

NSA Annual Report 2018

Norway

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Definitions and Abbreviations

CSI	Common Safety Indicator
CSM	Common Safety Method
ECM	Entities in Charge of Maintenance
IM	Infrastructure manager
MTC	Ministry of Transport and Communications
NIB	National Investigation Body
NSA	National Safety Authorities
OTM	On Track Machines
RU	Railway Undertakings

1. Introduction

1.1. Purpose, scope and addressees of the report

The purpose of this report is to provide information on the safety related results from 2018. It covers the main national railway network, tramways and underground are excluded from the scope. The intended addressees of this report besides the ERA are the National Investigation Body (NIB) and the Ministry of Transport and Communications (MTC).

1.2. Main conclusions on the reporting year

The overall risk picture of 2018 based on accident records and results from supervision, shows marginal changes from 2017.

NSA Norway use incidents and accidents statistics when planning the supervision activities. The NSA also do an evaluation of the risks for each company.

In 2008, there were five fatalities and zero serious injuries spread over three accidents. The number of fatalities in Norway is in general low. It has fluctuated between one and nine the last ten years, the average being 3,6. Most of the fatalities are in connection to level crossings and trespassing.

The number of significant accidents in 2018 is 25, which is higher than the average. 15 of these accidents involved passenger trains, 6 goods trains, 3 while switching and one empty train. 12 of the accidents are classified as impact with object, 10 of these teared down the contact line. 5 of the accidents are classified as derailments. 3 are level crossings accidents, 2 fire accidents, 2 accidents are collisions with persons and one accident involved an empty train.

The level of incident reporting has somewhat increased. NSA Norway received about 26 000 reports of incidents. This is an increase from about 24 000 the year before. The increase is true especially for load securement. Reporting of derailments and incidents regarding the infrastructure has also increased. However, for 2018, there are no clear trends of change in the accidents data, whether in accidents increment or decrement. There is also no clear relation between the number of precursors to accidents and the number of significant accidents in the table below. Costs due to significant accidents are also rather steady. Nevertheless, since the accidents are different in their nature, there is no significant relationships between the costs and the number of significant accidents.

The Ministry of Transport and Communications set high-level goals for supervision. NSA Norway has established an annual supervision program to achieve these goals. The supervision program include defined areas of priority, for 2018, these were emergency preparedness, management commitment and risk management in procurement. In addition, targeted supervision related to the train communication systems were given priority, after incidents reports indicated a problem related to these systems.

The supervision program and the prioritized areas are established using a risk based model as support for priority. NSA Norway is testing out maturity newly developed models as a basis for documentation of the NSA's assessment of the safety level of RUs and infrastructure manager (IM). This assessment was used for the 2019 risk based supervision planning.

Regarding Directive (EU) 2016/795 and article 19(e) of Directive (EU) 2016/798, the directives are not yet been implemented in the Norwegian law.

NSA Norway has not revoked any safety certificates or safety authorisations since 2010. In issuing new, mending or renewing safety certificates and safety authorisations, NSA Norway have noted these main issues:

- Risk analysis and risk assessment
- Competence management
- Safety management regarding outsourced activities (contractors)
- Emergency management

NSA Norway executed 15 supervisions in 2018, the most being in the form of audits. This is 12 less than 2017. The reason is mainly a change in strategy from short supervision meetings with the IM to more comprehensive audits.

The bases of the supervision program were the following identified risks:

- Weaknesses in the systems of emergency preparedness. Especially emergency preparedness analysis and plans, emergency exercises and cooperation with public emergency authorities
- Lack of sufficient involvement of the top managements in the management of safety and security
- Weaknesses in the systems of evaluating and controlling risks
- Weaknesses in the systems of controlling suppliers

Lastly, it is worth mentioning that in 2018 NSA Norway gave 36 authorizations to rail-/road wheel vehicles, from approximately 11 different applicants. 72 train driver licenses were issued and no driver license were amended or renewed.

2. English summary

See chapter 1.2 Main conclusion on the reporting year.

3. NSA safety strategy, programs, initiatives and organizational context

3.1. Strategy and planning activities

The railway undertakings (RU) are responsible for the safe operation of the railways and that the current safety level, as a minimum, is kept.

