# PROCUREMENT DOCUMENT

## Competition with negotiation

## Invitation to tender
## for purchase of Light sensors
## for delivery to the Institute of Marine Research

## Case No. 19/00714

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# 2. ABBREVIATIONS AND EXPRESSIONS

The following abbreviations, names and expressions are used in the tender documents:

| Abbreviation | Explanation | Notes |
|---|---|---|
| The Procurement Act | Norwegian Public Procurement Act of 17 June 2016, No. 73 | |
| The Public Procurement Regulations | Norwegian Public Procurement Regulations of 12 August 2016 No. 974 | |
| The Freedom of Information Act | Norwegian Freedom of Information Act of 19 May 2006, No. 16 | |
| The Public Administration Act | Norwegian Public Administration Act of 10 February 1967, No. 9 | |
| DOFFIN | Database for Public Procurement | National database of public procurements |
| TED | Tenders Electronic Daily | European database of public procurements |
| Tender documents | The common term for the announcement and the procurement document with attachments. | |
| Mercell | The Customer uses the Mercell tender management tool to manage the tender competition. | |

# 3. THE ASSIGNMENT

## 3.1 Customer

The Customer for this procurement is the Institute of Marine Research (IMR).

With more than 1000 employees, IMR is Norway's largest centre of marine science. Our main task is to provide advice to the Norwegian authorities on aquaculture and the ecosystems in the Barents Sea, the Norwegian Sea, the North Sea and the Norwegian coastal zone. For this reason, about fifty percent of our activities are financed by the Norwegian Ministry of Trade, Industry and Fisheries.

IMR's headquarters are in Bergen, but important tasks are also carried out in our department in Tromsø, and at the research stations in Matre, Austevoll and Flødevigen. In addition, IMR has several vessels at its disposal, both owned and rented ones.

More information about the IMR can be found at www.hi.no

## 3.2 Contract notice

The contract notice is found in DOFFIN (www.doffin.no), TED (www.ted.europa.eu) and in Mercell.

## 3.3 The procurement applies to

This acquisition applies to purchase of light sensors for use in the sea at great depths.

The desirable light sensors are, according to the Customer's knowledge, not developed or possible to buy off the shelf. The Customer therefore wants to buy light sensors that are being developed to meet our requirements.

The Customer wishes to do more research on the distribution and behaviour of marine organisms in relation to light, and in particularly organisms living in the mesopelagic zone. Mesopelagic organisms are known to be highly responsive and structured in their behaviour movement by the inherent light conditions.

The Customer wish to purchase light sensors to use on our research vessels. Today we are using PAR light sensors, which are made for measuring photosynthetic light. PAR sensors and other commercially available light sensors are not sensitive to low light intensities and are therefore not able to measure light levels at mesopelagic depths. We wish to purchase a light sensor that can measure low light intensities (twilight), as found from the photic zone down into the mesopelagic zone (100 to 800 m depth) and at surface during twilight and night.

The light sensors must match our existing Sea-Bird wired CTD system. CTD is an abbreviation for "Conductivity", "Temperature", and "Depth" and is an instrument for measuring seawater's physical values such as conductivity, temperature and pressure throughout the water column. Sea-Bird SBE 911 Plus with water retrieval ring, SBE 32, is part of the standard equipment on the Customer's own seagoing vessels. The light sensor will be mounted on to the retrieval ring (SBE 32) and communicate through an analog (0-5 volts) port on CTD (SBE 911). The Customer

wants to acquire light sensors that can be included in the standard equipment. The standard equipment can withstand pressure down to a depth of 6,000 meters.

The light sensor must withstand sunshine, and extreme temperatures. The light sensor must be able to transmit integrated intensity in real time through the CTD. At the same time, it must be able to measure light intensity (irradiance) over the entire spectral range of PAR (400-700 nm) and to store this data in its own memory.

The light sensitivity range of the sensor must cover the entire intensity range from $10^{1}$ down to $10^{-11}$ µmol quanta/$m^2$/s.

