

Market consultation: lot 1 Surface treatment

Commercial in confidence

Market consultation specialties Technology Center Land

Surface treatment: sandblasting chamber for ground bound systems and relocate current (small) sandblasting booths for components

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1 INTRODUCTION

1.1 General

The Royal Netherlands Army (hereafter: RNLA) is preparing tenders for a possible contract for the delivery, maintenance and exploitation of equipment (specialties) for the maintenance, repair and overhaul of all its ground bound systems, i.e. trucks, tanks, armored vehicles and components. In order to find answers to questions with regard to the subject of the tenders and the way in which the tenders should be organized, RNLA has started this market consultation.

The information gathered in this market consultation will be used to determine:

1. whether the respondent is able to provide and maintain the equipment which meets the requirements as set out in Annex A.1 and is able to provide the relocation services as set out in A.2 Functional specifications.
2. whether the respondent is able to provide technical details, drawings and other information necessary to draft requirements for the build of the Technology Center Land which will house the equipment.
3. a suitable procurement strategy (according to European Public Procurement procedures) for:
 - a. Scope of the tender;
 - b. Suitability criteria;
 - c. Criteria for award;
 - d. Conditions for intellectual property and service levels;
 - e. Requirements for sustainability;
 - f. Specific requirements/innovations for the equipment.
4. the total life cycle costs for provision, implementation and support of the equipment in order to decide on the applicable procurement procedures;
5. possibilities for cooperation between RNLA and supplier.

The information obtained will not be used to draw up a shortlist.

You are not requested to provide highly detailed information or a detailed offer. As a response RNLA requests you to answer the questions as set out in Annex B and C.

1.2 Description organisation

The RNLA is tasked with the protection of peace and freedom. It defends the territory of the Kingdom of the Netherlands and of its allies, protects and furthers international legal order and supports (local) governments in law enforcement, disaster relief and humanitarian aid, both nationally and internationally.

In order to fulfill its tasks, RNLA uses ground bound systems, such trucks, tanks, armored vehicles and components. For these systems, maintenance, repair and overhaul is carried out by RNLA in its Technology Center Land (hereafter: TCL). For this maintenance-process the ground bound systems are also sandblasted and painted.

2 CONTEXT OF THE PROJECT

2.1 **Background**

The current facility, where all ground bound systems are maintained, has become inconvenient and outdated; the building its infrastructure and equipment do not fully comply with health – and safety regulation.

As the Technical Division will be given a new building and transformed towards the Technology Center Land, some off the equipment needs to be replaced and some relocated. In case of the surface treatment functions this means a new sand blasting chamber and the relocation of smaller sandblasting booths to their new location.

2.2 **Scope**

The equipment (specialties) in scope of replacement or removal are divided into the following lots:

Lot 1:	Lot 2:	Lot 3:	Lot 4:
Surface treatment	Innovation en Expertise facilities	Innovation and Expertise facilities	Surface conservation
1) Sand blasting chamber for ground bound systems 2) Relocate current (small) blasting booths for components	1) Engine test stand 2) Powertrain test stand	1) Vibrating table	1) Pre-treatment cabin 2) Spray booth for components 3) Spray booth for ground bound systems

The scope of this market consultation is lot 1 "Surface treatment": sandblasting chamber for ground bound systems and relocate current (small) sandblasting booths. If you are able to supply the equipment of Lot 4: Surface conservation or part of this equipment, please indicate so by answering the Lot 4: Surface conservation market consultation.

2.3 **Reason market consultation**

The new TCL needs to be equipped with the latest, new equipment for sandblasting, spray painting and testing and where possible, innovations in either the equipment itself or in the process of maintenance or in safety measures. In order to determine the equipment available, the innovations possible, the market and scope, the result of this market consultation will help to determine the scope of the tender and its design.

3 PROCEDURE AND PLANNING

3.1 Procedure

The market consultation will be conducted in the English language. Respondents are requested to use either the English or Dutch language.