Nevertheless, the Ministry of Transport and Communications set high-level goals for supervision. NSA Norway have established an annual supervision program to achieve these goals. The supervision program includes some defined areas of priority. For 2018, these were emergency preparedness, management commitment and risk management in procurement. In addition, targeted supervision related to the train communication systems were given priority, after incidents reports indicated a problem related to these systems.

The supervision program and the prioritized areas are established using a risk based model as support for priority. NSA Norway is testing out maturity models as a basis for documentation of the NSA's assessment of the safety level of RUs and infrastructure manager (IM). This assessment was used for the 2019 risk based supervision planning.

To ensure that the supervision activities add value, there has been a strong focus on risk, significance changes and non-conformities. This has also had focus in the planning of the individual supervision activities and spot checks.

NSA Norway arrange an annual safety conference to promote railway safety. In addition, mini-seminars on chosen subjects as part of the guidance are regularly organized.

3.2. Safety Recommendations

All recommendations issued by the NIB, are forward to the relevant RU's and IM's. The Ministry of Transport and Communications appoints this task to the NSA. The NSA may demand that the relevant RU's and IM's give an account on their plans for acting upon the recommendations from the NIB before the recommendation is closed.

Twice a year, status on all the open recommendations and recommendations closed since last reporting period are given to the Ministry. The NIB is also informed. Meetings with the NIB to share information and gained experience are also held twice a year.

3.3. Safety measures implemented unrelated to the recommendations

Not applicable.

3.4. Safety Organisational context

NSA Norway reports to the Ministry for Transport and Communications who is the legislative authority for railways. The NSA is supervisory authority for safety, security and passenger rights for railways and is also Regulatory body. The NIB reports independently to the Ministry.

Norway is implementing a railway reform, opening the passenger rail market for competition. The first contract was signed late 2018 including the southern railwayline from Oslo to Stavanger, and the RU will start its operations in december 2019. Further lines will be opened for competition in 2019.

The figure below show NSA Norways relations to the most important actors.

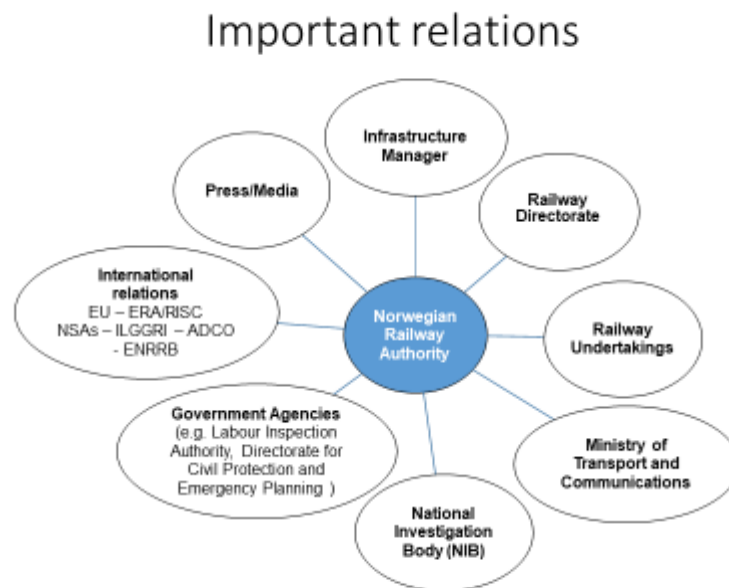


Figure 1 NSA Norway organizational context

NSA Norway reports directly to the Ministry of Transport and Communications. The NSA is an independent organization supervising safety, security and passenger rights on railways, metros and trams. In addition, NSA Norway is Regulatory Body on railway issues. There has been no changes to the organisation in 2018. However, a reorganisation project with the aim of a more efficient organisation was carried out in 2018 and has been operational from January 2019.

4. Safety performance

In 2008, there were five fatalities and zero serious injuries spread over three accidents. The number of fatalities in Norway is in general low. It has fluctuated between one and nine the last ten years, the average being 3,6. Most of the fatalities are in connection to level crossings and trespassing.