See more about the CTD in Appendix 3. and here: https://www.seabird.com/

The light sensor must also be able to be used standalone without CTD. For example, attached to a ROV (Remotely operated vehicle) or AUV (Autonomous Underwater Vehicle).

The complete data collected must be easily transferable once the light sensor has returned on board the vessel.

## 3.4 Scope of the contract

The Customer has six vessels with Sea-Bird wired CTD system. The goal is to equip the Customer's vessels with their own light sensor, so that new data can be collected every time the CTD is used.

The purchase under this contract is limited to one (1) light sensor. The purchase includes developing, producing and testing the light sensor with warranty and support as described.

If the light sensor is successful, then the option may be triggered to purchase, partly or all, the amount the Customer need.

## 3.5 Options

The Customer reserves the right to purchase up to 10 additional light sensors within two year of the first light sensor being delivered, tested and accepted. The light sensors should be of the same quality as the first or better, but they can be ordered with minor modifications by further agreement.

The decision on whether the option will be triggered and how many light sensors that will be ordered, will be based on an assessment of price and how successful the first light sensor will work. The Customer must also consider whether our needs and budget have changed.

## 3.6 Testing

For testing purposes, the Customer will be able to provide vessels with CTD. Reasonable time must be calculated for notice and completion of tests within the Tender's delivery time. Frameworks and details for testing are set in the negotiations.

## 3.7 Contract value

Surveys the Customer has done give us reason to assume that it will be possible to develop, test and complete one light sensor, and then produce 6 more light sensors, in order to deliver a total of 7 light sensors for a total of NOK 3,000,000 excl. VAT.

Based on the surveys, our budgets and the estimated upper economic limit for the procurement is 3,000,000 NOK, excl. VAT.

## 3.8 The Customer's Reservations

The stated Scope of the contract and Contract value, sections 3.4 and 3.7 is estimates based on our current needs and preliminary information on prices.

The Customer reserve the right to make changes to the volume based on budget, political proceedings, competition for services, the Customer's activities and/or organization.

## 3.9 Use of subcontractors

Use of subcontractors is permitted. If subcontractors will be used, be sure to complete Declaration of commitment, Appendix 4.

In Appendix 4, the Tender must provide information regarding survey the subcontractors that will be used and their involvement in the contract.

It is important to distinguish between the necessary support from subcontractors in order to fulfil the qualification requirements (see point 5) and to fulfil the requirements and obligations in the rest of the competition (including points 7 and 8).

If Tenders need the support of other businesses to meet the requirements in terms of economic and financial capacity and/or technical or professional qualifications, this should also be included in Appendix 4.

## 3.10 Tender documents

The attached contract is made applicable for this procurement. The contract refers to contract documents with relevant appendices and attachments. Tenders must acquaint themselves with the terms and conditions of the contract and the other tender documents.

# 4. IMPLEMENTATION OF THE COMPETITION

## 4.1 Regulations

The procurement is subject to The Procurement Act and The Public Procurement Regulations, section I and III.

## 4.2 Procedure

The procurement process is conducted as a competition with negotiation after prior notice, cf. Procurement Regulations section 13-1 (2), cf. section 13-2 parts a and c.

The process is conducted in two stages: The first stage is a qualification stage, which is open to all interested Tenders. The second stage is the competition itself. Only those Tenders who meet the qualification requirements and are selected by the Customer among the qualified Tenders, will be given an opportunity to submit a bid in the second stage.

The Customer plans to invite three and a maximum of five Tenders to bid. The selection from among the qualified Tenders will be based on the selection criteria in section 6.

The negotiations may take place in several phases. Customer reserves the right to reduce the number of bids and solutions to a minimum of three Tenders during the negotiations based on the award criteria in the competition. A first reduction may take place prior to the negotiations starts. See also the Procurement Regulations sections 23-7 and 23-11.

The negotiations will be conducted individually with each Tender and will take place as written feedback and video conferencing (Vidyo/Skype) or a combination of these. Personal meetings will only be conducted if this is acceptable to all Tenders.

