Questions and answers

Supply and Implementation of Vessel Traffic Monitoring and Information System (VTMIS)

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EuropeAid/125664/D/SUP/HR

2. Procedure
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5. Contracting authority
Central Finance and Contracting Agency

QUESTIONS	ANSWERS
Date: September, 2nd 2008	
1. Operator Workstations Please clarify the distribution of operator workstations between individual Control Centres at each level (e.g. NCC, RCC and LCC's)	1. Distribution is envisaged as follows: – NCC: 3 + 1(training) workstations – RCC Rijeka: 3 – RCC Split: 4 – RCC Dubrovnik: 3 LCC: as specified in System Architecture and general requirements ANNEX II: TECHNICAL SPECIFICATIONS – PART II
2. Training -Should the prices for training of operation and maintenance staff include additional costs e.g. travelling expenses, accommodation and daily allowances if applicable (i.e. in case training is not organized on site at one of the control centres)?	2. Training should be organized on site at one of the control centres, preferably in NCC Rijeka. The price of training should reflect the total sum for which you offer training as it is specified.
3. Site equipment -In case proposed solution relies on external systems (e.g. Windows active directory domain being in place); should these be included in the offer, or should we assume that these systems are existing/provided by the customer?	3. All costs for proposed technical solution should be included in a contractor's offer.
Date: September 3rd 2008	
4. In the timetable on Page 2 the tender submission deadline is the 29th September 2008, while in the Supply Procurement Notice and on the CFCA website the deadline is the 1st October 2008. Please clarify.	4. The correct deadline for submission to the tenders is as indicated in the Procurement Notice – 1st October 2008.
5. In Section 12 of the Technical Specifications it is listed that the Radar Stations should be compliant with the IALA V-128 Recommendation to the so	

called “Extended Level”. The current version, which is in force, of the IALA Recommendation V-128 on Operational and Technical Performance Requirements for VTS Equipment (June 2007) refers to “Basic”, “Standard” and “Advanced” levels as opposed to “Relaxed”, “Standard” and “Extended” as in the previous version (May 2004). Should the proposed Radar Stations be compliant to the latest IALA V-128 “Advanced” recommendation?	5. Yes. Table 6.1 Typical range performance, X-Band of the new standard is the same to Table 3.3. “Typical Range Performance, Radar X Band” of the standard of year 2004.
6. Should the answer to the Question 1 be “YES” than it is understood that the Radar Processors compliant with IALA V – 128 “Advanced” recommendation have to be proposed. This means that the tender requirements mismatch to the IALA recommendation, which states (Table 5.2 – Target Separation and Accuracy) that at ranges lower than 5 nautical miles, the track resolution should be at least 25 meters. In the tender specifications the requirement for track resolution should be below or equal to 30 meters at 3 nautical miles. Please clarify.	6. All requirements as stated in the Technical specifications must be met cumulatively. Please note that specifications listed in the Technical specifications are minimum requirements. Please note that Table 5.2 – Target Separation and Accuracy of the new IALA standard is the same as Table 3.5 Target separation of the 2004 standard.
7. From the tender document it looks that all VTS operator consoles located in NCC and RCCs will display synthetic radar video. Please confirm.	
8. In the tender specification 3 database servers will be located in Rijeka, Split and Dubrovnik. Is it correct that these servers deal only with the data relevant to the region or particular RCC?	7. Yes. Radar video shall be synthetic radar video as specified for Item 1-VTS software- Maritime traffic image handling.
9. Page 24 of the Tender Specification lists the systems to which integration has to be provided by the VTMIS. Are there any future systems that the proposed VTMIS has to be integrated such as SeaSafeNet (implementation of the Directive 2002/59/EC and other provisions in EC legislation), MEDAIS or otherwise?	8. Not fully correct. Please refer to requirements as specified for Item 1[VTS software] - Maritime traffic image handling of the ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER as well as ANNEX II: TECHNICAL SPECIFICATIONS – PART II- System Architecture and general requirements 9. No.
10. The number of VTS Operator Consoles is 14 and there are 2 Control Centres (National, Regional, Loca). The tender also specifies that there should be a “Training Instructor Module” at NCC. For a basic configuration the setup should at least include an Instructor’s module and a minimum of 2 Trainee consoles (separate computers)	
11. Can you specify the number of VTS consoles in Rijeka, Split and Dubrovnik. 12. Will the Training Module be run on the same consoles in NCC that will be used for the VTS, or is it expected that additional computer hardware will	10. One training console is required at NCC. Supervisor console at NCC is envisaged to be used as Instructor’s module. Also, please refer to answer to question 1.

