NSA Annual Report 2016
Norway

A. INTRODUCTION

The purpose of this report is to provide information on safety related results from 2016. This report covers the main national railway network. Tramways and underground are not included in the scope of this report. The intended addressees of the report besides the ERA are the National Investigation Body (NIB) and the Ministry of Transport (MT).

B. OVERALL SAFETY PERFORMANCE AND STRATEGY

B.1 Main Conclusions on the reporting year

It is safe to travel by train in Norway. The overall risk picture for 2016 (based on accident records and results from supervision activities) shows marginal changes from 2015.

The reports show a total of 16 significant accidents. One accident is still under investigation by the police and may come in addition to these.

There have been no fatalities involving passengers the last 10 years, but three persons were killed in accidents, one in the station area and two on the open line. Nine of the significant accidents involved passenger trains, six involved freight trains and one involved empty train/on track machine.

Seven of the significant accidents were classified as damage to overhead catenary lines leading to more than 6 hours stop in the train traffic, four related to collision with objects, three derailments and two accidents categorized as collision with persons.

An analysis of the accident statistics highlights the following topics:

- Level crossings
- Trespassing
- Climate related accidents (heavy rain, wind resulting in objects on the tracks, landslides and avalanches)
- Work near or on the tracks
- Incidents related to emergency preparedness (operation under conditions were barriers preventing accidents are out of operation)
- Sight distances to signaling (blocked by vegetation or unfortunate location)
- Safety zones (risks related to inadequate braking distances)

B.2 National safety strategy, program initiatives

The main principle is that the Railway Undertakings are responsible for the safe operation of the railways and that the current safety level, as a minimum, shall be kept.

The Ministry of Transport and Communications set high-level goals for supervision.

The Norwegian NSA has established an annual Supervision Program to achieve these goals. The Supervision program includes some defined areas of priority. The Supervision Program and the prioritized areas are established using a risk based model as support for priority.

The current programs are useful and have an appropriate level of detail to function as tools for priority of the focused areas. To ensure that the supervision activities add value, there has been a strong focus on risk, significance and effect on issued non-conformities This has also had focus in the planning of the individual supervision activities and spot checks performed.

B.3 Review of the previous year.
NSA Norway establish prioritized areas for supervision. We aim to have a long-term approach, so some of the areas may be the same over several years. Prioritized areas for 2016 were:

- Follow up of non-conformities
- Operational safety
- Management of suppliers
- Risk evaluations
- In addition, we have had a specific focus on the main IM, focusing on the main risks identified.

The Supervision has been performed through system audits, inspections, supervision meetings and document reviews and follow-up of these activities. The results of the supervision activities show that the RUs and IMs generally have acceptable Safety Management Systems. Some common challenges for the industry may however be concluded from these activities:

- Efficient follow up and prevention of non-conformities.
- Train driver training and the basis for the training schemes.
- Supplier management
- Emergency preparedness

The focus on operational safety has been successful and continued from 2015.

B.4 Priority areas for the next year
In the process of establishing the Supervision program for 2017, the following priority areas were decided:

- Top Management involvement in Safety and Security Management
- The RU's Emergency Preparedness
- Systematic follow up of driving/resting hours

The NSA will also prioritize:
Operational controls related to various aspects of Operation.
Specific follow-up of findings related to Supplier Management.

In addition, we will continue the specific program to follow up safety management on the five most important issues for the national infrastructure manager.

The Norwegian NSA regularly arranges mini-seminars on chosen subjects as part of our guidance. An annual safety seminar is also held.

C. DEVELOPMENTS IN SAFETY PERFORMANCE

C.1 Detailed analysis of the latest recorded trends

The development in safety performance represented by some of the most important CSIs are shown in chart 1 below. The level of reporting is stabilizing on a high level. The high number of reports gives the railway undertakings (RUs) and infrastructure manager (IM) a good basis for their Safety management activities if used correctly.