The number of significant accidents in 2018 is 25, which is higher than the average. 15 of these accidents involved passenger trains, 6 freight trains, 3 while shunting and one empty train. 12 of the accidents are classified as impact with object, 10 of these teared down the overhead contact line. 5 of the accidents are classified as derailments. 3 are level crossings accidents and 2 fire accidents and 2 accidents are collisions with persons and one accident involved an empty train.

The number of incidents reported has increased in relation to 2017, especially regarding load securement. Reporting of derailments and incidents regarding the infrastructure has also increased. However, no clear trends can be seen in the accidents, whether in accidents increment or decrement. There is also no clear relation between the number of precursors to accidents and the number of significant accidents. Costs due to significant accident are also rather steady. However, since the accidents are different in their nature, there is no significant relationships between the costs and the number of significant accidents.

Table 1 –Summary of safety indicators in periode 2009-2018

Summary of safety indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of significant accidents	16	20	35	19	30	28	19	16	16	25
Number of fatalities	3	9	5	1	4	1	2	3	3	5
Number of serious injury to person	3	4	5	3	3	4	4	0	0	1
Number of precursors to accidents	193	253	134	76	168	161	172	158	139	258
Cost of all accidents in mill NOK (estimated)	31	31	33	97	126	77	73	88	81	104

5. EU legislation and regulation

Regarding Directive (EU) 2016/795 and article 19(e) of Directive (EU) 2016/798, the directives are not yet implemented in Norwegian law.

6. Safety Certifications, Safety Authorisations and other certificates issued by the NSA

6.1. Safety Single Certificates and Safety Authorisations

The table below show valid safety certificates and safety authorisations in Norway. The table also includes issuing date for new and amended certificates and safety authorisation:

Table 1 Valid safety certificates and safety authorizations in Norway

Company name	History	Issuing date	Type of certificate
Green Cargo AB	Renewed	22/11/2018	Type B
Grenland Rail AS	Amended	18/09/2018	Type A
Grenland Rail AS	Amended	18/09/2018	Type B
Hector Rail	Amended	15/06/2018	Type B
LKAB Malmtrafik	Renewed	17/12/2018	Type B
SJ AB	Renewed	01/06/2018	Type B
Tågakeriet i Bergslagen AB	Renewed	13/09/2018	Type B
Norsk Jernbanemuseum	New	20/06/2017	Type A
Norsk Jernbanemuseum	New	20/06/2017	Type B
Bane NOR SF	New	10/11/2016	Safety authorisation
CargoNet AS	Renewed	09/02/2016	Type A
CargoNet AS	Renewed	09/02/2016	Type B
Flytoget AS	Renewed	18/01/2016	Type A
Flytoget AS	Renewed	18/01/2016	Type B
NSB AS /VY Gruppen AS	Renewed	15/01/2016	Type A
NSB AS /VY Gruppen AS	Renewed	15/01/2016	Type B
NSB Gjøvikbanen AS/ VY Gjøvikbanen AS	Renewed	13/11/2015	Type A
NSB Gjøvikbanen AS/ VY Gjøvikbanen AS	Renewed	13/11/2015	Type B

When issuing new, amended and renewed safety certificates and safety authorisations, NSA Norway have the noted these main issues:

- Risk analysis and risk assessment
- Competence management
- Safety management regarding outsourced activities (contractors)
- Emergency preparedness

NSA Norway has not revoked any safety certificates or safety authorisations since 2010. The main strategy and procedure for issuing safety certificates and safety authorisations has not changed. However, checklists and internal documentation regarding assessment reports have been improved.

6.2. Vehicle Authorisations

36 authorizations are given to rail-/road wheel vehicles, approximately 11 different applicants. Mainly to the infrastructure manager and different entrepreneurs. 65 authorizations are given to OTM and other railway vehicles, approx. 9 different applicants. 14 plus 4 of these were the same type as vehicles that already has an authorization in Norway.

6.3. Entities in Charge of Maintenance (ECM)

NSA Norway do not act as a certification body for ECM.

6.4. Train drivers

In 2018, 77 train driver licenses were issued. No driver license was amended or renewed. NSA Norway suspended 123 licenses on a temporary basis due to medical issues, meaning that the medical requirements were not satisfied. 75 percent of these suspensions were altered as the drivers nevertheless fulfilled the health requirements. 20 percent of these were retired drivers who no longer have a valid health certificate. The rest of the suspended licenses remained suspended.