need to be provided to keep VTS operations and training separate?	
13. From the tender document it looks that Operator Console furniture is not a part of the scope of supply. Please confirm	11. Same as In question 1.
14. It is assumed that power and communication lines will be delivered to the Equipment Shelters on the Remote Sensing sites, and therefore any civil works related to trenching, cable lying etc. are out of scope of supply. Please confirm. If it is not the case then kindly forward the approximate distance from the nearest source so these works can be budgeted for accordingly.	12. No additional computer hardware will need to be provided to keep VTS operations and training separate.
15. Are air-conditioners inside the Equipment Shelters considered as essential to the system availability and therefore need to be backed up i.e. dual configuration?	13. It is not a part of the tender.
16. On the remote Sensor Sites 380V 3-Phase power can be made available. Can you please provide the average power VA per phase?	14. Please refer to specifications of Item 8 and Item 13 of the ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER as well as ANNEX II: TECHNICAL SPECIFICATIONS – PART II-Installation-Remote sites. Also please refer to answer to question 23.
17. The tender document specifies the sizing of the UPS and the Generator i.e 12 KVA, plus the autonomy times (15 min for the UPS and the 96 hours for the generator). It is of outmost importance that these two units are sized according to the load of the equipment that will be present on the site; thus the capacity of these units can be more or less than specified on the understanding the minimum autonomy times are kept. Is this possible?	15. No.
18. The specifications of the generator state that the unit has to run autonomously (without re-fuelling) for a minimum of 96 hours. Shall tenderers propose a fuel tank that can hold enough diesel for 96 hours or propose a fuel tank with capacity of 2000 litres? Is diesel (to fill the whole tank) part of the scope of the supply?	16. This information is currently not available. Please refer to ANNEX II: TECHNICAL SPECIFICATIONS – PART II-Installation-Remote sites. 17. All requirements specified in the Technical specifications are minimum requirements and must be met cumulatively. The 12 KVA equipment in the Technical specifications are sized to facilitate future installations on the site. So, to be explicit: peak power shall be not less than of 12 kVA, the continuous work shall be not less than 96 hours after power interruption and capacity of external fuel tank shall be not more than 2.000 litres
19. Kindly confirm that any services related to getting licences (location and building permits, radio licences, application for electrical connection to power grid, communications etc.), plus any services provided by the local authorities during site acceptance testing (civil construction and fire fighting inspections etc) are out of the scope of supply. If not then please forward the complete list of such services for budgeting purposes.	18. The fuel tank shall be sized in order to facilitate continuous work of not less than 96 hours. At the same time fuel tank shall have the capacity of not more than 2000 litres. The fuel is not in the scope of the supply.
20. **TECHNICAL SPECIFICATIONS** ANNEX II – PART III – Table of remote sites - The altitudes of all remote sites are declared in mt. It is assumed that they are referred above sea level. However Zoirje, vis Island, Lastovo Island, Majet Island are reported to get different altitudes.	19. The winning contractor is to supply to the beneficiary technical documentation as defined in specifications for Item 14. Documentation of the ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER. All licences and services of inspections shall be obtained by the beneficiary.