In 2016 there were three fatalities and zero serious injuries spread over three accidents. The number of fatalities in Norway are low and has fluctuated between one and nine the last seven years. The number of serious injuries in Norway are also low and has fluctuated between zero and five the last seven years. There is no basis for concluding on a trend. Most of the fatalities are in connection to level crossings and trespassing.

The number of significant accidents is lower than the average from 2006 to 2014. The previous trend of increase in accidents over the years is primarily due to collisions caused by overhead catenary lines. Approximately 94 % of lines with regular traffic on the Norwegian railway are single-track lines, this makes delays of 6 hours or more a normal consequence when there is a demolition of the overhead catenary lines. When excluding collisions with overhead catenary lines and accidents during shunting from the data, the number of accidents has been falling slightly for the period from 2008 to 2016. Costs due to significant accidents are also rather steady, see Table 1.

Summary of safety indicators	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of significant accidents	14	16	20	35	19	30	28	19	16
Number of fatalities	1	3	9	5	1	4	1	2	3
Number of serious injury to person	1	3	4	5	3	3	4	4	0
Number of precursors to accidents	132	193	253	134	76	168	161	172	158
Cost of all accidents in NOK (estimated)	31 mill	31 mill	31 mill	33 mill	97 mill	126 mill	77 mill	73 mill	88 mill

Table 1: Summary of safety indicators (2008-2016)

C.2 Results of safety recommendations

A selection of the most relevant safety recommendations received and the safety measures triggered by these is shown in Table 2 below.

	Safety measure	Status
(JB Rap 2016/06) The AIBN submits two safety recommendations to Jernbaneverket (the Norwegian National Rail Administration) after an accident on a level crossing on Fauske station. The first concerns track allocation where an approaching train crosses a pedestrian crossing, and the second focuses on requirements for securing pedestrian crossings at stations with regard to the increasing use of ear plugs and smart phones.	The IM has established a working group, which has made a plan with 12 mitigating actions as a respond to the two safety recommendations from AIBN. The IM has made a schedule for the mitigating actions, and has already implemented some of them	Case closed.

Table 2: Implementation of safety measures triggered by safety recommendations

C.3 Measures implemented not in relation to safety recommendations

A list of the most important safety measures introduced by the NSA and information on the underlying reasons for their application:

Area of concern	Description of the trigger	Safety measure introduced
NVR register	Maintenance of the NVR register	Control of marking of freight and passenger trains
Track work	Incidents with workers in track	Topic during revisions.
Subcontractors	Increased use of subcontractors and increased amount of reported incidents.	Topic during revisions.

Table 3: Safety measures not triggered by safety recommendations

D. SUPERVISION

D.1 Strategy and plan(s)

Norwegian Railway Authority set its priorities and targets its activities in several steps. The annual high-level goals for the supervision activities are set by the Ministry of Transportation (the goals are normally unaltered from one year to another). Norwegian Railway Authority has established a strategy with several principles to reach these goals. A part of this strategy is the principle of risk-based supervision. There are developed criteria that ensure a transparent way of prioritizing the supervision activities.

Each year we also set certain areas (topics) of priority for the year to come.
Based on the mentioned activities we prepare an annual supervision program that is published on www.sjt.no. In addition, we ensure some capacity to handle unforeseen supervision needs.

The supervision program is based on the goals set by the MT as mentioned above.

The input for the risk-based priority is: Figures of train km for each RU, database of accidents and incidents, results of supervision activities and the follow-up of those. In addition, information of organization, complexity of operations and the infrastructure used by each company are used to set the priority.

There are planning meetings throughout the year (typically 3 meetings) where needs for changes in the plans or needs for spontaneous supervision activities are considered.

D.2 Human resources

There are four staff members whose primary task is acting as lead auditors (covering both safety and security supervision activities). In addition, approximately 18 staff members are acting as legal or technical auditors/experts in supervision activities. We do not register hours. Very roughly, we estimate that 5000 hours are spent on audits and inspections annually.