Regarding the number of recognized training centers, these are the same as safety certificates as Norway has implemented 2011/765/EU article 5. There has been no changes in the strategy or procedure for issuing train driver licenses.

6.5. Other type of authorisation/certifications

NSA Norway may grant authorizations for placing in service new and upgraded infrastructure. The authorizations may be for the whole system or for separate subsystems.

6.6. Contacts with other National Safety Authorities

NSA Norway has a cooperation agreement on supervision and safety certification with the NSAs in Sweden and Denmark. The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

NSA Norway has requested information on RUs having a part A certificate in Sweden. The content of the contact and data provided is general information on how the safety management is perceived, last date of supervision, findings/issues and the time schedule for the NSA to renew part A certificates in order for NSA Norway to issue renewed part B certificates. NSA Norway have to await the part A certificate to be issued before issuing a renewed part B certificates. Likewise, NSA Norway has to await for Sweden to get the certificates registered and validated in ERADIS before the registration of the new part B certificates.

6.7. Exchange of information between NSA and railway operators

NSA Norway puts emphasis on guidance of the sector. The NSA arranges an annual railway safety conference; the theme in 2018 was Safety, Interoperability and Healthy Competition. ERA was present, presenting the theme "4.th Railway Package, what's in it for us."

In addition NSA Norway have a number of guidance meetings (typically 6 pr year) with the sector, where topics related to safety, security and market surveillance are addressed. The topics are chosen based on what is seen in the supervisory activities and feedback from the sector.

Guidance meetings related to specific topics are given on request from the sector, and as part of the audits, guidance is offered to help the sector to understand the findings and expected mitigating activities.

A number of guidance documents are available on NSA Norway's websites, and all reports from the safety audits are also available. A quest back questionnaire follows the audits, to give the NSA feedback on the quality and effect of the supervision activity.

7. Supervision

7.1. Strategy, plan, procedures and decision making

There has been no changes in the strategy for supervision. For 2018, the bases of the supervision program were the following identified risks:

- Weaknesses in the systems of emergency preparedness, especially emergency preparedness analysis and plans, emergency exercises and cooperation with public emergency authorities
- Lack of sufficient involvement of the top managements in the management of safety and security
- Weaknesses in the systems of evaluating and controlling risks
- Weaknesses in the systems of controlling suppliers

Expected benefits for the supervision plan were:

- To ensure that the systems of the IM/RUs is improved and that remaining improvements in the systems of the infrastructure manager is executed
- To ensure the top leaderships involvement in safety, especially that they were actively using results of risk analysis in decision-making, follow up of internal audits and carrying out management reviews.
- To ensure the same control with tasks executed by suppliers as tasks performed by own staff

The supervision plan was executed with only minor adjustments during the year.

NSA Norway has identified a need to improve the system of evaluation of the supervision processes. It has also been identified a need for a more efficient process of follow up non-compliances. As a result of this, there has been an increased focus on guidance in interpretation of the regulations. There has been set up meetings open for all RUs and IM, on regularly basis for information and guidance about important topics as for example emergency preparedness and risk management system.

There is also implemented earlier warning about coercive fines for those who do not follow up within the decided time frames.

NSA Norway do check the correct applications and effectiveness of the processes in Regulation 1078/2012. Amongst other NSA Norway consequently require the companies to identify the root causes of non-compliances identified in other supervisions. NSA Norway frequently also investigate follow up of incidents related to the topic of the audits including how the company has identified the root causes, executed corrective actions related to the root causes and how the effect of the actions has been evaluated.

In 2018, NSA Norway did not receive any complaints on decisions from supervision activities.

7.2. Supervision results

NSA Norway executed 15 supervisions, the most conducted as audits. This is 12 less than last year. The reason is mainly change from short supervision meetings with the main IM to more comprehensive audits. In addition, the NSA was also participating as an observer in an emergency preparedness exercise executed by the IM.

In general, railway safety is satisfactory provided necessary corrective actions are taken to close identified non-conformities.