The negotiations will only apply to the bid and be about what can be improved in the bid from the individual provider.

## 4.3 Timetable for procurement

The Customer has the following preliminary timetable for the procurement process:

| **Activity** | **Tentative date/time** |
|---|---|
| **Stage 1** | |
| Announcement of tender, stage 1 qualification | 19.02.20 |
| Deadline for submitting questions and requests for clarifications regarding the qualification process | 09.03.20 |
| Last information and answer to question | 12.03.20 |
| Deadline for submitting a request to qualify.<br>**This deadline is mandatory** | 19.03.20 at 12:00 hrs |
| Notice of the result for Qualification and Selection | 24.03.20 |

| **Stage 2** | | |
|---|---|---|
| Invitation to tender | | 24.03.20 |
| Deadline for submitting questions and requests for clarifications regarding the tender stage | | 15.04.20 |
| Last information and answer to question | | 17.04.20 |
| Deadline for submission of bid | | 24.04.20 at 12:00 hrs |
| Bid opening | | Week 18, 2020 |
| Evaluation/negotiation (the timetable for the negotiations will be announced at a later stage) | | Weeks 19-22, May 2020 |
| Contract award and notification of Tender selection | | 29.05.20 |
| Standstill period | 10 days | after date for contract award |
| Contract signing | | Week 21 |
| Bids valid until | 90 days | after date for last tender deadline |
| Contract commencement | | According to agreed schedule |

Please note that any dates after the date for submitting a tender are tentative.

## 4.4 Language

The tender and all communication, both during the competition and the contracting phase, shall be conducted in English or Norwegian.

## 4.5 Changes to the procurement document

If necessary, the Customer can make minor corrections, additions or changes to the procurement document prior to the tender deadline. These types of corrections, additions or changes will be sent to everyone who has registered interest in the tender competition in Mercell. If the competition is revised, it will be shown as a new version of the competition.

## 4.6 Communication and providing information

Confirmation of participation in the competition must be done electronically in Mercell. Click on the tab ‘Submit tender’ and then click the button ‘I want to submit a tender’ or ‘I do not wish to submit a tender.’ This is only meant to be an indicator for the Customer of the number of tenders that can be expected, and it is not binding upon the Tender.

All communication in this process must be conducted via the Mercell portal so that it can be logged. If Tenders have questions about the competition or discover errors in the tender documents, these inquiries should be communicated via Mercell. Select the “Communication” tab. Then click at the “new message”-icon and write your message. Then click the “Send” -icon. The Customer will then receive the message.

If the Customer receives messages that affect all Tenders, the questions will be anonymised, answered and made available to all Tenders who have expressed interest in the competition. The communication system in Mercell will also be used by the Customer when making changes to the competition.

In terms of additional information, this is displayed via the “Communication” tab in the Mercell portal.

## 4.7 Deviations by the Tender

Any minor reservation or deviation to the requirements for the procurement (specification / technical specification) or the terms of the Contract must be clearly specified in the tender. The reservations/deviations must be precise and unambiguously specified and must enable the Customer to evaluate the reservations/deviations and estimate the costs for these reservations/deviations without contacting the Tender. When evaluating the tenders, reservations and/or deviations may result in additional costs being added to the tender price.

Tenders that contain significant reservations/deviations from the procurement documents will be rejected. Significant reservations/deviations are for instance:

- Reservations/deviations from specified requirements for the procurement (specification / technical specification)
- Extensive reservations/deviations towards the contract terms
- Reservations and/or deviations that cannot be calculated in terms of cost
- The Tender’s requirement to use its own (Tender’s) delivery and/or sales terms
- Lack of acceptance of the Customer’s Draft to Contract, such as delivery terms, payment terms, etc.
- Several minor reservations/deviations which collectively must be considered as significant
- Reservations and/or deviations that prevent the Customer from being able to compare the deviating Tender with other Tenders

It is recommended that Tenders pose clarifying questions instead of making reservations/deviations to the tender documents. Be advised that there is a deadline for asking questions.