To make Radar Carpet simulations and estimations those ambiguities are to be removed	
	20. Correct. The following micro-location coordinates and altitudes of remote sites locations specified in TECHNICAL SPECIFICATIONS ANNEX II – PART III – Table of remote sites and consequently in ANNEX II: TECHNICAL SPECIFICATIONS – PART II- Description of Remote Sites are applicable: Dugi Otok: Lat: 43°59'25.35"N; Lon: 15°03'32.83"E; height 348 m a.s.l. Vis: Lat: 43°01'47.46"N; Lon: 16°06'49.50"E; height 579 m a.s.l. Žirje: Lat: 43°39'15.62"N; Lon: 15°38'39.06"E; height 118 m a.s.l. Mljet: Lat: 42°41'39.07"N; Lon: 17°44'53.73"E; height 155 m a.s.l. Lastovo: Lat: 42°44'41.53"N; Lon: 16°51'03.07"E; height 410 m a.s.l.
21. **TECHNICAL SPECIFICATIONS**. Remote Sites: Access The Access to each site is poorly reported as it in not clear if the good transportation is feasible to all of them Please clarify in detail by giving precise description of the access to each site i.e. are all of them wide enough for truck circulation?	21. All locations are accessible by trucks.
22. **TECHNICAL SPECIFICATIONS**. Remote sites: EMC Only a list of existing electronic infrastructures is given for almost all sites. Nothing is declared for power and bands of frequencies emitted. Nothing is declared to comply with radar emissions. It is asked to confirm the contractor shall not be responsible at all for any problem arising from such an issue	22. Confirmed. The winning contractor shall not be responsible for problems arising from such an issue beyond the capabilities of the equipment to be supplied.
23. **TECHNICAL SPECIFICATIONS**. Remote sites: Layout From the tender description some constraints and bands about the point of the radar mast and shelter exist. It is required to get a layout scheme for each site or some photos to definitely clarify the host environment.	23. The description of each site is provided in the TS part II – under description of remote sites however a more detailed remote sites description as well as layout and photos shall be available to the winning contractor.
24. **EVALUATION GRID** a) MTBR: Meteo system and optical subsystems are cited, but else where they do not appear within the scope of supply nor relevant specifications are asked to comply with It is requested to delete such reference inside the evaluation grid.	24. Disregard. Meteo system and optical sub-systems are not in the scope of the supply.
25. **EVALUATION GRID** b) VTS software route planning and assignment to ships: It is understood that the existing AIS system shall be integrated in the VTMIS. However is it the only means for ship-to-shore and vice versa communications How is it possible to assign to the ships specific routes to follow and plan dynamically?	

	25. Specification “Route Planning and assignment to ships” of Item 1. “VTS software” refers to a functionality enabling route planning for a particular target (a ship) on the traffic image i.e. defining a particular route/corridor with waypoints on the visual interface and linking it to a target on the visual interface, therefore “ assigning “ a corridor to a target; in case a target deviates from the corridor an alarm is generated to the VTS operator. The functionality does not include communicating the planned route to an actual vessel by way of software solutions.
26. **EVALUATION GRID** c) VTS software – Blue box Ship reporting systems The buyer is responsible to make all information available to comply with such requirement It is requested to get such information available by soon	26. This provision should be regarded just as a possibility of VTS software for integration with Blue box Ship reporting system. Please refer to ANNEX II: TECHNICAL SPECIFICATIONS – PART II “Integration with existing systems”
27. **EVALUATION GRID** d) VTS software – interface with the existing arrival – departure notification database The question is similar to point c above and can be generalized wherever it is requested to interface with external systems.	27. XML structure shall be delivered to the winning contractor.
28. **EVALUATION GRID** e) Radar stations – compatibility with GMDS5 SART As SARTs work at 9,2 -9,5 band Can you clarify once forever that all radar sensors, regardless of the mode of operation shall operate inside the same band and bidders declaring in any way frequencies of operation out of such a.m. band shall be rejected?	28. All radar sensors shall operate in x-band. Pleas refer to specification of Item 2.Radar station.
29. **EVALUATION GRID** f) Radar antenna: Horizontal Beamwidth The array size is required to be 19’ feet whereas the horizontal beamwidth, measured at -3 dB against the maximum directivity is required less than 0,4° (degrees). Such requirements are in contradiction because physical reasons say that 19-foot antenna provides more than 0,4°, 0,44° typically. It means that the antenna should be longer, i.e 21 feet, so providing narrower horizontal beamwidht, say 0,37° - 0,38° With this said it is asked to clarify without ambiguity the matter is the horizontal beamwidth mandatory, or the antenna array length?	29. Both criteria must be met: Array size shall be 19 feet or more and Horizontal Beamwidth: shall be 0.4 or less.
30. **EVALUATION GRID** g) Radar antenna – Redundancy: Both requirements of Frequency diversity (FD) and redundancy i.e dual redundant RTX are simultaneously to be matched. As known the frequency diversity transceiver includes 2 separate single frequency transceivers operating simultaneously (FD mode) each of them working at its proper frequency. However, the operator can also select the single frequency mode therefore and additional FD transceiver configuration is hot/ standby in dual redundant fashion. In case of failure of one transceiver the radar sensor works in single frequency mode anyway. With that said a single FD transceiver is assumed to comply with both requirements	30. Dual redundant FD transceiver (two FD transceivers in hot/standby fashion) required.

