

SAFETY DIALOGUE BETWEEN SAFETY AUTHORITY AND INFRASTRUCTURE MANAGER

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SUMMARY

This paper describes the Safety Dialogue, a concept developed by the Finnish National Safety Authority (NSA) to support oversight and its work related to Safety Management Systems (SMS). The objectives of the Safety Dialogues as well as the method to perform them are described. After that the evaluation results based on the experiences of the participating organisations are included. The Safety Dialogue gives an opportunity to have deep going and informal dialogues between the safety authority and the railway actors on the safety issues, decreasing misunderstandings arising from auditing and assessing. An important goal is to have an open discussion to improve safety performance and safety culture of the railway system.

The Finnish Transport Infrastructure Agency (FTIA) was one of the first organisations participating into the Safety Dialogue with the safety authority. Safety dialogues with FTIA have had two phases. The first phase was performed during the development process of Safety Management System. The second phase supports with the self-assessment of the FTIA Safety Management System the oversight after assessing SMS, enabling the discussions on different areas of SMS.

We will have a safety dialogue on the self-assessment of SMS done by FTIA and in the similar way by the NSA. The results of the self-assessment are described in the paper and/or during the International Railway Safety Council 2022 to see if there are differences in the assessment and to understand the reasons for them.

BACKGROUND

Safety Dialogue is a concept developed by Finnish Transport and Communications Agency (safety authority) to support its supervision and the work related to the safety management systems (SMS) of the railway sector. After several years of auditing and assessing the Safety Management Systems of the railway actors the safety authority is well acquainted to the documentation related to the safety management systems (e.g. guidelines, processes, procedures). However, the safety authority did not have enough information on how the Safety Management Systems are working in everyday life or how the railway actors see their own safety and where the strengths and development issues lie in safety. To be able to act safely the railway actors need to take into account that

work as described and work as done never are exactly the same. For that reason, the safety authority wanted to understand how the work is actually done, keeping in mind that that it might be as safe or safer as the one described in the safety management system or in the guidelines. Safety Dialogue gives an opportunity to have deep going and informal dialogues on the safety issues, which are usually not possible during the audits because of time limits. The safety authority sees it important to be able to concentrate with a railway actor on one safety issue for a longer time. The other ways to support oversight done by the safety authority are for example surveys to the railway actors, safety discussions after serious incidents, cooperation meetings with the management of the bigger railway actors and safety culture assessments.

OBJECTIVES

One of the objectives of the Safety Dialogues is to decrease misunderstandings between the auditor and the auditee arising from safety audits. The assessment of the Safety Management System is in the similar way prone to misunderstandings. The time limits of audits and assessment affect to the possibility of misunderstanding. In addition, an important goal is to have an open, free discussion between the authority and railway actors thus increasing common understanding. We can discuss on what improves railway safety and what prevents the development of safety. The Safety Dialogues help both the safety authority and the railway actor to understand where the risks in the activities of one specific actor lie. The ultimate goal of the Safety Dialogues is to improve safety performance and safety culture of the railway system. The prerequisite to that is to have permanent improvements to the safety performance.

GENERAL ON SAFETY DIALOGUES

After presenting the Safety Dialogues to the management of three main rail actors in Finland, the safety authority and those rail actors piloted the Safety Dialogues during the year 2021. All three actors involved volunteered to take part into the pilot. The piloting organisations were the major railway undertaking, the state owned network infrastructure manager and the tram and subway operator of the capital area of Finland.

Typically, the Safety Dialogues take place 3-4 times per year with each railway actor. The participants are usually the experts on the chosen safety topic, those participating in the development and safety manager or safety director of the organisation. Safety dialogue is not as formal as a safety audit, which encourages the exchange of opinions. The railway actor does not need to present evidence on the issue discussed but present their interpretation on the safety topic. However, we have only one topic in each Safety Dialogue, prepare well and make notes on the tasks agreed together to both the safety authority and the railway actor. The railway actor typically sends some documents or a presentation on their point of view to the safety authority about one week before the Safety Dialogue. The documents do not need to be finalized but can still be drafts. After the Safety Dialogue the notes and the to-do-table are sent to all the participants of the dialogue. The follow up of the measures is typically presented in the regular meetings with the railway actor and the safety authority. The method is evaluated at least once a year. The Safety Dialogue process is presented in Figure 1.

