



Jernbaneverket

Safety and Quality

***Safety and Quality Manager,
Projects at the Main Line
(Hovedbanen)
Gerda M Grøndahl***

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Agenda

- Our criteria for success
- What the concepts entail:
 - Quality
 - RMM
 - RAMS (for infrastructure)
 - External environment
 - SHA
- Laws and regulations
- Requirements for competency
- How does the Norwegian National Rail Administration (Jernbaneverket) work with quality management?
- Do you as a supplier have an important role in Jernbaneverket's quality management?



Jernbaneverket's safety policy

Jernbaneverket will work systematically for the continuous improvement of safety in order to avoid injuries and damage to people, the environment and material assets.

The safety policy is based upon the zero vision and must be taken as a basis in the planning, organisation and execution of all activities at Jernbaneverket.



The Infrastructure Construction Division's five criteria for success

1

Safety

2

Quality

3

Time

4

Economics

5

Reputation



Quality

Quality concerns satisfying the customer's requirements.

- Jernbaneverket poses the requirement that all suppliers have a quality system that satisfies the requirements given in ISO 9001

Definition of quality management: Co-ordinating activities in order to guide and control an organisation with respect to quality

- Quality concerns satisfying the customer's requirements

Definition of quality: The degree to which a set of inherent characteristics fulfil requirements



Quality (This is not exhaustive)

Central laws and regulations:

- The Planning and Building Act
- Regulations concerning the approval of companies for legal liability
- The Interoperability Regulations set requirements for EN 50126 for new or significant changes to infrastructure.

Standards:

- ISO 9000 series (Systems for quality management)

Internal rules:

- The management system



Rolling stock and machinery management (RMM)

Concept clarification:

- Rolling stock:
 - Has railway wheels and uses rails as a substrate
- Road/rail vehicles (two-way machines):
 - Can operate both on roads and railway tracks
 - (Also applies for tracklaying machinery)



RMM

- Entities that will run on Jernbaneverket's licenses must follow Jernbaneverket's guiding processes for RMM.
- At Jernbaneverket's Web site under [supplier information](#) there is information that includes the following:
 - Application forms for rolling stock
 - Renewal of licenses for use
 - Reporting of changes in ownership
- The requirements are anchored in our contracts, chapters A1 and D1.
- Missing documentation is a cause for rejection in contract negotiations

NOTE! Approval from Jernbaneverket and The Norwegian Railway Authority may take some time. Apply in good time!



RAMS:

Reliability, **A**vailability, **M**aintainability, **S**afety

RAM and Safety for Infrastructure concern planning, project planning and construction in a manner such that trains can be run safely.

Important activities:

- Risk analyses (RAMS analyses)
- RAMS plans with associated activity plans
- Hazard log
- Non-conformance log



RAM and Safety (for infrastructure)

(This is not exhaustive)

Central laws and regulations:

- Railways Act
- Railways Regulations
- Railways Infrastructure Regulations
- Train Traffic Regulations
- Health Requirements Regulations
- Interoperability Regulations
- TSIs, including TSI for railway tunnels
- Regulations concerning implementation of joint safety methodology for risk assessments (CSM)

Standards:

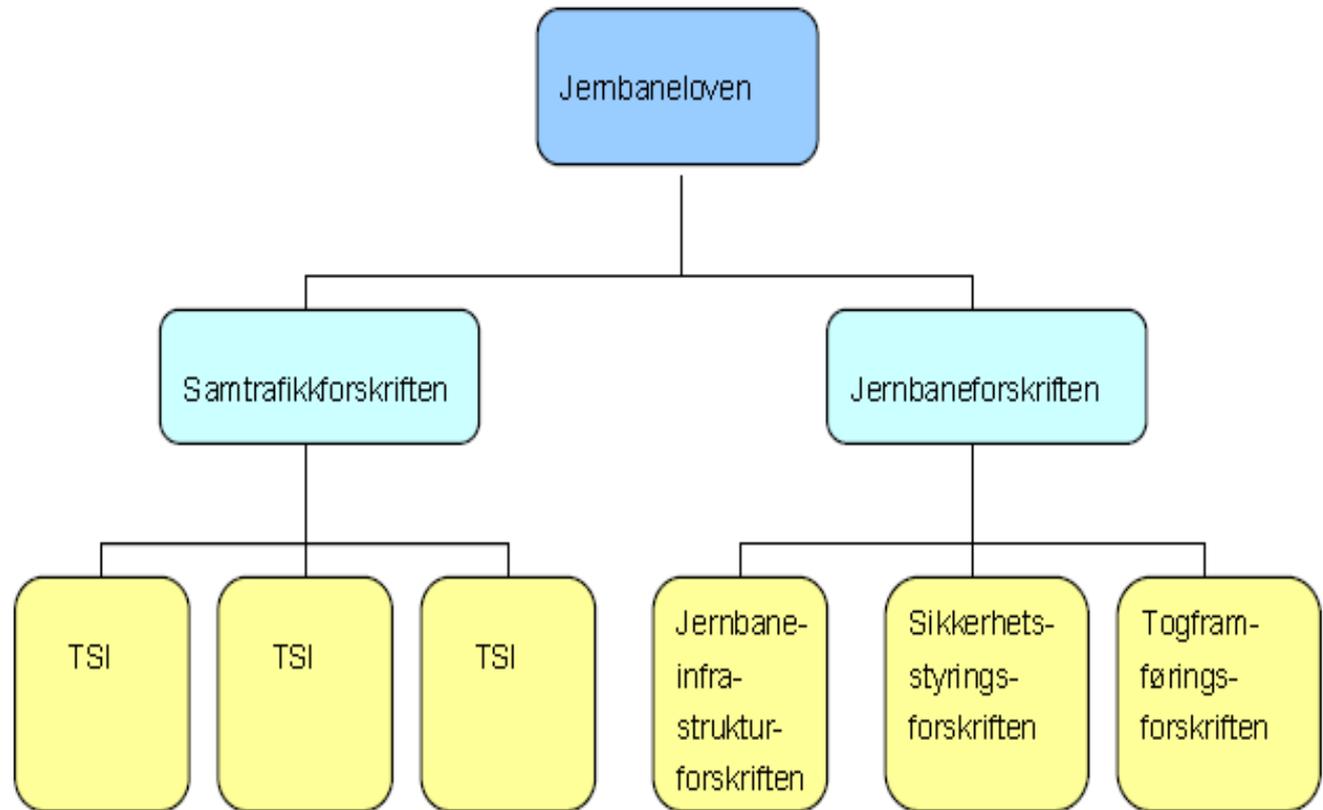
- EN 50126 (RAMS)
- EN 50128 (Software, signal)
- EN 50129 (Safety case, signal)
- NS 5814

Internal rules:

- Technical regulations
- Safety Handbook
- Traffic Rules for Jernbanelverket's Network (TJN)



RAM and Safety (for infrastructure)





External environment

Safety for the external environment involves all companies having a responsibility for not ruining or damaging the biotope by their activity.

- External environment

Jernbaneverket's Environmental Handbook describes the environment as follows:

The surroundings for an organisation's activities, including air, water, soil, natural resources, plants, animals, human beings and their mutual interrelationships (ISO 14001).



External environment (This is not exhaustive)

Central laws and regulations:

- Planning and Building Act
- Pollution Control Act
- Environmental Information Act
- Regulations concerning environmental impact assessments
- Regulations concerning the treatment of waste
- Regulations concerning control of pollution (Pollution Control Regulations)

Standards:

- ISO 14001

Internal rules:

- Environmental Handbook



SHA (and HSE)

Safety for production activities primarily involves ensuring that no persons who are involved in Jernbaneverket's activities suffer injuries or losses as a result of such activity

- **SHA: Safety, Health and the Working Environment**

The concept of SHA is only anchored in comments and guidelines for the Construction Client Regulations and involves only safety, health and the working environment for employees at building and construction sites

- **HSE: Health, Safety and the Environment**

The concept of HSE encompasses health, safety and the environment in all work-related contexts.



SHA (This is not exhaustive)

Central laws and regulations:

- Working Environment Act
- General Application Act
- Construction Client Regulations
- Internal Control Regulations

Standards:

- NS 5815

Internal rules:

- SHA Handbook
- Safe work in and on Jernbaneverket's Infrastructure (Traffic Rules chapter 8)



Non-conformance control

In order to learn from our mistakes, we must also acknowledge them.

- Registered non-conformities will be recorded by Jernbaneverket in our non-conformities database, Synergi. This concerns:
 - Risk-laden undesirable events (RUE)
 - Quality deviations/product deviations
 - Findings from audits and inspection rounds
- Jernbaneverket makes active use of the data from Synergi in a number of different manners:
 - Basis for work with risk analyses
 - Trend analyses
 - Input concerning which measures for improvements should be given priority