Is this assumption correct for complying with both requirements or is it dual redundant FD transceiver (two FD transceivers in hot/standby fashion) requested?	
31. **EVALUATION GRID** h) Implementation program Is the implementation program and workplan to be included in the proposal? Or may they be submitted at contract's discussion and finalization phases?	
Date: 04th September 2008	
32. Regarding the requirements under item 10, radar station, referring to specific radar target capability and specific physical characteristics of the required radars, our question relates to the precedent of these requirements. Is in compliance to both requirements mandatory for a complying tender submission?	
In other words, if the required targetting paramaters can be met with alternative physical radar configurations, would this be deemd compliant to the requirements of these specifications?	31. The Implementation program and workplan are to be submitted by the winning contractor after the signature of the Contract.
We would appreciate your clarification of this issue.	
Date: September, 8th 2008	32. All requirements as stated in the Technical specifications must be met cumulatively. Please note that specifications listed in the Technical specifications are minimum requirements. Also please refer to answers to questions 6 and 29.
33. **Item 2, Page 11, second line** Could you clarify the following requirement? It refers to database, should it be VTS server?	
Duplicated Database server sub-system in hot standby configuration. Including O.S. licence	
34. **Item 5** Could you please clarify how many VTS Operator Consoles there should be at each control centre (NCC and RCC's)?	
35. **Item 2, 3 and 4** Could you clarify what is meant with *hot-swap adapters*	33. Correct. The specification refers to VTS server
36. How is the Annex II part two to be answered? Should there be a specific compliance table for each requirement?	
37. *ANNEX II :* TECHNICAL SPECIFICATIONS – PART II **Item 6** It is required that the max power consumption for the GPS-clock is 2W. A normal active GPS antenna takes itself 2W. Could you clarify this requirement?	34. Same answer as for question 1.

38. **Item 12** Please clearify which radar antenna that is installed at the VTS in Rijeka. Please provide information such as: Model/make, serial number, manufacturer.	35. Definition of that component for all servers is: two redundant hot swap power supplies.
39. ITT B Annex II, Technical Specifications *Pg 2* **VTS Software** *"provision at NCC of individual images of the maritime traffic at all ports, the integrated image of the maritime traffic of the three regions, and the integrated image of the maritime traffic in the sensor visibility area".* Please define the mentioned regions.	36. The provisions from Annex II, part two are incorporated in the Evaluation Grid – technical specifications, as given in the Tender Dossier 37. The requirement refers to GPS antenna power consumption
40. ITT B Annex II, Technical Specifications *Pg. 3* *Maritime traffic image handling* *Radio-localization of cooperating vessels by means of AIS* What exactly is meant with radio-localization?	38. Information about radar antenna installed for Rijeka Port VTS is not relevant for this tender.
41. ITT B Annex II, Technical Specifications *Pg 4* *Maritime traffic image handling* *shall feature at NCC and RCC early warning information in support to security monitoring with the identification and threat evaluation procedures on unidentified ships, including indirect identification criteria (based on abnormal behaviours, kinematics, merge/split indicators, etc.), direct identification criteria (optical target classification, missing or abnormal AIS reporting, correlation of ship reporting systems with AIS/radar tracks)* Please confirm "optical target classification" is outside the scope of this tender.	39. Region as stated in TS is mentioned as area under responsibility of RCC. The sensor visibility area is coverage area of each radar station.
42. ITT B Annex II, Technical Specifications *Pg 4* *Maritime traffic image handling* *shall feature at NCC and RCC integration of Blue Box Ship Reporting Systems collected by External Authorities into the Maritime Traffic Image* Please confirm integration of Blue Box system is required at the NCC only. (See also question 18.) Please specify the interface and the messages received from the Blue Box ship reporting system.	40. Using AIS to identify a radar target 41. Confirmed. Items in brackets are examples of direct identification criteria for security monitoring. Since the optical system is not a part of this supply, the optical target classification can not be obtained..
43. ITT B Annex II, Technical Specifications *Pg 5* *System supervision* *Shall feature at NCC and RCC monitoring and reporting the status of the sensors and communication equipment including:* Please confirm the Communication Equipment is limited to local LAN-equipment at the NCC and at the RCC's and doesn't include interfaculty Communication Equipment or any other communication equipment.	42. Please refer to answer to question number 26.