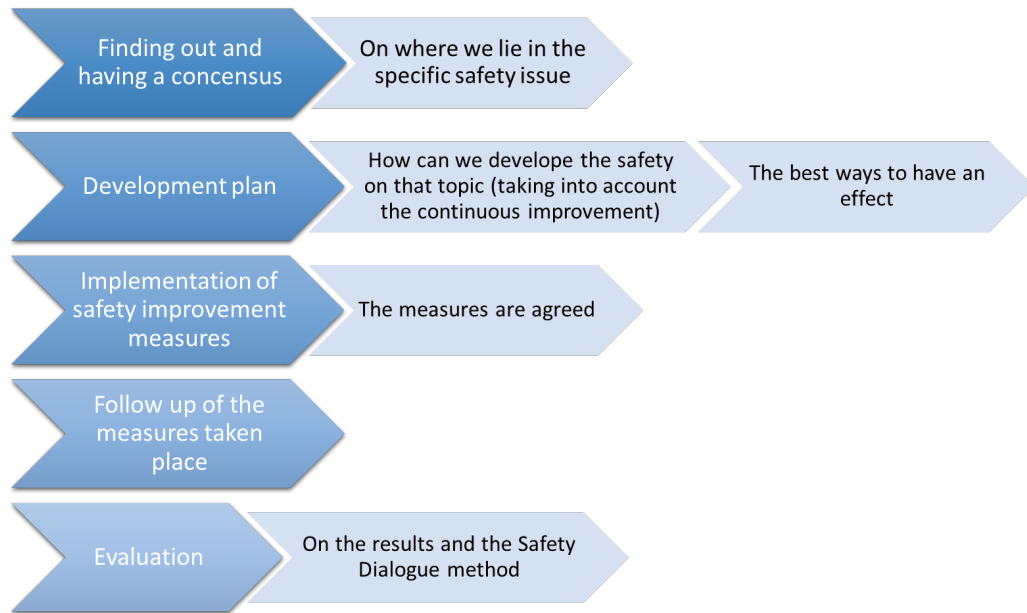


Figure 1. Safety Dialogue process.

The safety topics for the dialogue are chosen together. Usually the railway actor proposes the topic and then we will agree on it together. The topics have included for example human and organizational factors (HOF), cyber security, development of Safety Management System, resilience in the organization and training of the staff. Often the Safety Dialogues are focused on the safety issues under development or otherwise current in the organization. The dialogue during the development phase facilitate the future assessment and safety audits.

DISCUSSION

The Finnish NSA perceived the need for the Safety Dialogues to support their supervision activities. The method was evaluated after the piloting year 2021. All three participating organisations and the safety authority had found the Safety Dialogues useful and improving the understanding of safety issues between the railway actor and the safety authority. The Safety Dialogues continue with all the piloting organisations during 2022. The issues best suiting for the Safety Dialogues are those concerning human behavior (e.g. safety culture, human and organisational factors, resilience of the organisation) or the processes under development. The technical issues have challenges. It is also important that the experts on the safety topic discussed are present. Many directors or managers participating can lead to less vivid discussion.

SAFETY DIALOGUES WITH FTIA

The Finnish Transport Infrastructure Agency (FTIA) was one of the piloting organisations wanting to test the Safety Dialogue with the safety authority. We have had two phases of safety dialogues between the safety authority and FTIA. We performed the first phase of dialogue during the development and continuous improvement process of FTIA Rail Safety Management System. That included for example the issues on Human and Organisational Factors, including integration of HOF into the Safety Management System and training it to the personnel. Having a possibility to discuss the Safety

Management System already during the development phase has made it easier to assess it during the safety authorisation process.

The second phase of the Safety Dialogues with FTIA supports the supervision done by the safety authority after assessing the Safety Management System. In that phase, we can have discussions on different areas of Safety Management System and both the safety authority and FTIA have a possibility to give their understanding on safety performance of FTIA. FTIA's self-assessment of their Safety Management System is the topic of the Safety Dialogue in the autumn of the year 2022.

USING SELF-ASSESSMENT OF SMS AS PART OF SAFETY DIALOGUE

The method used

The performance of safety management is traditionally assessed through audits. However, the authorisation or certificate holder should also make a self-assessment. Self-assessment has several uses: 1) it can be used to mirror one's own performance against the set target level 2) it can replace an external audit 3) it provides an opportunity for a real dialogue with the supervising organisation, especially if the supervising organisation uses the same criteria in their own the assessment.

The Finnish Transport Infrastructure Agency's safety experts carried out a self-assessment on the performance of the rail safety management system in the spring of the year 2022. The aim of the self-assessment was to assess how well the safety management system works in practice. FTIA used the Safety Management System wheel model (ERA 2022) and the maturity model (ERA 2018) of the European Union Agency for Railways criteria in the assessment. The target was to assess the entire Safety Management System and all its aspects. The evaluation was carried out as a Webropol-survey in three batches. In addition, before each Webropol-section opened, there was a workshop where criteria and their interpretation were discussed together in more detail. There are several safety experts situated in various parts of the organisation, which gave us reliable information of our overall performance.

