



Republic of Serbia
Ministry of Construction,
Transport and Infrastructure
Project Implementation Unit

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Clarification No. 4 to the TD

Terms of Reference - Appendix I, Miscellaneous

QUESTIONS	ANSWERS
Question No 1 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.013 What exactly is meant here by the term 'data streams'? The data transfer between data logger and target system (e.g. ftp-server or database server)? The processing of data in the target system (data validation, editing, etc.)?	Answer No 1 By 'logging access to the data streams' it is meant to log any request by any user (internal, external, or SOAP/REST API) to the data stored in the system, with the details available in that request.
Question No 2 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.022 a. We assume that this is not the minimum but the maximum of 5 seconds? b. Can we understand 5 seconds as the maximum allowed time for the last current values of 10 stations, i.e. 10 values, or is a longer time interval of data meant here (e.g. all values of the last 12 hours for all 10 stations)?	Answer No 2 a. Indeed there is a typo and it is to be understood as "a maximum of 5 seconds" b. This is a performance requirement, how it can be proven/demonstrated is the duty of the Integrator who will propose for approval a method for testing during the Final Acceptance Protocol.
Question No 3 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.025 What is meant by the (incomplete?) sentence "Field Segment of the HMS Network"?	Answer No 3 The sentence is a typo and should be ignored.
Question No 4 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.2.1.017 / 3.2.1.028 – 030	Answer No 4 Detailed information will be provided to the winning bidder. Inland ENC is one example for the



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<p>Which interfaces / widgets / export formats do Plovput, ECDIS, ENC provide to use the specified maps, charts, pictorial & textual representation? Can we get some examples?</p>	<p>data format, and it is available for free download from the website of Plovput.</p>
<p>Question No 5 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.2.1.059 Can you provide an estimate of how many users of each are attributable to the role distributions in chapter REQ-3.2.1.046?</p>	<p>Answer No 5 Estimates will be provided to the winning bidder, but the requirements 3.2.1.046 and REQ-3.2.1.059 refer to two different types of scenarios: REQ-3.2.1.046 refers to working day users that may sometime later in the usage of the application reach 100 users. REQ-3.2.1.059 refers to a performance requirement where during the Final Acceptance, the Integrator will stress the system with at least 100 users and demonstrate its performance.</p>
<p>Question No 6 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-3.3.007 Does the database to be used here have to support all three operating systems mentioned, in particular: does Unix have to be supported?</p>	<p>Answer No 6 Yes.</p>
<p>Question No 7 General The documentation often describes 24/7 availability. Does this also mean that the overall system offered here (Central Segment - Data Centre and Backup Location) will be subject to 24/7 maintenance and support (maintenance contract)?</p>	<p>Answer No 7 Until the final taking over of the overall system by the Contracting Authority the Contractor (System Integrator) is responsible for the operation, maintenance and support of the entire system.</p>
<p>Question No 8 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.003 Within the functional requirement statement a focus is set on data accuracy; Data integrity, Transmission redundancy; Error correction. Q: For an important parameter as the water level, would a redundancy concept for measuring the water level with two independent sensors be accepted to ensure a possibility to verify that the measured values are correct.</p>	<p>Answer No 8 REQ-2.003 is a general requirement that outlines some issues encountered often in automatic data collection.</p>
<p>Question No 9 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.1.006 Within the functional requirement statement, it is written that the details of water depth etc. will be</p>	<p>Answer No 9 The length foreseen is up to 50 m, but only in exceptional scenarios (please see the Preliminary Design).</p>