With this document the respondents are able to obtain a global view of the project requirements which the RNLA would like to investigate.

Respondents should bear in mind it is the RNLA's decision whether or not to commence with the next phase and in what way. Therefore, it should be noted that:

- with receipt of this market consultation it may not be inferred that (pre)contractual contacts with the RNLA have arisen, nor that a contract will be placed, nor that the project will be executed as currently envisioned, nor that the company of the respondent will automatically appear on the tender list;
- the RNLA retains the right to change the contents of the program and/or to end the program, without being obliged to pay any form of compensation;
- all costs with regard to the completion of this market consultation must be worn by the respondents and will not in any way be reimbursed by the RNLA.

By responding to this market consultation the respondent agrees to the above mentioned conditions. In the event that the respondent decides not to participate, he is kindly requested to inform the RNLA through Negometrix (as mentioned below).

The RNLA has the right to use any information provided by respondents for the future tender.

All questions and answers will be shared with all participating respondents. If certain information is commercial and/or technical in confidence this must explicitly be stated by the respondent. No information, pricing included, will be shared which is deemed confidential by respondent.

All correspondence and communication regarding this market consultation must be sent via Negometrix, the procurement platform of RNLA.

The respondent is kindly requested to provide the name of the point of contact when participating in this market consultation.

3.2 Planning consultation procedure

The following planning is applicable:

#	activity	Who	Date
1	Sending market consultation documents to selected parties	RNLA	8 December 2021
2	Date for issuing questions	Supplier	20 December 2021
3	Replying of questions / answers to all respondents	RNLA	6 January 2022
4	Submission of answers to market consultation	Supplier	24 January 2022
5	<ol style="list-style-type: none"> 1. Evaluation by the RNLA of the responses 2. Consult supplier(s) and/or reference projects (if possible) 	RNLA/Supplier	<ol style="list-style-type: none"> 1. 25 January 2022 – 31 January 2022 2. February 2022
6	Sending end report to all respondents	RNLA	February / March 2022

3.2.1**Evaluation**

Subject to the first evaluation of your answers, RNLA may visit your company and/or reference projects i.e. clients / companies using the equipment in order to gain understanding of your company, your equipment and/or maintenance which you offer. RNLA will evaluate your answers and verify them by sending you questions. Part of the evaluation may also be a visit to you / your facility or a reference project.

4 FINALLY

The functional specifications of the sandblasting chamber for ground bound systems and relocation of small sand blasting booths are set out in the following Annexes:

- Sandblasting chamber for ground bound systems: Annex A.1
- Relocation current (small) sand blasting booths: Annex A.2

These functional specifications should give respondent enough information to answer the questions of both Annexes B and C. These questions apply to Annex A.1 and A.2 (please use the form in Word as provided with this document), which forms the essence of this market consultation. You are requested to answer them as completely as possible.

Annex D is the price sheet. Your pricing should be based on the requirements of Annex A.1 and A.2. Pricing is confidential information and will not be shared as end result of the market consultation.

Your remarks and/or supplements are highly appreciated and can relate to various aspects such as: financial, organizational, practical, technical and/or legal aspects, quality assurance, but can also relate to the planning.

If you have any questions about this market consultation, please feel free to contact the contact person through the Negometrix platform.

Finally, the RNLA would like to thank you in advance for the effort you will make by participating in this market consultation.

1 ANNEX A.1 – FUNCTIONAL SPECIFICATION SAND BLASTING CHAMBER FOR GROUND BOUND SYSTEMS

1.1 Introduction

This Annex A.1 is a summary of the requirements set for the new to build sand blasting cabin for complete ground bound systems.

The new cabin is intended to replace the existing, dated blasting cabin. Not in the current infrastructure, but at the new to build TCL building.

This Annex A.1 starts with a short description of the current blasting process itself. The pre- and post-treatment are not described in this Annex A.1 but in the market consultation documents for lot 4: Surface conservation.

