included.

[21] http://www.sika-institute.se/Templates/Page____45.aspx

Table B1: *Järnvägar - spårlängder, banlängder och investeringar* ("Railways – track lengths, railway lengths and investments"), 18 July 2007.

## Indicators relating to the management of safety

**32. Audit**
An audit is a systematic, independent and documented process to provide facts and evaluate these in order to assess whether the auditing criteria are met. The indicator includes:

total number of audits accomplished during the year

total number of audits planned to be performed during the year.

## Indicators relating to other data

**33. Train-km**
Unit of measure representing the movement of a train over one kilometre. The distance used is the distance actually run, if available, otherwise the standard network distance between the origin and destination should be used. Only the distance on Swedish territory should be taken into account (Regulation 1192/2003/EC).

**34. Passenger-km (km travelled)**
Unit of measure representing the transport of one passenger by rail over a distance of one kilometre. Only the distance on Swedish territory should be taken into account (Regulation 1192/2003/EC).

## Annex G: Queries, Procedural aspects Section F.3.

### Queries Section F.3.3.1, Safety certificates Part A

3.1.1. Reasons for updating/amending Part A Certificates (e.g. variation in type of service, extent of traffic, size of company)

3.1.2. Main reasons if the mean issuing time for Part A Certificates (restricted to these mentioned in Annex E and after having received all necessary information), was more than the 4 months foreseen in Article 12(1) of the Safety Directive

3.1.3. Overview of the requests from other National Safety Authorities to verify/access information relating the Part A Certificate of a Railway Undertaking that has been certified in your country, but applies for a Part B certificate in the other Member State

3.1.4. Summary of problems with the mutual acceptance of the Community wide valid Part A Certificate

3.1.5. NSA Charging fee for issuing a Part A Certificate (Yes/No – Cost)

3.1.6. Summary of the problems with using the harmonised formats for Part A Certificates, specifically in relation to the categories for type and extent of service

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

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

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

### Queries Section F.3.3.2, Safety certificates Part B

3.2.1. Reasons for updating/amending Part B Certificates (e.g. variation in type of service, extent of traffic, lines to be operated, type of rolling stock, category of staff, etc.)

3.2.2. Main reasons if the mean issuing time for Part B Certificates (restricted to these mentioned in Annex E and after having received all necessary information), was more than the 4 months foreseen in Article 12(1) of the Safety Directive

3.2.3. NSA Charging fee for issuing a Part B Certificate (Yes/No – Cost)

3.2.4. Summary of the problems with using the harmonised formats for Part B Certificates, specifically in relation to the categories for type and extent of service

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

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

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

**Queries Section F.3.3.3, Safety authorisations**

3.3.1 Reasons for updating/amending Safety authorisations.
(Reasons may refer to individual applications, e.g. new rail installation, new signalling system, substantial changes to operative routines).

3.3.2. Main reasons if the mean issuing time for Safety Authorisations (restricted to these mentioned in Annex E and after having received all necessary information), was more than the 4 months foreseen in Article 12(1) of the Safety Directive

3.3.3 Summary of the regularly problems/difficulties in application procedures for Safety Authorisations

3.3.4. Summary of the problems mentioned by Infrastructure Managers when applying for a Safety Authorisation

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

3.3.6. NSA Charging fee for issuing a Safety Authorisation (Yes/No – Cost)

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