Feedback from self-assessment

The experts involved considered answering to all the planned questions of the maturity model was considered too laborious and time-consuming to do on one sitting. Therefore, the survey was carried out in three parts. This helped in making the assessment, as the time spent could be broken down and better adapted to the gaps allowed by other work streams. Even like this, the self-assessment cannot be considered to be a short survey, where answering will only take up 15 minutes of your time. Responding required at least an hour of concentrated work at a time. The total time used for the assessment was somewhere between 5 and 6 hours for each expert. The evaluation was carried out as a "silent" assessment, i.e. the respondents did not see each other's answers and the answers were not discussed in advance. Thanks to this, each respondent had one vote and there was no need to seek compromises when answering except within him- or herself. Even though the criteria were clear, in retrospect, the use

of the criteria should have been instructed much more precisely. It would have been easier if in the interpretation of the results, a firm ruling had been taken place. For example, if a criterion from maturity level 2 is not met, the final grade for the matter in question is 2 even if all criteria from maturity level 4 are met. However, in practice, nothing is black and white, as the self-assessment showed.

Giving a grade was considered challenging, just because of the example set above. On some maturity levels the requirements were only partially met, there were subdivisions where most of the maturity level 3 requirements were met, partly also at level four, but at the same time one of the maturity level 2 criteria was not met. Therefore finding the right level was challenging. Table 1 shows as an example of how difficult for safety experts it was to assess maturity level, even though everyone had the same criteria to use. It was often the interpretation, which caused the differences.

Table 1. An example on the variation of maturity level assessment among the experts.

Maturity level	Number of answers
1	1
2	6
3	7
4	2
5	0

According to the strict policy, the accepted maturity level would have been 2, but that would have given an overly gloomy and poor picture of the situation. In addition, it was also noted that safety expert's own criticality made it difficult to give an assessment. In the spirit of HOF, the organisation should rather be encouraged to notice and strengthen things that are working well. In any case, the evaluation was slow and laborious, but absolutely useful. In particular, the feedback discussion on the results of the assessment was seen useful as respondents were able to both justify and question the justifications for the assessment.

Issues to consider in the future

The assessment carried out was originally designed for the supervisory authority, so carrying out the assessment more broadly involving all staff or service providers of infrastructure manager (IM) or railway undertaking (RU), requires simplifying and clarifying the questions. The criteria should be modified into simple examples on which the respondent can easily take a stand without studying the exact descriptions of the activities or manuals. Naturally, the possibility of open answers should be maintained.

Self-assessment in the Safety Dialogue

At the time of writing this, there is still no experience of discussion on the results of the self-assessment with the safety authority. The Finnish Transport Infrastructure Agency

has asked Traficom to carry out an assessment using the same Webropol survey and the same criteria. The assessments at the NSA will take place in the end of September and the beginning of October. Comparing the results of these two evaluations should certainly be rewarding and interesting. As an organization implementing a management system, it is important to understand how external actors perceive our operations and where the differences and similarities of the assessment of the maturity level lie. That is why we are also planning to have our service providers and contractors give their assessment of our performance as well. That will probably be done in a form of a questionnaire.

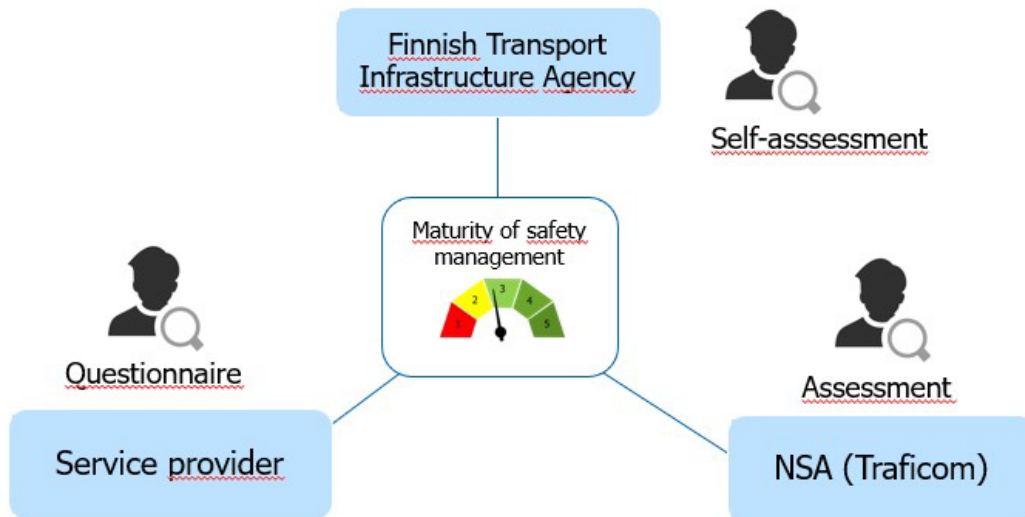


Figure 2. Maturity of safety management is a combined assessment of various sources
Combining all results should give the most realistic picture of performance.

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