## 4.8 Alternative tenders

Alternative tenders will not be accepted and will not be evaluated.

## 4.9 Cancelling the competition

The Customer may cancel the tender competition effective immediately if there are reasonable grounds.

## 4.10 Costs for participating in the competition

Tenders must bear all the costs of participating in the competition.

### 4.11 Public access to the tender documents

The Customer will keep the procurement protocol and the tenders received in the competition shielded from public view until the winning tender is chosen. Thereafter, only the information in the tenders that is considered trade secrets or personal information subject to confidentiality is exempt from public access.

The Customer will perform an independent assessment of the existing documents when determining the required level of access. Public access to the tender documents is permitted pursuant to the Freedom of Information Act, the Public Administration Act and the Public Procurement Regulations.

The Freedom of Information Act does not require consent to be obtained to provide access.

## 5. QUALIFICATION CRITERIA

### 5.1 Generally

Qualification criteria are minimum requirements towards the Tender's and is set to ensure the Tender's suitability to execute the procurement in question and to fulfil the contract terms. The qualification criteria are listed in Mercell and in the table below. In Mercell the term "qualification criteria" is referred to as "qualification demands".

In order to have the tender evaluated, the Tender must fill in the electronic self-declaration form, European Single Procurement Document (ESPD). The ESPD must be submitted together with the tender to show that the Tender is fulfilling the qualification criteria and that there are no reasons for rejecting the tender.

Prior to awarding the contract, the selected Tender will be asked to provide updated documentation regarding fulfilment of the qualification criteria.

More information on the ESPD is found here: https://ec.europa.eu/tools/espd

## 5.2 Qualification criteria

| Requirement | | Documentation requirement |
|---|---|---|
| **1** | **Tender's Tax and VAT certificate** | |
| The Tender shall deliver a tax certificate for VAT (Norwegian Tenders) | | • The certificate shall be issued via Altinn, the Tax Office or the Tax Recovery Office.<br>• The tax certificate must not be older than 6 months from the deadline for delivery.<br>This requirement only applies to Norwegian Tenders. |
| **2** | **Tender's registration, authorisation, etc** | |
| The Tender shall be registered in a company register, professional register or trade register in the state/country in which the Tender is established. | | • Norwegian companies: Company certificate<br>• Foreign companies: Evidence that the company is registered in a company register, professional register or trade register in the state/country the Tender is established. |
| **3** | **Tender's economic and financial capacity** | |
| The Tender shall have sufficient economic and financial capacity to fulfil the contract | | • Credit rating based on the latest known accounting figures. The rating shall be carried out by credit information agencies that have a license to conduct such business. The Customer reserves the right to obtain its own credit rating for the Tender. |
| **4** | **Tender's technical and professional qualifications** | |
| The Tender shall have experience from comparable deliveries. | | • A description of maximum 5 of the Tender's most relevant deliveries during the last 3 years. The description of each delivery shall not exceed one A4 page of text per reference. The Tender must ensure that the documentation fulfils the requirements.<br>• A description of how the Tender's experience from the above-mentioned deliveries, will be used to fulfil this tender. In total, the descriptions should not exceed two A4 page of text.<br>If necessary, documentation regarding deliveries older than 3 years may be taken into consideration. |
| **5** | **Tender's operational qualifications** | |
| The Tender shall have equipment and locations | | • The Tender shall have appropriate equipment and locations available for development and testing of the product. Describe how this is and how it will take place. The descriptions should not exceed two A4 page of text. |

### 5.3 Collaborative bids

If the Tender delivers bids with other Tenders, the offer becomes a Collaborative Bid. Each entity in the Tender's collaboration group must be a legally established company and submit a tax certificate, cf. Section 0, Requirement 1 and 2.

Furthermore, the following documentation must be completed and signed: Declaration of commitment, Appendix 4, from the company with which the Tender cooperates.

### 5.4 Support from other businesses

If the Tender must rely on other businesses to meet the qualification requirements for technical and professional qualifications or economic and financial capacity (incl. affiliated companies / "sister" companies), the Tender must document that it will have access to the necessary resources, cf. the Procurement Regulations section 16-10 (2). This also applies for subsidiaries.

