

Report RfI

Subject	RFI - Switches & Track monitoring
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Introduction

This document describes the progress and results of the “RFI - Switches & Track monitoring” by ProRail, reference TN 308214. The substantive principles are not repeated in this report, reference is made to the original RFI document. After this introduction, the most important insights are summarized based on the questions in the RFI. Responses are anonymized and competitively sensitive information shared is not included.

RFI process

This RFI started with the notice on TenderNed of the RFI Document on April 14, 2021 (TN 308214). In response to questions from market parties about this RFI Document, an Information Memorandum has also been published on TenderNed on April 23, 2021. Until May 3, 2021 at the latest market parties had the opportunity to submit their written answers to the questions posed in the RFI Document. Ultimately, ProRail received a substantive response from 6 parties. These parties indicated that they are interested in (part of) the scope.

After an analysis of the written answers, ProRail asked all parties a clarification question about the possibility of being able to carry out the entire assignment. The presented integral (anonymised) report is a short summary of the written round. This report has been provided for factual verification to all parties who responded in the written round. The final report was subsequently published on TenderNed, completing the RFI.

3.1 Introduction

- 1 The first question concerns an introduction. All participating parties have introduced themselves.

3.2 Experience with switches & track monitoring

- 2 The second question addresses into what extent participating parties have experience with track monitoring regarding the inspection of switches (2a) and video-inspection (2b). Also, the question if systems used are validated and, if not validated, how much time is needed for validation (2c). The experience with handling large amounts of data is mentioned (2d). Final, the minimal availability rate is asked, including countermeasures (2e).

Participating parties (partly) have experience regarding track monitoring regarding the inspection of switches and video-inspection. We have received concise as well as extensive answers regarding the possibilities for track monitoring. Different kinds of techniques and methods are described. In addition, some parties mention the development of specific soft/hardware used for trackmonitoring. Some of the systems mentioned are validated, by ProRail or otherwise. Other systems have not yet been validated. The indicated time needed for validation varies, this is explained by the fact that no preconditions for validation have been given by ProRail in this RfI. All parties have experience handling large amounts of data. Overall, the availability rate mentioned is ideally between 80% - 100%, depending on the service level. Due to the availability of the Dutch track a lower percentage may be presumed more realistic. Different countermeasures are mentioned to limit unavailability due to maintenance and failure etc.

3.3 Other

The third and last question goes to which future developments are foreseen. Also, the possibility is given to mention any other matters with the aim of publishing the best possible tender.

For this question, various answers were received. In general parties state that the world of asset monitoring is moving quickly. Monitoring contributes to a reliable and sustainable track. Different developments and innovations are mentioned. Innovation could be promoted by partnerships of different parties. Specifically, development in capturing and analysing of data is mentioned. Also, the shift from reactive to predictive is discussed, for example forecasting potential track and switch problems by using machine learning models. Combining and merging more data sources will provide better insights.

The cost effectiveness of service trains is expected to rise, although the services maintain costly. Start-up costs are high, advised is to take into account the difference between the estimated amount of measurements versus the actual measurements to be carried out. The importance to invest in the entire chain on all levels (operational, tactical and strategical) is mentioned. Continuous monitoring and periodic monitoring are described, as well as non-conventional measurement systems.