Also included in this Annex A.1 are climatic conditions and other operational aspects. Subsequently, a number of specific and global requirements are set out, together with a list of ground bound systems.

All this data together should provide insight into the type of facility that is required.

1.2 Process

The daily process is that ground bound systems and large components are blasted with corundum. For some ground bound systems and/or large components are treated with lacquers containing chromate, blasting may result in a polluting environment.

The current facility itself is equipped with a room extractor and has a central exhaust system. The automatic loading and unloading system for the grit is provided under the work floor of energy-efficient grit removal.

During blasting or sanding, all kinds of substances released via the room extractor should be disposed of. After the work, the employees must walk into a decontamination area before entering the "public" space. The employees use Personal Protective Equipment (PPE) at all times during the work. A blasting overall, a blasting helmet with air supply from the compressed air system, gloves and the right shoes are among the standard equipment.

1.3 Operational requirements

This paragraph lists the basic operational requirements.

- Uptime: ~900 hours/year
- Downtime including (filter) maintenance: ~200 hours/year
- Number of operational employees: maximum 2 at a time
- Maximum product dimensions: (Lx W x H): 10.2 meters x 3.8 meters x 4 meters (Leopard II on load wagon)
- Maximum product weight: 70,000 kg (Leopard II on load carriage)

Paragraph 1.5 contains table with the most common ground bound systems, which are (partly) blasted and their workload 2020.

Environmental conditions during use;

- Temperature range outside T_{outside} : $-12\text{ °C} \leq T_{\text{outside}} \leq 30\text{ °C}$
- Temperature range during pre-treatment in the cabin T_{booth} : $0\text{ °C} \leq T_{\text{booth}} \leq 25\text{ °C}$

As mentioned, blasting is a very dirty work process, it is also physical intensive to perform. As an employer, the RNLA has a duty to keep the load within reasonable limits or to limit it to a minimum. To achieve this, the blasting cabin is equipped with a blasting robot.

The new sand blasting cabin must be as safe as possible and therefore a facility with central extraction is required to sand vehicles with chromate paints with pneumatic sanders.

It goes without saying that the cabin and associated facilities and equipment should comply with all ATEX¹ regulations.

The entire cabin must be designed and build, as economically as possible. Energy is recovered where possible and energy consumption is kept as low as possible. For example: design all lighting as LED lighting.

1.4 User requirements and equipment

User requirements

Internal dimensions of the sand blasting cabin:

- Length: 19 meters;
- Width: 8 meters (please note: sand blasting with the robot must be possible for a width of 3.8 meter);
- Height: 5.5 meters to the plenum, 5 meters to the crane track of the robot.
- Clear opening of the doors to transport the vehicle in the sand blasting cabin, width 5 meters, height 5 meters;
- In-cab light intensity of 1000 Lux, with a color of ~6000 K. Specifically for the sanding a lighting strip at about 1.6 meters high is necessary;
- The installation is equipped with a fire alarm and extinguishing system;
- The cabin is easy to clean;
- The cabin is equipped with an adequate decontamination unit for personnel in conformance with relevant legislation and regulations.

Equipment

- Central extraction system, including vacuum cleaner outside the cabin.
 - extraction points for the sander on each wall;
 - system is equipped with a Hepa filter system;
 - vacuum cleaner bag is equipped with a so-called infinite bag.
- Vacuum cleaner is suitable to support 2 sanders.
- Vacuum cleaner to suck up blasting grit from vehicles, then the contents are dumped on the floor or through a separate system aspirated. This grit then follows the usual route for filtering and reuse.
- The floor and the filter installation are suitable for removing the falling dust (very limited) to process.
 - robot on crane track to relieve work;
 - robot can be programmed via tracking system;
 - robot can be programmed via 3D model;
 - robot can be controlled via control from a special cabin. There is a wide view from the cabin, this is supplemented with camera images.
- Two blast hoses are included, which can both be manually operated at the same time.

¹ ATEX comes from the description of the hazardous materials, as written in French — "Appareils destinés à être utilisés en ATmosphères EXplosives." The translation into English reads, "Devices intended for use in explosive atmospheres."