The following documentation must be supplied:

- Declaration of commitment, Appendix 4, or similar from the companies on whom the Tender relies
- Documentation for fulfilment of the relevant qualification requirement
- Certificate from the Company Register or equivalent certificate from statutory registration register in the state/country in which the businesses are established
- Separate ESPD-forms (in addition to that of the Tender)

## 6. SELECTION CRITERIA FOR PARTICIPATION (STAGE 1)

Among the qualified Tenders, the Customer will select a number of qualified Tenders as specified above in section 4.2. Only pre-qualified Tenders will receive the invitation to participate in stage 2 of the procurement.

The selection among qualified Tenders will be based on an assessment of which Tenders best satisfy qualification requirements, cf. section 0 above.

This will apply to section 0:

3. Tender's economic and financial capacity
4. Tender's technical and professional qualifications
5. Tender's operational qualifications

Tenders not selected will be notified in writing of the selection with a brief explanation, cf. the Procurement Regulations section 16-12 (4).

# 7. TECHNICAL SPECIFICATION (STAGE 2)

The specification describes the requirements for the product. These are also known as Customers technical specifications.

**NB Note: Only those Tenders** who meet the qualification requirements and are selected by the Customer among the qualified Tenders, will be given an opportunity to submit a bid in the second stage (see Procedure Section 4.2).

The Customer has specified requirements for the goods and/or services to be procured. The requirements specified are minimum requirements that must be fulfilled. If a requirement is not fulfilled, the rejection provisions in the Public Procurement Regulations will apply.

The specification is set out in the tender specifications in Mercell and in the table below. In Mercell the term “requirement” is used for the specification / technical specification.

| Specification – The light sensors must meet the following requirements: | |
|---|---|
| 1 Quality – Exterior | |
| 1.1 Dimension | The light sensor unit must be of a dimension and form that able it to fit on to the SBE 911 plus with an SBE 32 Carousel water sampler.<br>The unit must not be longer than 80 cm and wider than 12 cm diameter. |
| 1.2 Depth pressure | The light sensors must withstand pressure equivalent to 3000 m depth. |
| 1.3 Temperature | The light sensors must withstand the following temperature range:<br>Sample temperature -5 to + 40°C, storage temperature -50 to +50°C. |
| 1.4 Sunshine | The light sensor must withstand sunshine. |
| 1.5 Exterior | The light sensors must be robust enough to handle use during rough weather conditions. |

| 2 Quality – Functionality | |
|---|---|
| 2.1 CTD-attached | The light sensors must be able to be attached to our standard CTD (SBE 911 plus, Sea-Bird Scientific), see more in Appendix 3. |
| 2.2 Power requirements | The light sensors must be able to operate all its functions by using no more than 200 mA (12-15V) from CTD when connected. |
| 2.3 Communi-cation | The light sensors must, be able to send information of total light (integrated intensity across 400 to 700 nm) by analog port (0-5 volts) on the CTD. |
| 2.4 Voltage range | The A/D output must be a binary number between 4095 and 0 corresponding to voltage in the range of 0 to +5 volts. |
| 2.5 Output format I | The data output must be in a format that can be compelled with .cnv files from the CTD, to able a real-time display of data on the CTD computer. |
| 2.6 Output format II | The data output must be in ascii format with depth in one column and total light (integrated light) or light per wavelength channel in a second column. |
| 2.7 Logging | The light sensors must have logging of date, time and depth in decibar. |
| 2.8 Intensity measures | Light intensity must be measured as vector irradiance of downwelling light and displayed as $W/m^2$ or $quanta/m^2/s$. |
| 2.9 Intensity range | Light intensity (irradiance) must be measured across the entire spectral range of PAR (400-700 nm). |
| 2.10 Wavelength channels | Intensity must be measured and displayed by wavelength and as integrated intensity between 400 and 700nm. Number of wavelength channels must be minimum 10. These must be in the style of a SeaWIFS sensor with discrete wavelength channels spread out across the specter (400 to 700 nm). The bandwidth of the wavelength channels (FWHM) must be wide enough to effectively cover the entire spectral range (400 to 700 nm). |
| 2.11 Sensitivity range | The light sensitivity range of the sensor must cover the entire intensity range from $10^1$ down to $10^{-11}$ µmol $quanta/m^2/s$, this goes for each of the 10 ≤ wavelength channel. |
| 2.12 Standalone use | The light sensors must be able to be used standalone attached to other equipment and arrangements as a ROV (Remotely operated vehicle). |
| 2.13 Battery capacity | When used standalone, the light sensors must have a battery (internal/external) capacity for 10 hours of continuous data logging when used standalone. |
| 2.14 Data storage | The light sensors must store all data in its own storage, both when used with the CTD and when used independently. |
| 2.15 Storing capacity | The light sensor must have storing capacity equivalent to 200 hours of data logging. |
| 2.16 Software | The light sensors must have a software to read, store, send, transfer and delete data. |

