Defence Materiel Organisation
Ministry of Defence

MARKET CONSULTATION

Equipment for Tactical Air Control Party

Version 1.0

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Colophon

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1 INTRODUCTION

1.1 General

On behalf of users from the Royal Netherlands Army and Royal Netherlands Marine Corps who are engaged in fire support missions (Joint Fires), the Defence Materiel Organisation (DMO) is preparing one or more tender(s) for possible agreement(s) for the delivery of Tactical Air Control Party (TACP)-equipment. Before publishing this tender or these tenders, the DMO has decided to consult the market first.

The information gathered in this market consultation will be used to determine if the requirements for the TACP-equipment can be met, if the program can be realized within the available budget and if this program can be carried out in the way it was intended. Since the list of requirements has not been completed at this stage, the information of the respondents may lead to adjustments in the requirements.

The information obtained will be used to identify the most potential suppliers. The information obtained will **not** be used to draw up a shortlist.

The results from this market consultation will be used by the DMO to determine a suitable procurement strategy.

The DMO appreciates your effort to provide general information concerning the possible participation of your company in a future tender. You are not requested to provide highly detailed information or a firm offer.

1.2 Description organisation

The Defence Materiel Organisation ensures that military personnel has modern, robust and safe materiel to work with. The DMO is involved in the procurement, maintenance and disposal of the materiel throughout its entire life-cycle. The materiel involved can vary from ships, aircraft, helicopters and vehicles to clothing, computer systems and (hand weapons as well as consumables like for example fuel and, ammunition).

After procurement, the DMO hands over the purchased materiel to the relevant users from army and navy who are then responsible for its sustainment.

The logistics divisions of the service then ensure maintenance and further distribution of the materiel.

For further information about the Ministry of Defence and the DMO please contact the website www.defensie.nl

2 PROCEDURE AND PLANNING

2.1 Procedure

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

At this stage, the DMO has no intention to plan a meeting with the respondents.

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

Respondents should bear in mind it is the DMO'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 DMO 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 DMO 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 borne by the respondents and will not in any way be reimbursed by the DMO.

By responding to this market consultation the respondent agrees to the above mentioned conditions.

The DMO 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.

All correspondence regarding this market consultation must be sent to: PHM.Bremer01@mindef.nl.
Please refer to: "Market consultation equipment for TACP".

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

All communication regarding this market consultation will be conducted by e-mail.

2.2 Planning

The following temporary planning will be applicable:

1	Publishing of market consultation on Tenderned	08 March 2017
2	Closure date for issuing questions	14 April 2017
3	Replying of questions / answers to all respondents	21 April 2017
4	Closure date market consultation	28 April 2017
5	Evaluation by the DMO of the responses	26 May 2017
6	Sending end report to all respondents	07 June 2017

3 CONTEXT OF THE PROJECT

3.1 Background

The Netherlands Ministry of Defence started with Tactical Air Control Parties (TACP) around 1994. Since 2013 the TACP is part of a Fire Support team (FST). With the formation of the FST´s the number of TACP's has significantly increased.The existing FST's have a set of TACP-equipment to perform their task. This set includes a Laser Target Designator (LTD), See Spot device, Electronic Angulation Head (EAH) with tripod, an illuminator/pointer, a sight with Laser Range Finder (LRF) and tripod, Night Vision Goggles (NVG), UHF/VHF-radio's and a military GPS and a ruggedized laptop. This equipment is used in different combinations, resulting in different configurations, depending on the mission.

The scope is limited to the functionality of the LTD, See Spot Device, EAH, tripod and illuminator/pointer. This set is further referred to as Laser Target Designation Kit (LTDK) in this document. The new equipment will not replace the existing TACP-equipment. The sight with LRF, NVG, radio's, GPS and laptop are out of scope of this market consultation.

The scope of delivery will be approximately 18 to 24 LTDK sets while delivery in The Netherlands is foreseen in 2018.

3.2 Reason market consultation

To increase the mobility of the FST's the need has been identified to reduce the weight and size of the equipment while maintaining capability and performance. This market consultation is used to determine if smaller, lighter and possibly more integrated TACP-equipment is available, that is able to provide the required functions.
Therefore the DMO is interested in equipment that can comply with **all** or a **subset** of the functional requirements of features described in paragraph 3.4. The respondents are asked to provide information on products that they deem appropriate for these tasks.

If the respondents have more than one product, or a set of products that is capable to provide all functions please provide a **separate response** to the questions for each individual product.

3.3 User profile

The TACP-equipment will be used by Fire Support Teams (FST) within the Netherlands Army and the Royal Netherlands Marine Corps worldwide including the Arctic and Antarctic regions.

The LTDK will be used for:

- Employment of Close Air Support (CAS) in the following environments:
    - Arctic (severe low temperatures)
    - Mountain (high precipitation more than likely)
    - Jungle (humidity)
    - Desert (severe high temperatures)
    - Amphibious (sea water)
    - Riverine
    - Urban
- Guided targeting with precision guided munition. In case there is no precision guided munition available, than the FST has to do a quick and exact target acquisition.
- Target detection and identification, both day and night. During targeting operations the target should be under observation to avoid collateral damage and blue-on-blue.
- The FST has to perform a Battle Damage Assessment (BDA) to assess whether the desired effect is achieved after a certain action against a target.