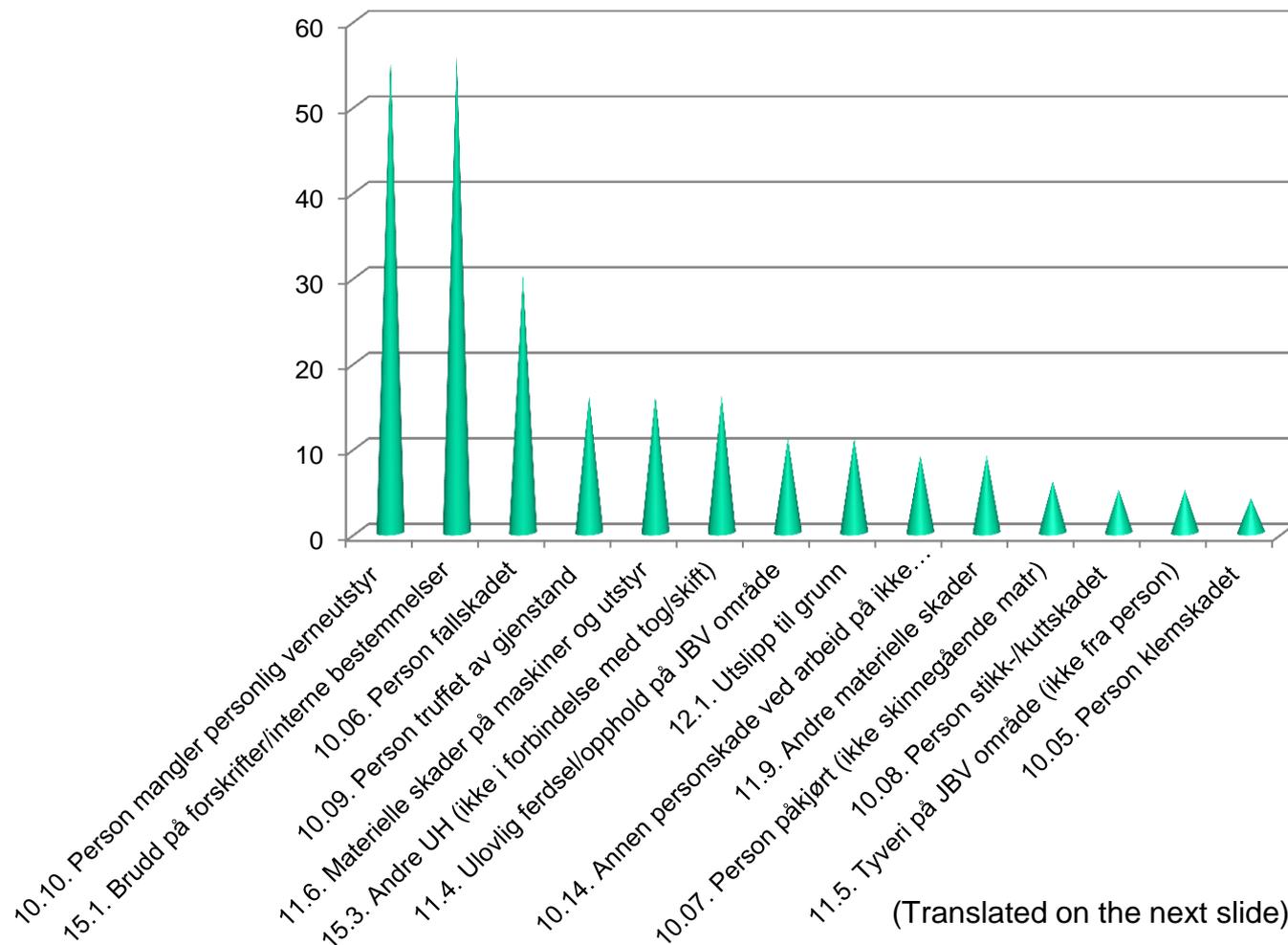


Reporting of non-conformities

- Copy of form from own company
- SMS and MMS: Tel. (+47) 474 52 884
- Mail to avviksreg@jbv.no

Number of undesirable events for UR – past 12 months

Condition – Incipient situation – Damage/injury



(Translated on the next slide)



Number of undesirable events for UR – past 12 months

- 10.10 Person lacking personal protection equipment
- 15.1 Breach of regulations/internal provisions
- 10.06 Person injured in fall
- 10.09 Person hit by object
- 11.06 Material damage to machines or equipment
- 15.3 Other undesirable events (not in connection with log/shift)
- 11.4 Unlawful traversing/presence in Norwegian National Rail Administration area
- 12.1 Emissions to soil
- 10.14 Other personal injury during work at non-
- 11.9 Other material damage
- 10.07 Person run into (not rail-bound rolling stock)
- 10.08 Person stab/cut injured
- 11.5 Theft in Norwegian National Rail Administration area (not from person)
- 10.05 Person injured by being stuck/squeezed/pinched



Requirements for competency

In order to be able to deliver products or services to Jernbaneverket, the supplier must satisfy Jernbaneverket's requirements for competency and be able to document this.

- Safe work by and on tracks
- Driver training for RMM
- Certified and documented training as per requirements in "Regulations concerning the use of work equipment"



Joint quality management

- Quality management means something to us at Jernbaneverket, and we are working actively with improvements.
- Contributions from you will give added value to the finished product.
- Together, we can continuously improve the quality management of our joint projects!
- We look forward to working with you.



Jernbaneverket

Any questions?