44. ITT B Annex II, Technical Specifications *Pg 5* *System supervision* *Shall feature network administration functions, user profiles management functions, authentication, setting of access rights, control and record of users accesses for all the system resources at all consoles* Please clarify what is meant with "network administration functions".	
45. ITT B Annex II, Technical Specifications *Pg 5* *Database structure requirements:* Please confirm Database structure requirements are applicable for Database server (section 3) and are not applicable to the VTS-server. The VTS-server as such does not include a database server.	43. Correct. Communication equipment that is to be within the scope of *System supervision* shall not include routers or any other communication equipment placed between system sites (NCC, RCCs and remote sites) provided by the beneficiary
46. ITT B Annex II, Technical Specifications *Pg 6* *Database structure requirements* *shall feature continuous collection and update, in automatic or manual mode, of data necessary for execution of the system tasks including:* *resource management* Please specify the contents of "resource management".	44. Network administration functions are design, management and control of all local area networks and wide area network of the CVTMIS.
47. ITT B Annex II, Technical Specifications *Pg 6* *Database structure requirements* *other system specific data processing;* Please clarify	
48. ITT B Annex II, Technical Specifications *Pg 6* *Database structure requirements* *service to external client, data exchange with external information system.* Please confirm external clients are the users at the LCC and the Ports using web-access.	45. Confirmed.
49. ITT B Annex II, Technical Specifications *Pg. 6* *Database structure requirements* *Ship Database - both identified and unidentified targets, consisting of:* MMSI is used as a unique identification key. Please elaborate request for ships database regarding unidentified targets.	46. For resource management purpose database shall consist of data about users, locations, organizational structure, technical components etc.
50. ITT B Annex II, Technical Specifications *Pg 7* *Database structure requirements* *shall feature an Interface with the existing CIMIS -*	