3.4 Functional requirements

The LTDK is used by the TACP in preparation and execution of CAS and other Air Support Missions.

- The LTDK is used for:
    - Coded Laser target Designation for terminal guidance of NATO laser guided weapons.

    - Laser hand-off procedures aka marking target for NATO laser spot trackers (coded marking).
    - Acquire accurate and precise target coordinates.
    - Accurate determination of the range of a target.
    - Marking with invisible energy, which can only be detected with special equipment.
    - Situational awareness and to see laser spot in day and night conditions
    - Detection of vehicle size targets and recognition of vehicle size targets in day and night conditions.
    - Generate a GPS coordinate with an accuracy of < 5 mtr by internal NATO GPS, or an external GPS can be used to obtain this coordinate.

- The users should be able to accurately calibrate the LTDK in order to be able to produce accurate target coordinates.
- The LTDK should be adjustable for users with different eye sight.
- The total LTDK system and its individual components have to be small in size, man portable and easy to operate, calibrate and deploy.
- The LTDK can be a set of systems, but should be mountable on a tripod in one assembled set.
- The LTDK will be used in the in the temperature range +49° - -46°C (AECTP 200 category A1- C2).
- Users should be able to export/import data from the LTDK like 3D target coordinates, sensor imagery, etc. to other systems (i.e. in support of Digital Aided CAS).

4 FINALLY

The questions in both Annexes are the essence of this market consultation. You are requested to answer them as completely as possible.

The questions should be considered in conjunction with the context which is described in paragraph 3 *Context of the product*.

Your remarks and/or additions 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 e-mail address as mentioned in paragraph 2.1.

Finally, the Army and Navy and the Defence Materiel Organisation would like to thank you in advance for the effort you will make by participating in this market consultation.

ANNEX A – QUESTIONNAIRE MARKET CONSULTATION

A. 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.

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 9001:2015)?

8. Does the Configuration Management system as part of the QMS, 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 provide a summary of the most significant (military) orders related to your proposed product over the last 3 years?

ANNEX B – QUESTIONS ABOUT THE PRODUCT AND SERVICES

B.1 General information

1. Do you have a product available for the Netherlands MOD that could be suitable for the purpose described in paragraph 3?

   If it relates to one or more subsystems, which one(s)?

2. What is the name of this product?

3. Can you provide product information of this product (datasheet)?

4. How can the status (development, available, etc.) of the product you have available be described best?

5. Has (a prototype of) your product been tested yet and by which standard (MIL-STD, DEF-STAN etc.) and by whom?

6. Has your product been manufactured in larger quantities and delivered to (military) customers? If yes, please provide some references.

B.2 Product information

7. What are the dimensions of the product (length / width / height)?

8. What is the mass of the system including batteries (in kg)?

9. What is the system start up time from off to fully operational mode?

10. What is the system start up time from standby to on mode?

11. What type of batteries does the system use?

12. What is the expected battery life during regular use in relation to the required temperature range?

13. What time is required to replace the batteries?
    Please specify if any tools are required.

14. Can the system operate from an external power supply (ac power, dc vehicle power, or other)?

15. Is there a battery charger included and if so what type and charging times are applicable?

16. Is the system sensitive for environmental conditions like bright light sources, heat, water, dust, temperature etc.? Please specify.

17. Is the system in any way protected against environmental conditions?

18. What are the most critical components of the system?

19. Can the system be assembled together with other (sub)systems to provide all requirements of the LTDK?

20. Is the system handheld and/or is there a possibility to clip the system with a NATO accessory rail (STANAG 2324)?

21. Does the system have data in/outputs (video, GPS etc) and what are the specifications?

22. Has the system been connected with other systems for target location purposes and has successful data transfer to these systems been achieved?

23. Can you provide a list with systems (Manufacturer and model) that have successfully been connected to your system?

24. What is the temperature range in which the product can operationally be used?

Optical (sub)system

25. What is the focus range of the system?

26. If applicable, what is the minimum exit pupil of the ocular?

27. If applicable, what is the minimal eye relief of the ocular?

28. What is the magnification of the system?

29. What are the Fields of View of the system?

30. Is the dioptre adjustable? If yes, to what values?

31. Is the (sub)system equipped with a reticle?

32. Does the system have an option to capture images (digital still camera)?

33. Does the system have a display? If so, what is the resolution of the display?

See Spot capability (sub)system

34. What is the range performance for detection and recognition of the system, based on the definitions in STANAG 4347 ed.1?

