

Final report Market Consultation Yellow Fleet.

Outline of the process

ProRail BV is responsible for the railway network in the Netherlands: construction, maintenance, management and safety. Employees ensure that every day, 24/7, 1.200.000 travelers and 100.000 tons of goods reach their destination, with 6.550 trains running over more than 7.000 kilometers of track. The railway network is truly the beating heart of mobility in the Netherlands. ProRail works on the accessibility of the Netherlands by ensuring an optimal rail network. We distribute the capacity on the track, regulate all train traffic, build and manage stations and lay new track. ProRail also maintains existing infrastructure such as tracks, switches, signals and crossings.

The ERTMS Program is responsible for the national implementation of the new ERTMS security system in both the infrastructure and rolling stock. A specific group of rolling stock concerns the equipment used by the rail contractors: the so-called Yellow Fleet (also referenced as On Track Machines – OTM's). The Yellow Fleet Management Team has been set up to make the Yellow Fleet suitable for ERTMS: a collaboration between the ERTMS Program Directorate and representatives of the rail contractors.

To this end, the ERTMS Programme, in cooperation with the Yellow Fleet Management Team, has invited market parties to participate in this Market Consultation (MC).

(Please note: This MC is formally organized by ProRail, as legal entity. The client and recipient of the results is and remains the ERTMS Programme Directorate in full collaboration with the Yellow Fleet MT.)

Scope

The Program Directorate and the Yellow Fleet MT are searching for the most suitable solution to ensure that part of the Yellow Fleet is suitable for ERTMS. The part involved concerns approximately 20 vehicles from various contractors.

Questions raised in the MC

Participating parties were asked to answer the following questions in this MC.

Possible Solutions

Question:

By which method of operationally working and certified solution(s) can ensure that contractor machines operate under ERTMS? Provide an overview of existing and certified components and processes in the intended solution.

- a. Provide an overview of innovative components and processes in the intended solution.
- b. What is the expectation with regard to the lead time for the realization and approval of innovative components/solutions?

Description of activities per machine

Question:

Can you describe the activities with associated lead time and cost per machine for the design, engineering, conversion, testing, approval and certification? We would like to receive a specification on the following points:

- a. Suggestions to maximize equipment availability and deployment (minimum withdrawal)
- b. Indication of the costs of the delivered ETCS equipment, installation material and any other materials
- c. Indication which adjustments can be implemented or engineered by the maintenance party of the machine itself (based on instructions and/or manual from the supplier)
- d. How supplier and maintenance party can work together with regard to ETCS integration and parameterization
- e. How the supplier and maintenance party can work together with regard to certification, homologation and approval on the basis of the necessary documentation and information provided by the supplier.

Other Questions

- a. Provide an indication of costs and lead time for (generic) development and individual adjustment per machine;
- b. Provide an overview of preconditions and risks + mitigating measures in the approach and the solution offered

- c. Provide a proposal for a business model or a framework contract (between suppliers and contractors) within which contractors can purchase the solution per machine
- d. Provide a proposal for the maintenance model (1st, 2nd, 3rd line) and associated costs of the installation or solution provided.
- e. In addition, we would like to receive a description of the efforts made for providing answers in this market consultation, so that we may be able to substantiate your compensation.

Fair and Transparent

In order to guarantee a transparent and fair MC, the following rules for participation were applicable. By means of participation, participants unconditionally agreed to complying with these rules and any obligations pertaining to these rules and/or the market consultation.

1. The commercially sensitive information provided by participants will be treated confidentially and therefore will not be shared with other participants.
2. The market consultation is expressly not part of any tendering procedure that may or not be held.
3. This market consultation shall be held in the English and/or Dutch language.
4. No rights can expressly be derived from the information provided for the purposes of this market consultation.
5. As a result of participating in this market consultation, participants will not be given any preferential status with respect to any tender procedure to be held, nor will participation lead to exclusion from such a procedure.
6. The market consultation is voluntary and no rights can be derived from the (insights resulting from) the market consultation.
7. The target group of this market consultation is limited to private market parties that meet the requirements set out in Chapter 3 of this document. The following parties, among others, are excluded from participating in this market consultation: public parties, interest groups, private individuals, the press and knowledge institutions.
8. If, according to the ERTMS Program Directorate, an individual interview is needed to obtain clarification on the answers provided, a request thereto will follow. The ERTMS Program Directorate is not obligated to hold individual interviews.
9. Based on the written answers and individual interviews, the ERTMS Program Directorate shall draft an overall report in outline that will be made public in due course (anonymised and without commercially sensitive data). Participants are expressly requested to expressly state which information (which they provide when answering the questions and/or the individual interviews) they consider to be commercially sensitive.