ships arrival/departure notification database for exchange of the following XML data: Please provide a list of messages, message layout and message timing of the messages to and from the CIMIS-database	47. Reporting on execution of predefined protocols , automatic pull-in for some data from other databases of CIMIS (Arrivals and departures of ships database).
51. ITT B Annex II, Technical Specifications *Pg 7/8 Database structure requirements* – *shall feature:* - *archive and failure recovery of system data;* - *optimization of data processing in order to guarantee maximum effectiveness and the scaling to Very Large Data Base (VLDB);* - *cooperative processing* - *support of queries to scattered databases* - *expandability to data mart* - *support of specific data types (images, films, soundtracks etc.)* - *possibility to configure information windows* - *registered info stored in a relational database* - *ANSI SQL 99 standard* - *access to data through ODBC and JDCB drivers* - *Database must consist of basic tables needed to secure proper performance of the entire system and auxiliary tables serving to raise the work comfort of users and to preserve the coherence of databases.* *(The basic tables will be defined by the system's Contractor. The auxiliary tables will be agreed with beneficiary.)* Considering the requested features as stated in this part, they seem to be applicable for a database in general and not specific for the MIS application. Please confirm that requirements as stated in the Technical Specification, with exception of the requirements as stated in this part, are leading. Example given: Database Software selected may support the soundtrack as datatype, but these types are not implemented for the MIS application.	48. CIMIS -ships arrival/departure notification database is an external information system. 49. Not all ships may be identified trough MMSI and/or other information. Not all targets may be identified. Some unidentified targets may be identified at a later time, for example on arrival to port. 50. XML structure shall be delivered to the winning contractor. 51. We confirm that these requirements are applicable for a database in general and are not specific for the MIS application.
52. ITT B Annex II, Technical Specifications *Pg 8 Database structure requirements* *shall feature automatic correlation of ships in registered forecasts based on available AIS information (MMSI or IMO number) and manual correlation of ships in registered forecasts based on existing radar track information.* Please explain what is meant with "registered forecasts".	
53. ITT B Annex II, Technical Specifications *Pg 9 Playback and Support to training:playback of pre-recorded situation on all consoles at NCC and RCC*	

without affecting system operations on the other consoles. Recording functionality is available at the NCC. Is it also required to be able to playback synthetic radar video at the RCC's?	
54. ITT B Annex II, Technical Specifications *Pg 9* *override of the actions performed during the recorded period and simulate alternative reactions and behaviours vs. the recorded information during the playback period* Please confirm that "override actions" are limited to traffic information display information.	
55. ITT B Annex II, Technical Specifications *Pg 11* *Requirements for External interfaces:* *be capable of continuously and simultaneously transmitting both voice ad data information to all parts of the network* Please confirm "voice" is not applicable.	
56. ITT B Annex II, Technical Specifications *Pg 11* *VTS server* *Duplicated Database server sub-system in hot standby configuration. Including O.S. licence.* 3 times a duplicated VTS database server, meaning a total of 6 servers, is requested. A much more cost effective solution would be to provide 1 duplicated server at the NCC, which will be accessed by the RCC's through telecommunication network for VTS-purposes. This solution provides a very high availability of the VTS-system. Please confirm this is allowed.	52. Registered forecast is an entry for a particular vessel in the CIMIS -ships arrival/departure notification database (set of XML data provided in the Technical specifications). Practically, registered forecast is a schedule of ships arrivals/departures to/from a particular geographical area.
This also seems to be justified since all radar data is received at the NCC and this radar information is routed through the NCC to the RCC's.	53. Yes, it is.
57. ITT B Annex II, Technical Specifications *Pg 12* *Database server* *Shall be Duplicated Database server sub-system in hot standby configuration. Including O.S. licence.* 3 times a duplicated database server, meaning a total of 6 servers, is requested. A much more cost effective solution would be to provide 1 duplicated server at the NCC, which will be accessed by the RCC's through telecommunication network. This solution provides a very high availability of the VTS-system. Please confirm this is allowed.	54. Confirmed.

This also seems to be justified since the connections with the external interfaces, such as ship reporting system are avaiable at the NCC and information is routed through the NCC to the RCC's	55. Correct „voice" is not applicable.
58. ITT B Annex II, Technical Specifications *Pg 24* *Integration with existing systems* *AIS subsystem, through local Ethernet interface: AIS data of all vessels are received and AIS messages are transmitted according to ITU-R M.1371-3. The VTMIS system shall be able to send AIS data and pseudo AIS data to other systems* a) Will the AIS-data be received at the NCC? b) Please clarify what is meant with "Pseudo AIS data". c) Please specify what is meant with "other systems".	56. No. That is not allowed.
59. ITT B Annex II, Technical Specifications *Pg 25* *Redundancy* *Supervisor workstation will have VTS display showing the actual vessel movements in the coverage areas. It will be identical to the operator workstations and will be used. as back-up whenever one Operator workstation fails* Please specify the amount of operator and supervisor workstations per location.	
60. ITT B Annex II, Technical Specifications *Pg 30 Pg 31, Pg 32* *Description of remote sites* *Žirje, heights given: 337 and 112 mtrs asl* *Hum (Island Vis), heights given: 408 and 575 mtrs asl* *Hum (Island Lastovo), heights given: 408 and 401 mtrs asl* *Gruj (Island Mljet), heights given 147 and 134 mtrs asl* Please supply the correct heights.	57. No. That is not allowed.
61. Re: Diesel generator Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER", item 10. Please specify what requirements should the offered diesel generators fulfil in terms of allowed RPM range, prime power etc. Also, should the monitoring system for the generator and the overvoltage protection system be included in the proposal?	

