



Request for Consultation

Nederland's Spoorwegen (NS) (Dutch Railways)

Train Simulators for training purposes

Utrecht, 18 July 2019



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1. Introduction

The Nederlandse Spoorwegen (Dutch Railways/"NS") intends to start an European tender for the supply and long-lasting maintenance of train simulators, related equipment and services in order to use them in the training program it offers to its train drivers.

This document contains:

- Background of NS and train simulators;
- Aim of the market dialogue;
- Process of the market dialogue;
- Available information;
- Planning;
- Exchange of information, conclusion of the market dialogue and the continuation;
- Specific questions to operators in the market (Appendix A);

The aim of this document is to give interested parties insights into the market dialogue. The main purpose is to offer information as complete as possible to interested parties as to come to an optimal exchange of insights.

2. Background information

2.1. Background NS

For participating in the Request for Consultation, it is important, that you take note of NS as an organization and its related activities. For the background of NS and its business units, please consult www.ns.nl.

2.2. Background train simulators

Recently NS has installed 6 compact train simulators to train their train drivers with the ERTMS system. The training objectives for using simulators are:

- technically correct driving and braking behavior by correct operation (including; energy-efficient driving);
- operating the train systems;
- communication with other train staff, passengers and train traffic control;
- driving using safety systems (ATB (Automatic Train Control) and ERTMS);
- driving in line with applicable regulations;
- how to act during incidents and emergencies;
- resolving faults;
- specific route knowledge.

These compact train simulators were delivered by the current preferred supplier of NS. On top of the supply of train simulators also education for the NS instructors and maintenance personnel was provided. NS is an experienced user of training simulators for train drivers. The current simulator tools are:

- 2 full scope closed cab motion simulators;
- 2 multifunctional desk simulators;
- 6 compact simulators;
- ATB and ERTMS safety system functionality;
- 300 km of Dutch ATB track;
- Basic ERTMS track;
- Specific Dutch High Speed Line Track;
- VIRM, SLT and Traxx train models ;
- Instructor station units;



- Scenario builder units.

All of the tools are characterized by the highest level of functional fidelity¹. These simulators are installed in a dedicated simulator center in Amersfoort. Two compact simulators are installed at depots in Amsterdam and Rotterdam.

2.3. Project Goals

NS already uses successfully high fidelity train simulators to instruct train drivers in ERTMS skills. In the forthcoming years NS has to train all of their train drivers in ERTMS skills. However, the current capacity of simulator training facilities is not sufficient. Therefore NS is looking for ways to expand the actual simulator facilities. NS is looking for a supplier which can provide the following products and services:

- Additional compact simulators with the same level of functional fidelity. The functionality consists of high fidelity versions of: Dutch ERTMS basic track, Dutch High Speed Line track, Dutch ATB tracks, Multi trainmodel use (SLT and ICNG);
- Installation of the simulators at several locations in the Netherlands;
- Scenario builder and instructor stations;
- Long term (+/- 10 years) maintenance service on the delivery.

2.4. Principles of the procurement law

Within the framework of the market dialogue as during the actual tender the principles of non-discrimination, transparency, objectivity, en equality shall be observed. This includes that in the resulting tender documentation all information, that was given to third parties during the market dialogue will be disclosed to the participating candidates at that time. The principles regarding confidentiality can be found in paragraph 4.5.

3. Market dialogue

3.1. Definition

A market dialogue enables the purchasing organization to collect knowledge and experience of market parties and use them during the process of a purchasing or tender process.

In practice this means that NS will use the knowledge and skills of market parties to benchmark her own ideas and intended purchasing strategies before the start of the tender itself. The aim is to improve the quality of the tender.

3.2. Purpose of the market dialogue

NS utilizes the market dialogue to examine the possibilities available in the field of train simulators in conformity with NS's requirements. Or the possibilities in development in this field. NS would like to collect and use the knowledge and skills of the interested parties to:

- Determine the scope of an eventual tender;
- Test the feasibility and conditions of the project.