- At the connections of the vacuum cleaner for sanding, air connections for the drive of the sanding machines.
- Wall cladding that can be moved at the location of the air connections, the vacuum system and the lighting in the side wall.
- Grit must be collected in one or more 200 liter drums. The barrels can be removed individually using a forklift. If you have an alternative to grit collection and / or removal please state your method for collection or removal here.
- The complete installation must be provided with its own compressed air system, suitable for breathing air.
- The installation is equipped with a fire alarm and extinguishing system.

1.5 List of vehicles and yearly workload (2020)

Listed below are some of the vehicles which are (partly) sand blasted

Name	Quantity/yr	Length [m]	Width [m]	Height [m]	Weight [kg]
Boxer	8	8,4	3	3,2	36.000
Bushmaster	14	7	2,5	3,2	10.000
CV-90NL	36	7,5	3	3	32.000
Leopard 1 and 2 family	3	10,2	3,7	3	62.000
DAF 2300 line	0	11	2,5	3,7	13.000
DAF 3300 line	1	9	2,5	3,7	22.000
DAF 4442 line	5	7,3	2,5	3,5	7.600
Fennek	10	5,5	2,5	2,5	10.000
Mercedes 290/280 line	16	5,5	2,2	2,2	4.000
Container 45"	0	14	2,5	2,8	2.700
Boat	5	6,5	2,7	2,8	6.000
Bigger divers items	41				
Total	139				

2 ANNEX A.2 –RELOCATION OF THE CURRENT SMALL BLASTING CABINS

2.1 Introduction

This Annex A.2 is a summary of the requirements for the relocation and the new space of the current small blasting cabins.

The blasting cabins with the associated filter installations meet the (ATEX) requirements, as applicable in April 2020. The space is designed to allow the current installations to function in a safe environment.

This document starts with a brief description of the process of blasting the parts itself. The pre- and post-treatment are not described in this document.

Also included in this document are other operational aspects. Subsequently, a number of specific and global requirements are discussed.

All this data together should provide insight into the type of facility that is required.

2.2 Process

This area is the set-up area for the small blasting cabins, including the associated equipment. The daily process is that various parts and components of various sizes are offered to release paint or to be cleaned (for example, to remove carbon deposits). This is done by blasting with different means. Technical Division has five different blasting cabins to achieve this;

1. Belt machine with jet thrower, blasting with steel corund;
2. Overhead conveyor machine with three jet throwers, blasting with steel corund;
3. Blasting cabin, manually operated, blasting with stainless steel;
4. Blasting booth, hand-operated, blasting with aluminum corund;
5. Blasting booth, manually operated, blasting with glass bead.

The first three cabins are connected to 1 large filter installation, which complies with the ATEX requirements applicable in April 2020. The other two cabins each have their own filter system. Parts are transported into the area through a lock entrance. Then the parts are loaded into the machines by an employee who starts the blasting.

During blasting, all kinds of substances are released that must be extracted via the room extraction. When the work has finished, the employees must walk through a decontamination room before they are allowed to enter the “public” area. The employees use Personal Protective Equipment (PPE) at all times during the work. Disposable overalls, a helmet with active filters and air supply, gloves and the right shoes are standard equipment.

2.3 Operational requirements

This paragraph lists the basic operational requirements.

- Uptime: ~900 hours/year
- Downtime including (filter) maintenance: ~200 hours/year
- Number of operational employees: maximum 2 at a time
- Room dimensions (LxWxH): ~ 20 meters x 20 meters x 6 meters max. floor load: 14,000 kg (forklift with load)
- Environmental conditions during use;
- Temperature range outside T_{outside} : $-12\text{ °C} \leq T_{\text{outside}} \leq 30\text{ °C}$
- Temperature range during pre-treatment in cabin T_{room} : $12\text{ °C} \leq T_{\text{room}} \leq 22\text{ °C}$

There is no negative pressure in the blasting cabins. There is a negative pressure outside the cabins, but still within the set-up area of the blasting cabins. It goes without saying that the facilities and equipment comply with all ATEX regulations.