Controlling suppliers:

- Contracts important for safety are mainly more explicit as regards to specifying relevant requirements, and more specific with statement of sanctions in cases of breaches
- There are non-conformities related to processes regarding suppliers, especially purchase of services from companies within the same group, and related to information security
- There is some work left to achieve the same level of control with tasks performed by suppliers as with tasks performed by own staff.

Leadership involvement:

- In most supervisions the results have demonstrated that the management is committed, and participated actively in controlling safety
- In few supervisions the results have demonstrated lack of involvement from the top management

Emergency preparedness:

- Some non-conformities were identified, mainly related to the analysis made as bases for emergency preparedness plans
- There was no need for sanctions beyond requirements of corrective actions

7.3. Coordination and cooperation

NSA Norway have a cooperation agreement on supervision and safety certification with NSA in Sweden and Denmark. The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes. NSA Norway has participated as an observer in one supervision executed by the Swedish NSA.

8. Application of relevant CSMs by RUs and IMs**8.1. Application of the CSM on Safety Management System**

CSM SMS is not yet applicable in Norway. NSA Norway evaluate RU's and IM's safety management system according to CSM CA when issuing safety certificates and safety authorisations. The safety management system is evaluated by inspections and supervision.

8.2. Application of the CSM for Risk Evaluation and Assessment

Not possible to provide at this moment.

8.3. Application of the CSM for Monitoring

Most of the railway operators have tried to implement the CSM for Monitoring, but still struggle to do so in a useful way. It is challenging for the operators to see the difference between monitoring and other activities such as internal auditing, management review and objective management.

NSA Norway will focus our supervision activity on this area and get more information on the status on implementation of CSM for Monitoring.

8.4. Participation and Implementation of EU projects;

No information available.

9. Safety Culture

9.1. Safety culture evaluation and monitoring

NSA Norway have started using our own adaptation of the management maturity model, and is expecting to gain indications on safety culture in the railway sector.

9.2. Safety culture initiatives/projects

No ongoing separate work on this topic.

9.3. Safety culture initiatives, projects and communication

No ongoing separate work on this topic.

10. Theme chapter

Not applicable.

ANNEX: Progress with Interoperability

Please provide the following information as it is at the 31st December of the reporting year.

Please refer to the Appendix for definitions.

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

1a	Length of lines excluded from the scope of application of the IOP Directive [km]	N/A
1b	Length of lines excluded from the scope of application of the SAF Directive [km]	N/A

Please provide the list of lines excluded:

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

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

3a	PRM TSI compliant railway stations	N/A
3b	PRM TSI compliant railway stations - partial TSI compliance	N/A
3c	Accessible railway stations	N/A
3d	Other stations	N/A

4. Train driver licenses (end of year)

4a	Total number of valid European licenses issued in accordance with the TDD	2253
4b	Number of newly issued European licenses (first issuance)	72

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

5a	First authorization - total	N/A
5aa	Wagon	N/A
5ab	Locomotives	33
5ac	Hauled passenger vehicles	N/A
5ad	Fixed or pre-defined formation	N/A
5ae	Special vehicles	30
5b	Additional authorization – total	N/A
5ba	Wagon	N/A
5bb	Locomotives	N/A
5bc	Hauled passenger vehicles	N/A
5bd	Fixed or pre-defined formation	N/A
5be	Special vehicles	N/A
5c	Type authorization - total	N/A
5ca	Wagon	N/A
5cb	Locomotives	N/A
5cc	Hauled passenger vehicles	N/A
5cd	Fixed or pre-defined formation	N/A
5ce	Special vehicles	N/A

5d	Authorizations granted after upgrade or renewal - total	N/A
5da	Wagon	N/A
5db	Locomotives	N/A
5dc	Hauled passenger vehicles	N/A
5de	Fixed or pre-defined formation	N/A
5df	Special vehicles	N/A

6. ERTMS equipped vehicles (end of year)

6a	Tractive vehicles including trainsets equipped with ERTMS	N/A
6b	Tractive vehicles including trainsets – no ERTMS	N/A

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

7a	FTE staff involved in safety certification	2,00
7b	FTE staff involved in vehicle authorization	4,50
7c	FTE staff involved in supervision	4,84
7d	FTE staff involved in other railway-related tasks	0,20