We have approximately 50 members of staff as a NSA, which means that each staff member in average spends 100 hours on inspections/audits.

Approximately 6 % of each staff member's time is spent on audits/inspections.

D.3 Competence

There are set competence criteria for lead auditors, technical auditors and technical experts.

There is established a simple qualification and evaluation procedure for auditors and experts.

D.4 Decision–making

Our decision-making is based on the railway-regulations, public administration act and internal procedures for supervision and administration.

There are internal procedures for implementing EU-regulations and directives and there are internal procedures to develop national regulations according to the principles in the public administration act.

There were two complaints on decisions made during supervision activities in 2015, both related to one company using a driver who was not considered qualified. These two complaint-processes were completed in 2016 and Norwegian Railway Authority was upheld on all counts.

D.5 Coordination and cooperation

There is a cooperation agreement on supervision and safety certification with the NSA in Sweden and Denmark.

The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

D.6 Findings from measures taken

There is a tendency that non-compliances are not properly dealt with: We frequently register that the same type of non-compliances are identified on later audits after corrective actions are carried out. Time limits are also often exceeded.

E. CERTIFICATION AND AUTHORISATION

E.1 Guidance

Information regarding the application process is available in regulations, in the application form itself and as guidelines to the application form. Still the Norwegian Railway Authority (SJT) has seen the need to clarify the requirements by gathering information concerning the application process related to the safety certificate part B for foreign RUs in a separate guideline, which is published in both Norwegian and English.

SJT has also published guidance material for the other application processes. The application guidance for new, amended or renewed safety certificate parts A and B (Norwegian and foreign RUs).

SJT has published several specific guidelines that may be helpful to the RUs. These guidelines are written in Norwegian. On our web site, you may find guidance on safety management systems for smaller RUs, internal audits and supplier management.

It is useful to have an open dialog between SJT and the applicant both prior to and during the application, and SJT offer guidance through meetings, phone and mail- or e-mail-correspondence.

In Norway, we have only one IM for the national rail network, and this is the reason for no written guidance material directed at IMs.

The guidance and application process are free of charge for the RUs.

E.2 Contacts with other NSAs

There is a cooperation agreement on supervision and safety certification with the NSA in Sweden.

There is also established a cooperation on supervision and safety certification with the Danish NSA, but it is not based on a formally signed agreement.

The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

Norwegian Railway Authority has requested information on RUs having a Part A certificate in Sweden. The main content of the contact and data provided is general information on how the safety management is perceived, last date of supervision, findings and the time plan for the NSA to renew part A certificates in order for us to issue renewed part B certificates.

We have to await the part A certificate to be issued before we can issue renewed part B certificates. Likewise, we have to await Sweden to get the certificates registered and validated in ERADIS before we can register the new part B certificates.

E.3 Procedural issues

There has been no procedural issues in 2016.

E.4 Feedback

The Norwegian NSA has established a feedback procedure for the RUs through conducting user surveys every other year from the year 2011. The survey gives the respondents the possibility to express their opinions on processing times as well as opinions on our communication and services in general. We have also established a feedback option through sending out questionnaires for participants at our different meetings and conferences held for the RU`s.

According to Norwegian legislation, it is possible to file a complaint if the applicant object to a decision made by the Norwegian NSA.

F. CHANGES IN LEGISLATION

F.1 Railway Safety Directive

The following legislation in force transposes the RSD:

Regulation 29 January 2010 No 72 concerning implementation of Commission decision 2009/460/EU on the adoption of a common safety method for assessment of achievement of safety targets
Regulation 27 October 2014 No 1344 concerning common safety method on the risk evaluation and assessment (entry into force 21 May 2015)
Regulation 11 April 2011 no. 389 concerning safety management of railway undertakings and infrastructure managers on the national railway network
Regulation 2 December 2011 No 1176 concerning implementation of Commission regulation (EU) No 1169/2010 on a common safety method for assessing conformity with the requirements for obtaining a railway safety authorisation on the national railway network
Regulation 2 December 2011 No 1177 concerning implementation of Commission Regulation (EU) No 1158/2010 on a common safety method for assessing conformity with the requirements for obtaining railway safety certificates on the national railway network
Regulation 8 May 2012 No 409 concerning maintenance for freight wagons on the national railway network
Regulation 13 Mars 2013 No 280 concerning common safety targets in the railway system
Regulation 2 July 2013 No 852 concerning implementation on a common safety method for supervision by national safety authorities after issuing a safety certificate or safety authorisation
Regulation 2 July 2013 No 853 concerning implementation on a common safety method for monitoring to be applied by railway undertakings, infrastructure managers and by entities in charge of maintenance
Regulation 20 December 2016 No 1747 concerning license, safety certificates, safety authorization and other safety related issues on the national railway network
Act of 3 June 2005 No 34 on notification, reporting and investigation of accidents and incidents
Regulation 31 March 2006 No 379 concerning the obligation to notify and report railway accidents and -incidents
Regulation 31 March 2006 No 378 concerning public investigation of railway accidents and serious incidents

The transposition measures of the amendments to the RSD at the end of 2016 are also included in table 1 of annex B.

F.2 Changes in legislation and regulation

Table 2 of annex B list the relevant changes in the national regulatory framework concerning railway safety during 2016. No national regulatory framework concerning railway safety during 2016 has entered into force in Norway, except the above-mentioned regulations implementing EU legislation.

G. APPLICATION OF THE CSM ON RISK EVALUATION AND ASSESSMENT

G.1 NSA experience

Norwegian Railway Authority is of the opinion that the level for judging a change as significant is still a bit on the high side. We have, however, seen some development that may indicate a change in the right direction. And for larger projects the IM always judge a change to be significant. We do also have some concerns about the varying quality of the significance assessments.

For changes to vehicles, the use of CSM RA is mainly controlled by TSIs and use of significance assessments is not that relevant.

It is the impression of the Norwegian Railway Authority that, especially the smaller RUs, are trying to avoid using the CSM RA and therefore assess most changes as non-significant. They do however conduct risk assessments according to their own procedures as required by national legislation.

Norwegian Railway Authority has little experience with the risk management process, involvement of AsBo and Interface management because few changes are judged by the proposer as significant.

G.2 Feedback from stakeholders

The "highlights" from the 2016 reports, regarding CSM RA:

- The IM in Norway reorganized and changed name from “Jernbaneverket” to “Bane NOR”. They analysed the change according to CSM-RA and considered it as a significant change.
- Overview of projects in Bane NOR where the process of CSM RA has been applied are documented and followed up by internal AsBo in Bane NOR.
- All RUs reports that they use CSM RA. Most analysis concludes that changes are not significant.

G.3 Revision of NSRs to take into account the EC regulation on CSM on risk evaluations and assessment

None.

H. DEROGATIONS REGARDING ECM CERTIFICATION SCHEME

No derogations to the ECM certification scheme in 2016.

ANNEX A
COMMON SAFETY INDICATORS

Electronic version sent to ERA.

ANNEX B
CHANGES IN LEGISLATION

Table 1

AMENDMENTS TO RSD	**Transposed (Y/N)**	**Legal reference**	**Date of entry into force**
Directive 2008/57/EC	Y	Regulation 16 June 2010 No 820 concerning interoperability in the railway system	16 July 2010
Directive 2008/110/EC	Y	Regulation 1 April 2011 No 351 amending regulation concerning railway safety (later inserted in Regulation 21 June 2012 No 633 concerning vehicles on the national railway network. This regulation was repealed and replaced through Regulation 19 December 2016 No 1846 concerning vehicles on the national railway network, entry into force 1 January 2017.)	1 April 2011
Commission Directive 2009/149/EC	Y	Regulation 2 July 2010 nr. 1062 amending regulation concerning railway safety (later replaced by i.a. Regulation 11 April 2011 no. 389, see p. F1)	2 July 2010

Table 2

See point F2.