2.4 User requirements

- Lock with clear opening of the doors to transport components with a forklift truck in the set-up area of the blasting cabins, width 3 meters, height 3.5 meters and a space of 5 meters between the inner door and the outer door of the lock. This lock is located outside the installation area.
- Light intensity in the blast chambers of 1200 Lux, with a color of ~6000 K.
- Light intensity in the installation room of 1000 Lux, with a color of ~6000 K.
- Daylight entry.
- The confined sandblasting space is equipped with an adequate decontamination unit for personnel (1 person) conforming with relevant legislation and regulations. The existing installations must be moved and connected. For this, at least the following must be taken into account;
 - the electrical connection values of the machines;
 - the electrical connection values of the filter installations;
 - adapting the ductwork to the new space.

2.5 Equipment

- Additional electrical connections 4x 240 V/10 A, 2x 400 V/32 A.
- Extra air connections, 4 pieces.
- The room is equipped with negative pressure and a room exhaust, fitted with a Hepa filter on the outlet opening to the outside.
- The installation is equipped with a fire alarm and extinguishing system.
- The entire facility has been built as economically as possible. Energy is recovered where possible. Energy consumption is, where possible, as low as possible. For example: design all lighting as LED lighting.

B.1 General questions about your company

1. Please provide the full name of your company.
2. Is your company autonomic or does it belong to a larger holding?
3. Please provide the address of your company. And, if applicable: the name and address of a local company/distributor in The Netherlands.
4. Please provide the name(s) of the person(s) and their function who are responsible for answering this market consultation.
5. Which person will be the point of contact for this market consultation? Please provide name, telephone number and e-mail address.
6. If applicable: please describe relevant partnerships with other companies.
7. Which Quality Management System (QMS) do you use for design, development and production (for example ISO 9001:latest version)? If the system is certified, please enclose a copy to the response.
8. Do you have a Configuration Management system as part of the QMS, and if so, does this comply with ISO 10007?
9. Which main (sub)suppliers would be involved in this program? Please, enclose a separate description of the components and/or services they supply.
10. Please could you provide a summary of the most significant (military) orders related to your equipment over the last 5 years?
 - a. Is it possible for representatives of RNLA to visit a client and discuss the equipment (similar to the equipment as set out in Annex A.1), its function and any points of interest for RNLA. Please note that we would like to visit without any representatives of your company.
 - b. What was the average time for you to develop, deliver and install the equipment and technical adjustment in these projects;
 - c. After installation, what, if any, items were generally left to address and within what time period were they resolved?

4 ANNEX C – QUESTIONS ABOUT THE EQUIPMENT AS SET UP IN ANNEX A.1 AND ANNEX A.2 AND SERVICES

C.1 General information

1. Do you have equipment available for the RNLA that could be fit for the TCL, as described in paragraph 3 and which meets the requirements as set out in Annex A.1 Functional specifications?
2. Do you have equipment available or would you also be able to act as main-contractor for the design, delivery and installation plus maintenance for the equipment as set out in Lot 4: Surface conservation?
3. Is the equipment produced by you or are you an (authorized) reseller of the equipment?
4. Please describe the equipment by its functions and its components.
5. What are the most critical components of your equipment?
6. Which requirements need to be developed in your equipment in order to meet the requirements as set out in Annex A.1 and A.2 Functional specifications.
7. Where is your equipment in use?
8. Has (a prototype of) your equipment been tested yet and by which standard (MIL-STD, DEF-STAN etc.) and by whom?