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<p>later on provided with the Bathymetric Survey results.</p> <p>Q: For the calculation of cable length required and other installation materials is a cable length of 30 m confirmed to be sufficient?</p>	
<p>Question No 10 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.1.1.016</p> <p>In the specification for the precipitation sensor an optical principle is required.</p> <p>Would a precipitation sensor based on piezometric principle with same or better accuracy be acceptable?</p>	<p>Answer No 10</p> <p>The requirement must be fulfilled.</p>
<p>Question No 11 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.1.2.007</p> <p>Within the functional requirement statement it is written, that the Integrator of the SHMS is free to propose other mechanisms to ensure the data collected is accurate and in accordance with the reality.</p> <p>Q: For an important parameter as the water level, would a redundancy concept for measuring the water level with two independent sensors be accepted to ensure a possibility to verify the measured values to be correct and in accordance with the reality?</p>	<p>Answer No 11</p> <p>This stage is dedicated to the clarification of requirements and not validating or invalidating individual understanding regarding the solution proposed. The Contracting Authority is convinced that the requirement is sufficiently narrow to express what is desired from the system, and sufficiently broad to allow all bidders to design mechanism according to the proposed equipment and experience in implementing similar contracts.</p>
<p>Question No 12 Buoy</p> <p>For the buoy sites, could you please specify:</p> <ul style="list-style-type: none"> – Min. and max. water depth at the sites, which can be used for calculation of mooring parts (Mooring can be expensive). – Max. current in the water at the sites. – What is the expected range of waves heights and frequency? 	<p>Answer No 12</p> <p>Water depth: 2-20 m; Water current: 7 m/s; Waves: 3 m max., 1 sec. frequency.</p>
<p>Question No 13 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.2.021</p> <p>Within the functional requirement statement it is written, that the battery will be mounted inside the HMS box.</p> <p>Q: Would it be possible to separate the battery enclosure from the HSM box to mount it on a</p>	<p>Answer No 13</p> <p>The batteries should be kept in the box, as a part of the HMS, which may be the same or different box than the one containing the rest of the equipment. It is up to successful tenderer to provide details as a part of the Detailed Design document, which is subject of approval of the</p>



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<p>different position or to use a space in the ground for storage of the batteries? Reasons: A) Keeping in mind a bigger size of the needed battery to supply the power in the worst case of 10 days w/o sun in the winter, operating sensor with heating. B) Better access and handling possibility in case of maintenance / exchange.</p>	<p>Contracting Authority prior to the Implementation.</p>
<p>Question No 14 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.3.001 The Communication sub system is described as a separated part. Q: pls confirm that the communication could be an integral system / module of the data logger of the HMS.</p>	<p>Answer No 14 The Communication sub-system is described as a separate part in order to provide potential bidders with greater freedom in designing their solution. We confirm that the communication can be an integral system/module of the data logger as long as it does not affect the other requirements expressed in the documentation.</p>
<p>Question No 15 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.3.025 Within the non-functional requirement statement it is written that the GSM modem should be capable of M2M, IoT and broadband Internet communication. Q: Please define or give a definition what M2M communication is intended, please define or give a definition what IoT communication is intended. Q: Having the comparably small amount of data in mind which are transmitted from the site to the central station, please specify what broadband Internet communication is need for?</p>	<p>Answer No 15 The fact that the GSM modem should be capable of a certain type of communication does not mean that that all the types of communication will be used in the solution. The fact that now one type of communication is used, does not mean that it will remain the same. The purpose of having M2M, IoT and broadband Internet communication capabilities is to ensure maximum flexibility in designing the current SHMS and maximum flexibility when that network will be expanded.</p>
<p>Question No 16 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.3.045 Within the non-functional requirement statement it is written that the satellite modem should be capable of M2M, IoT and broadband Internet communication. Q: Please define or give a definition what M2M communication is intended, please define or give a definition what IoT communication is intended. Q: Having the comparably small amount of data in mind which are transmitted from the site to the central station, please specify what broadband Internet communication stands for?</p>	<p>Answer No 16 The fact that the satellite modem should be capable of a certain type of communication does not mean that that all the types of communication will be used in the solution. The fact that now one type of communication is used, does not mean that it will remain the same. The purpose of having M2M, IoT and broadband Internet communication capabilities is to ensure maximum flexibility in designing the current SHMS and maximum flexibility when that network will be expanded.</p>



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<p>Question No 17 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-2.3.042 Within the non-functional requirement statement it is written that the satellite modem need to be capable of providing access to one of satellite networks used for two-way communication in Europe (Inmarsat, Thuraya, ORBCOMM, or equivalent). Q: In the statement is open which communication system can be used (Inmarsat, Thuraya, ORBCOMM, or equivalent). In the following requirement positions REQ-2.3.047 to REQ-2.3.055 a specific modem is described in detail. This detailed specification won't allow to use a solution as openly described in REQ-2.3.042. Please clarify.</p>	<p>Answer No 17 The minimum requirements are specified and are to be respected by all bidders.</p>
<p>Question No 18 b8f_annexiitorglobal_en_appendix_I_HMS_Impl REQ-5.1.001 and REQ-5.1.013 Q: Shall the ADCP be mounted on an existing vessel or supplied with a float? Or both? Q: Could you give further information on the expected boat or stream velocities?</p>	<p>Answer No 18 The DCP should be equipped with suitable float.</p>