35. What is the magnification of the (sub)system?

36. What are the Fields of View of the (sub)system?

37. What is(are) the spectral band(s) for which the (sub)system is sensitive?

38. What type of sensor is used (material, pixels, pitch)?

39. What type of display is used (material, pixels), if applicable?

40. What is de Noise Equivalent Temperature Difference (NETD) of the system, if applicable?

41. Does the system have a light guard or other solution to minimize light leakage?

42. Is the brightness and contrast of the presented image adjustable?

43. Is the system equipped with automatic or manual Local Contrast Enhancement?

44. Is the system able to switch between hot black/white/edge detect mode?

45. Is the system equipped with a reticle? If yes, please specify what type of reticle.

North finder and/or inclinometer (sub)system

46. What type of technique is used in the (sub) system to calculate the azimuth?

47. What is the accuracy of this calculated azimuth?

48. What type of technique is used in the (sub) system to calculate the elevation?

49. What is the accuracy of the calculated elevation?

GPS (sub)system

50. What type of GPS (military/civil) is used in the (sub) system?

51. Can or does the (sub) system use external GPS (DAGR)?

52. What is the accuracy of the GPS (sub) system?

Laser Target Designator (sub)system

53. What type of laser is used in the system?

54. What is the laser safety class in accordance to IEC825?

55. What is the power and pulse width of the laser?

56. What is the beam divergence?

57. What is the range capability for designation of targets?

58. 63.64. What is the maximum measurement range for a NATO target (2,3m x 2,3m with 40% reflectivity)?

59. Does the laser pulse have programmable PRF (Pulse Repetition Frequency codes) IAW STANAG 3733?

60. Is the equipment certified for use on NATO (air-to-ground) ranges?

Laser range finder (sub)system

61. What type of laser is used in the system?

62. What is the laser safety class in accordance to IEC825?

63. What is the power and pulse width of the laser?

64. What is the maximum measurement range for a NATO target (2,3m x 2,3m with 40% reflectivity)?

65. What is the range measurement precision of the system?

66. Can the system handle multiple targets and how?

67. Can a minimum range be set to suppress reflection?

68. Is the equipment certified for use on NATO (air-to-ground) ranges?

Target Acquisition (sub) system

69. What is the total measurement precision for a target position of the (sub) system?

70. Is the system capable to provide CAT 1 coordinates?

71. Can or does the (sub) system use external GPS (DAGR)?

Illuminator/ pointer (sub)system

72. What type of laser is used in the (sub)system?

73. Is the energy visible with night vision goggles?

74. What is the laser safety class in accordance to IEC825?

75. What is the wavelength of the laser?

76. What is the beam divergence?

77. What is the range of the (sub)system?

78. Does the laser have a low and high power setting?

79. Does the laser have a pulse option?

80. Does the (sub)system have azimuth and elevation adjustments? If yes, what are the increments per click in mrad?

81. Can the (sub)system be mounted on a NATO accessory rail (STANAG 2324) on the Colt C7/C8, FN MAG and/or FN M2 QCB?

82. Can the (sub)system handle the recoil of the Colt C7, FN MAG and/or FN M2 QCB?

83. Is the equipment certified for use on NATO (air-to-ground) ranges?

Tripod sub system

84. Is the system supplied with a tripod?

85. Can the tripod be used in any of the standard positions (prone, sitting, kneeling or standing).

86. What type of adapter /connector is used to mount equipment on the tripod? Is this a proprietary mount?

B.3 Trainingsystem

For training purposes a Joint Fires Training and Exercise System (JFTES) is used in the Netherlands.

87. Are we, in regard your answer to question 1, allowed to use the following aspects of your product in our simulator:
    a. The Man Machine Interface of the product (look and feel)? This is **not** related to any of the internal components.
    b. Behaviour of the menu and settings related to the product as well as the product manuals?

88. Do you have experience with simulation environments regarding the design, assembly and advice to the customer?

89. Are you in general prepared to answer any questions regarding our simulation environment in respect to your product?

B.4 Maintainability

90. Do the users require a training to be able to maintain the system in missions abroad?

91. What is the expected number of maintenance hours (preventive and corrective, excluding damage repair) considering 400 hours of operation of the system per year?

92. What would be a reasonable maximum amount of downtime (as a result of preventive and corrective maintenance excluding damage repair) to demand per piece per year?

93. Above what level of operating hours will the cost of maintenance significantly increase?

94. Does the system have regular service intervals? Please specify.

95. If any, which (legal) inspections, as part of the preventive maintenance, are applicable to the system?

96. Can you give a recommendation how to organize the execution of the DLM maintenance in The Netherlands?

97. How long would you be prepared to guarantee the logistic support on your product?

98. Are you prepared to offer a maintenance contract with fixed return times or, if irreparable, swapping of the product?

99. Do you have experience with contracts for the delivery of spare parts on demand for longer periods (e.g. 10 years), based on a framework agreement?

    What procedures have to be followed to receive and return equipment from your premises (e.g. ITAR)?

Codification

100. Has your product already been codified in accordance with the NATO Codification System?

101. If not, are you basically prepared to hand over detailed technical information in order to make this codification possible?

B.5 Price-information

102. Please give a global price indication for the product as proposed in question B1.1, preferable divided in estimated development costs (if applicable) and serial prices (based on approximately 20 pieces). If you have different products that are each applicable to one or more subsystems please provide a separate list with answers for each product as well as individual pricing of these products.

103. Is this price-information to be regarded as a rough estimate or has it been based on recent contracts with other customers?

B.6 Finally

104. Please state here any other technical / commercial information that you consider indispensable for the thorough understanding of your response.