62. Re: Equipment shelter Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER“, item 13. Please specify the required size of the equipment shelter/container. We are assuming that the wording in the specification: “Up to 12 m²“ is an error and should probably state “minimum of 12 m²“? Also, is it necessary to offer a fence to be placed around the equipment (radar mast+shelter+generator)	58. a) Yes. National AIS server is in the NCC. b) For detailed information about “Pseudo AIS data” please see IALA Recommendation V-128 Edition 3.0, Annex 3 chapter 5.4. and 5.5. c) other AIS systems such as for example Port Authority AIS systems or MEDAIS, regional AIS data exchange.
63. Re: On-site response: During, both warranty and commercial warranty period, 48 hour on-site response is required. In “ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER“ p.23 it is also requested that MTTR for 98% of Critical Failures must be 2 h. Please clarify if you assume: a) that you will have own operation and maintenance staff that will assure MTTR of 2 hours in case of incident or b) that Tenderer will have to assure MTTR in 2 hours remotely?	59. At NCC and each RCC there shall be one supervisor workstation. Also see answer to question 1.
64. Re: On-site response: Please provide your definitions of “response” and “response time”.	
65. Re: Hardware specification – server HW Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER“, items 2 through 4. Do you require that the servers are equipped with two discreet processor units or a single Dual Core processor?	60. Please refer to answer to question number 20.
66. Re: Hardware specification – server HW Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER“, items 2 through 4. In your specification, UltraSCSI disks are required. As this technology is being increasingly replaced with SAS (Serial Attached SCSI) in server applications, would you accept that server HW is offered with SAS disks of equivalent capacity in all servers?	61. As defined in the TS Annex II Part II – Redundancy, diesel generators shall be used to guarantee the system service during power failures. Detailed technical characteristics of diesel generators depends on specific contractor‘s proposal.
67. Re: Hardware specification: UPS Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER“, item 9.	

Since radar turning units require 3-phase (380 V) power supply, please confirm if UPS's at radar sites also have to supply 3-phase output?	62. "Up to 12 m² " is correct requirement. Fence is not within the scope of the supply.
68. Re: Hardware specification: power generators Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER", item 10. Since radar turning units require 3-phase (380 V) power supply, please confirm if generators at radar sites also have to supply 3-phase output?	
69. Re: Hardware specification: power generators Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER", item 10. Since UPS units supplying 12 kVA typically require pairing with generators whose output is greater than that of the UPS by a factor of approx 1.1, please confirm if generators will have to provide 14 kVA, or do you consider 12 kVA to be sufficient? Alternatively, should the UPS be offered with lower output and if so, how much?	63. 48 hour on-site response time during warranty and commercial warranty period is maximum time to respond per incident. Required MTTR- Mean Time To Respond as in "ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER" p.23 being the average response time includes remote response.
70. Re: Site equipment and works **Reference „ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER", item 13.**	64. Please refer to answer to question number 62.
What is the distance between exact radar locations (on site) and equipment shelter and the location of existing WAN equipment for each radar site?	65. The request is for two processors.
71. Re: Site equipment and works What is the distance between the connection to the power grid (HEP) and radar location and equipment shelter for each radar site?	
72. Re: Site construction Please clarify how many sites have necessary infrastructure to allow access with heavy equipment (concrete mixers, trucks and cranes) necessary for site construction, and for how many should we assume other means of transport will need to be used (e.g. helicopter transport).	66. Ultra SCSI as defined in TS is minimum requirement.
73. Re: Site construction Please clarify if it is necessary to acquire	