3.3. Execution of the market dialogue

NS has decided to combine a written and (optionally) spoken consultation (e.g. a conference call). NS invites interested parties to first respond by writing before a possible conference call takes place.

3.4. Planning market dialogue

Hereby the planning of the market dialogue:

¹ The degree of exactness with which something is copied or reproduced.



Date	Action
Thursday 18 th of July 2019	Start market dialogue.
Thursday 8 th of August 2019 (till 16:00 pm)	Deadline for asking questions regarding this RfC.
Tuesday 13 th of August 2019	NS responds to the questions of participating parties.
Thursday 22 nd of August 2019 (till 16:00 pm)	Input received from participating parties.
To be determined	(optional) Dialogue with parties. Duration dialogue and Q&A: 1 hour.

3.5. Completion

The feedback of the participating market parties will be processed in the program of requirements of the actual tender.

3.6. Requested information

We would like to request you to fill out the questions and clarifications in the "Form for the market dialogue". At the same time we would like to ask you to propose suggestions related to vision (future developments) or any other topics you find noteworthy within the framework of this project.

4. Administrative Conditions

4.1. Information Exchange

All communication regarding this RfC should be directed to the assigned contact persons of NS for this project. NS prefers communication by e-mail. Please send your queries and input to:

NS Procurement

Att. of: Mr. S. Westrik
E-mail: Stenn.westrik@ns.nl
Telephone: +31 6 12 65 90 71

Att. of: Mr. J.T. Brouwer (*contact from 19/7/2019 till 12/8/2019*)
E-mail: Janthomas.brouwer@ns.nl
Telephone: +31 6 20 41 04 85

Please make sure to start the subject-field of your e-mails with the reference:

"RfC Train Simulators – [name of your company]"

4.2. Cost reimbursement

Participating parties will not be given a financial reimbursement for made costs. Participating in this market dialogue is fully without obligation.

Participating parties cannot claim a preferential treatment in a possible tender procedure by participating in this market dialogue.

Finally parties cannot derive any rights by participating in this market dialogue.

4.3. Reservations

This market dialogue document is written within the framework of the market dialogue concerning the inquiry into insights train simulators. This document cannot be regarded as an



invitation to register for the tender to which the market dialogue is a preliminary or any other tender. NS reserves the right to:

- Alter the way, as described in this document, the tender in question or any other tender is executed or;
- To discontinue the market dialogue and/or the tender temporarily or indefinitely.

By participating in the market dialogue the participating party agrees to the administrative conditions within this market dialogue document.

4.4. Intellectual property

Besides exceptions by law, no content of this market dialogue document may be copied or multiplied without explicit written consent by the organization (other than in light of the aim of this document) by means of print, photocopy, microfilm or by any other means.

4.5. Confidentiality

All communications between NS and participants concerning this market dialogue will be conducted electronically through E-mail. All information provided will be treated confidentially. The information provided in this market dialogue document and potential additional information shall remain absolutely confidential and may only be shared with those employees of the participating parties that for the purpose of the market dialogue in question need to know.

NS will treat feedback given on this market dialogue document and/or during and concerning the following tender given by the participating parties with the same confidentiality. This information will only be shared with employees and advisers that are involved with the market dialogue and/or the following tender(s). Unless NS is obligated by law to further publication. Information submitted by participants will be used as input for the eventual drafting of tender documents.

4.6. Format of the Consultation

NS has chosen for an open form of consultation. This means that all interested parties may attend and provide relevant input.

4.7. Your Response

NS desires your consultation and input regarding the questions formulated in Appendix A. Please make sure to use the template in Appendix B attached to this document to provide us with the required input and the answers to the questions in Appendix A.



Appendix A – RfC Questions

A. General Company Information

NS is interested in how the market is organized and on which industries the market focuses. To get an objective view, NS asks questions about company details and project references. We want to develop an objective view without bias, despite that the questions could seem suggestive.

Company detail

Contact information and an impression of the kind of businesses in the market.