C.2 Specific questions

C.2.1 Blasting cabin

9. Do you have experience with robots in a blasting cabin?
10. What are the advantages / disadvantages of robotic blasting?
11. Is it possible to use a robot to (wet) blast the inside of vehicles and armored tubs?
12. Is the blast robots easily programmed (e.g. designating a plane by a movement, or a drawing).
13. What are the advantages / disadvantages of dry / wet blasting, including environmental matters. Think of the removal of waste residues, the prevention of blockages, separation of still usable grit and waste, consumption of the grit (is this higher, lower or equal to dry blasting with wet blasting), etc.?
14. How is the waste residue (grit and paint residue) removed and then separated into (un)usable?
15. We also blast interiors of our ground bound systems, do you also have facilities to remove the grit here and deposit it in the system/floor?
16. What is your lighting plan in a large blast room and how is the lighting maintained/protected.
17. What proposals do you have regarding granting access to the pre-treatment room as well as the controls of the installation for authorized persons only (i.e. trained persons)?
18. How do you guarantee the personal safety of the personnel for, among other things, all CRM-containing substances in the sandblasting blasting cabin / booths? What's new in personal security that could have a positive effect on it?
19. Do you also provide decontamination space? If so what does it look like? In terms of decontamination, we are thinking of combining an air shower with UV light.
20. What is your advice for flooring or type of floor, knowing that we want a cab you can drive through. We have heavy equipment, not everything is 100% blasted.

C.2.2 Relocation (small) blasting booth components booth parts

21. Will the CE certification of the current blast boxes be secured after the move from the old hall to a new hall? Is this certification based on the issued documents or do you issue new documents?
22. Have you often moved blasting booths? Please list some of the relevant projects you have done in the past five years.

C.3 Delivery and installation

23. What activities do you foresee for delivery and installation, and what is generally the time you need for this.
24. What type of support do you need from RNLA in order to design/deliver and install?

C.4 Services: design (Annex A.1)

25. What is a reasonable time period for you, after a possible contract award, to finish and hand over the drawings and other information necessary such as 'provisions for' for drafting the technical specifications for the procurement of the new TCL building.
26. What type of information and/or support do you need from RNLA for the drawings.
27. The order is placed before the actual delivery, how can you guarantee that the latest technology is delivered, especially with regard to filtering/possible decontamination and the HMI (both software and used PC)?

C.5 Maintenance (Annex A.1)

28. What maintenance services do you provide? Or is maintenance provided by a third party.
29. What maintenance activities do you expect RNLA to execute? What type of training does this require?
30. Does your equipment have regular service intervals? Please specify.
31. What type of maintenance activities do you perform: predictive, preventive, conditions based, corrective. Does the maintenance include a change of the filters?
32. If you offer predictive or condition based maintenance, how do you perform this and what type of experience do you have in predictive maintenance.
33. If preventive maintenance is part of your maintenance, what activities fall under preventive maintenance and how often is preventive maintenance done (once/twice a year)?
34. How long does preventive maintenance take?
35. Is preventive maintenance based on time or production hours?
36. What is the expected number of maintenance hours (preventive and corrective, excluding damage repair) considering the hours of operation of your equipment.

37. Above what level of operating hours will the cost of maintenance significantly increase?
38. If any, which (legal) inspections, as part of the maintenance, are applicable to the equipment?
39. What are the personnel consequences of dry/wet blasting, in relation to the daily preventive maintenance?

C.6 Spare parts

40. Do you have experience with contracts for the delivery of spare parts on demand for longer periods (e.g. 10 years)?
41. Please provide a list with recommended spare parts and documentation available for maintenance.
42. What is the lifespan of your installation under normal use in the market?
43. How do you guarantee the supply of spare parts for the future, especially with regard to software and the necessary computers, in relation to the lifespan of your installation?

C.7 Price-information

44. Please give a global price indication in accordance with the format of Annex D.
45. Is this price-information to be regarded as a rough estimate or has it been based on recent contracts with other customers?

C.8 Finally

46. Please state here any other technical / commercial information that you consider indispensable for the design/installation/maintenance of the equipment provisioning and the thorough understanding of your response.

5 ANNEX D – PRICING

This Annex is a separate document. Please fill in the excel sheet as provided with your pricing.