permissions from local authorities for constructing of a radar site and if so, who will be responsible for securing them?	67. As defined in the TS Annex II Part II – Redundancy, UPSes shall be used to guarantee the system service during power failures. Detailed technical characteristics of UPSes beside those required under Technical specifications shall depend on specifications offered.
74. Re: Site construction Please clarify if it is necessary to acquire building permits for radar towers, equipment shelters, issued and approved by Ministry of Construction and if so, who will be responsible for securing them?	68. As defined in the TS Annex II Part II – Redundancy, diesel generators shall be used to guarantee the system service during power failures. Detailed technical characteristics of diesel generators beside those required under Technical specifications shall depend on specifications offered
75. Re: Site construction Please clarify if it is necessary to acquire written consent for construction of radars from the Ministry of Interior and if so, who will be responsible for securing them?	69. 12 kVA is a minimum requirement for both UPS and diesel generator that must be met. You may propose greater outputs.
76. Re: Site construction Please clarify if it is necessary to acquire written consent for construction of radars from the Ministry of Defence and if so, who will be responsible for securing them?	70. At all locations all the equipment shall be in the close vicinity. Remote sites layout and photos shall be available to the winning contractor. Please refer to ANNEX II: TECHNICAL SPECIFICATIONS – PART II.
77. Re: Site construction Please clarify if it is necessary to acquire written consent for construction of radars from the Ministry of Health and if so, who will be responsible for securing them?	71. At all locations all the equipment shall be in the close vicinity. Remote sites layout and photos shall be available to the winning contractor. Please refer to ANNEX II: TECHNICAL SPECIFICATIONS – PART II.
78. Re: Site construction Please clarify if it is necessary to acquire the study of the impact on environment for each radar site from an authorized institution and if so, who will be responsible for securing them?	72. All locations are accessible by trucks. Please refer to ANNEX II: TECHNICAL SPECIFICATIONS – PART II.
79. Re: Site construction Please clarify if it is necessary to acquire frequency use permits from the Agency for Telecommunications (HAT/HAKOM) for each radar and if so, who will be responsible for securing them? Also, are frequency use studies are required to secure these permissions?	
80. Re: Site construction Please provide specifications on what wind force should each radar mast be rated for. We consider this information to be crucial, much more than the maximum equipment load.	

81. Re: Site construction Please clarify if each site will have to be attested for grounding and lightning protection? The reason for asking this is that radar sites are located in zones where frequent lightning strikes are expected so the quality of the grounding project is crucial. Additionally, since some sites will be constructed on rock base, proper grounding is more complex to realize.	73. Please refer to the answer to question 19.
82. Re: Site construction Please clarify what should be the expected life-span of the equipment shelters (containers), i.e. should "standard" of "long-life" containers be provided?	74. Please refer to the answer to question 19.
83. Re: Site construction Please clarify what kind of air-conditioning, ventilation and heating system should be offered for radar shelters, in terms of intended use – semi-professional or industrial quality. We would consider semi-professional system to be sufficient if paired with a "long-life" shelter container, as they are typically equipped with high-quality heat insulation.	75. Please refer to the answer to question 19.
84. Re: Site construction Please clarify requirements on the fire/smoke detectors to be installed in equipment shelters/containers: should these be equipped with network interfaces and reporting to a central management system (e.g. at the NCC)? In that case, additional servers (HW and SW) will also need to be specified and provided by tenderers.	76. Please refer to the answer to question 19. 77. Please refer to the answer to question 19. 78. Please refer to the answer to question 19. 79. Please refer to the answer to question 19.

	80. Operational wind speed: 150 km/h Survival wind speed: 240 km/h
	81. The winning contractor is to supply to the beneficiary technical documentation as defined in specifications for Item 14. Documentation of the ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER. All licences and services of inspections shall be obtained by the beneficiary.
	82. Please refer to Technical specification of Item 13. Sites Ancillaries, for minimum specifications of Equipment shelter. You are free to offer the equipment which meets specifications beyond minimum requirements.
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