A	Questions
1.	Company Name
2.	Contact person (name and contact details)
3.	Address of the representative
4.	Headquarters address
5.	Website
6.	Company's overall business scope and strategy
7.	Number of employees in total
8.	Which industry/industries are you mainly focused on?

References

NS wants to know what kind about experiences in developing, supplying and long-term maintaining train simulators are currently available in the market and at what maturity levels these solutions are in their product life cycle. Please provide an overview of related and relevant projects undertaken by your company in the recent past. Please include the following aspects in an orderly fashion.

A	Questions
1.	Do you have experience with European Tenders?
2.	Can you describe a reference in which you developed a train simulator in iterations e.g. concept, proof of concept, prototype, production ready product?
3.	Do you have experience in modelling simulations focused on Dutch infrastructure safety systems (e.g. ERTMS, Automatic Train Control)?
4.	Do you have experience in delivering a centralized developing station which is connected with decentralized training simulators?
5.	What experience do you have with on-distance learning? ²
6.	With which industry/industries do you have significant experience(s) in the field of high fidelity public transport simulators? What type of experience(s) are these?

B. Key Questions

NS invites you to share your vision or thoughts on the most important criteria for the European Tender.

B	Questions
	Context: Within this project the following criteria are identified by which the suggested solutions are valued. These criteria are not quantified yet: • Delivery time ; • Purchase costs; • Functional high fidelity; • Reliability and maintainability;

² Meaning that the instructor should be able to control and manage the simulation session on-line not being present at the training location.



1.	Do you recognize other criteria that may be important to value the proposed solutions?
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C. Your solution

NS wants to know about your proposed solution.

C	Questions
1.	Which technologies do you propose to add value to the training simulators?
2.	How do you proof and ensure a high level of fidelity in your proposed solution?
3.	What resources does NS has to be in place in order to fit with your proposed solution?
4.	To what extent does your solution rely on subject matter expertise from NS?
5.	Do you have an estimate of the list price of your solution?

D. Timelines

1.	What phase of maturity is the proposed solution in? Idea, concept design, prototype, ready for production, or operational in different environment.
2.	What phases do you identify in this process?
3.	What is timespan you need to develop your solution towards a final design ready for production?
4.	What level of support would you need from NS to make your solution ready for production?
5.	What is the leadtime between ordering and delivery of 1 pieces the solution?
6.	What is the leadtime between ordering and delivery of 5 pieces of your solution?
7.	What is the leadtime between ordering and delivery of 15 pieces of your solution?
8.	What is the leadtime for subsequently/additional orders

E. Interest

This section is meant to find out if your company is interested on participating on a possible NS Train Simulators tender procedure.

D	Questions
1.	Would you be interested in participating in the European Tender, in case NS chooses to start a European Tender?
2.	What condition do you, as a company, impose on the European Tender in order to participate?



Appendix B – Response Sheets

Below you can answer all RfC questions as mentioned in appendix A. We would highly appreciate that you not only answer with Yes/No but also provide the rationale behind and your opinion and alternatives where applicable.

A. General Information

Company Detail

A	Answer
1. Company Name	
2. Contact person (name and contact details)	
3. Address of the representative	
4. Headquarters address	
5. Website	
6. Company's overall business scope and strategy	
7. Number of employees	
8. Production under license and NDA	
9. Focus on following industries	

References

1. Experience with European Tenders	
2. Development in iterations	
3. Modelling simulations	
4. Centralized development station	
5. On-distance learning	



6. Field of expertise	
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B. Key Questions

B	Answer
1. Criteria for solution	

C. Your Solution

C	Answer
1. Which technologies	
2. Fidelity	
3. Resources	
4. Subject matter of expertise	
5. List price	

D. Timelines

D	Answer
1. Phase of maturity	A) Idea B) Concept design C) Prototype D) Ready for production E) Operational in different environments
2. Phases	
3. Timespan	
4. Level of support	
5. Leadtime 1 simulator	
6. Leadtime 5 simulators	



7. Leadtime 15 simulators	
8. Limiting factors production	

E. Interest

E	Answer
1. Interested in participating in possible Tender	
2. Conditions imposed by you	