Course of the Market Consultation

After the invitation to participate, 11 parties have shown interest to participate. Of these 11 parties 9 companies complied with the requirements as mentioned in the MC documentation and indicated to be interested in further participation. The requirements for participation were as follows:

1. You have demonstrable experience as a producer of railway equipment solutions (e.g. either as an individual market party or as a market party through a partnership with a manufacturer). For example, to be demonstrated by stating relevant rail projects or relevant ERTMS experience you have carried out.
2. You have demonstrable experience in offering operational and certified solutions to allow contractor machines to operate under ERTMS or you can demonstrate that this solution will be operational and certified available within 2 years.
3. You are able to indicate the approach to be followed to arrive at a quotation/cost estimate for the given scope of machines.

Following this, a Kick Off took place in December 2022 with eight attending parties. The parties were also offered the possibility to visit the OTM's in scope. One of the parties made use of this possibility.

Ultimately, three parties answered the questions as posed in the MC documentation completely. As provided for in the MC-documentation, the participants made use of the possibility to distinguish confidential and public information. Two parties actively informed us that they found it not feasible nor to their benefit to continue participation in the market consultation. Four parties eventually refrained from responding.

Main conclusions based upon a general appraisal of answers by participating companies

The three parties that responded to the questions as posed in the MC documentation indicated that some of the provided information given in their answers was not intended for public use. These exclusions concerned architectural, technical and financial information which is to be considered commercially sensitive.

Nevertheless, several generic conclusions may be made based on the the answers received on the individual questions. This report will therefore provide a short summary of the generic conclusions that can be drawn.

Conclusion 1

The Dutch Yellow Fleet consists of 15 First in Class (FIC) vehicles and 5 series vehicles. Several parties indicated that the amount of engineering needed was not proportionate to the Return on Investment. Partly due to this reason, several parties chose not to participate (further).

Conclusion 2

Participating parties have excluded the engineering, integration design and the certification from their indications. The main reason for this, is the fact that it was understood by parties that owners preferred an implementation model with the highest possible participation by the owner itself. Next to that it can also be concluded that integration design is very challenging due to the aforementioned FIC-issue, and also due to possible lack of installation space: the Dutch OTM's lack space under the vehicle for ETCS equipment, nor space for a 19" rack in the vehicle. With this in mind, parties are willing to design and deliver the ETCS equipment, but installing and integration is a responsibility for the vehicle owner.

Conclusion 3

Although no individual pricing (components) can be published in this report (due to the commercially sensitive nature thereof), the received answers confirm pricing and cost as seen for FIC vehicles in the Freight Fleet when retrofitting.

Conclusion 4

Although no insight in individual expected downtimes for the OTM's can be published in this report (due to the commercially sensitive nature thereof), the received answers confirm previous insights that individual machines will encounter at least 1 year of downtime when retrofitting the First in Class (FIC) vehicles and 3 months per series vehicle. This downtime is mainly caused by mandatory processes imposed by relevant authorities. None of the parties have shown methods to possibly reduce these downtimes.

Conclusion 5

Parties providing traditional retrofit solutions indicated that a high involvement of the vehicle owner is strongly recommended for engineering, design, approval and certification.

Conclusion 6

The MC explicitly challenged parties to present any innovative solutions (not being traditional retrofitting). Previous to the MC the MT Yellow Fleet was aware of three different innovative solutions. All three known parties showed interest in the MC. Ultimately, only one of these parties provided answers to the MC. However, these answers were not to be used in this public report. The innovative solution that was shown promises a relatively simple solution at a fraction of the cost of traditional retrofitting with no downtime now or with future upgrades. However, the solution still requires prototyping and approval.

Conclusion 7

Some of the parties have stated that they see advantages of having the complete scope of vehicles combined in one project with multiple vehicle-owners.