| 3 Quality – User interface – Functionality for the user | |
|---|---|
| 3.1 Measure-ment setting | It must be possible to pre-set / choose the light sensors measurement interval as well as the wavelength channels trough the software. |
| 3.2 Calibration | The light sensor must be able to be calibrated by the Customer personal onboard the vessels. |
| 3.3 Download | The light sensor data must be downloadable to PC/laptop when the sensor is back onboard the vessels. |
| 3.4 Software | The light sensor must be able to be upgraded by the Customer personal onboard the vessels. |
| 3.5 Recharge | The light sensor battery must be able to be recharged and changed. |
| 3.6 Power | The light sensors must be able to turn on and off. |

| 4 Specification Services – The Tender must meet the following requirements: | |
|---|---|
| 4.1 Time | The Tender must be able to deliver the first light sensor (prototype) within 12 months from signing the contract. |
| 4.2 Progression | The Tender must be able to deliver the next light sensors within 6 months from the option are triggered. |
| 4.3 Volume | The Tender must be able to deliver 10 submersible light sensors. |
| 4.4 Warranty | The Tender must give 1-year warranty to each light sensor. |
| 4.5 Service agreement | The Tender must be able to deliver service agreement for at least 10 year. |
| 4.6 Bugfixes | The Tender must be able to deliver free software bugfixes for at least 10 year. |
| 4.7 Upgrades | The Tender must be able to deliver software upgrades for at least 10 year. |
| 4.8 Source code | The Tender must provide the source code to the software after the obligation to provide bug fixes and upgrades ceases. Whereupon the Customer must get the right to use and develop the software for free. |
| 4.9 Electronical manual | The Tender must provide a electronical manual describing the instrument itself and how it should be maintained, in addition to a user's manual, made for first time users (none engineers), containing a step by step description of how to gather and download data from the sensor. |

# 8. AWARD CRITERIA (STAGE 2)

Award Criteria is the criteria on which the Customer will evaluate the received tenders and apply when selecting a tender. An overall assessment of the award criteria will determine which of the qualified Tenders will be awarded the contract.

The Tender is responsible for ensuring that the award criteria listed are sufficiently documented.

All documents reagarding the Tender's sollutions description, the price and product sheet, and other descriptions and documents must be named and marked with Appendix 2 (2.1, 2.2 or 2 a, 2 b and so on). Use the price and product sheet to name and arrange the other subappendices.

The solution description will be the subject of negotiations, and the final version from the selected Tender will be included as Appendix 2 to the contract.

## 8.1 Priority / weight of criteria

| Award criteria | Description | Priority/ weight |
|---|---|---|
| Price | Price is assessed according to a total of the price of seven light sensors, service checks and post ordered software updating development. | 40 % |
| Quality | Quality is assessed according to how good and suitable the light sensors is described in the Sollution description | 50 % |
| Services and Delivery date | The delivery deadline and services according to the specification must be met, but faster delivery and better services will give higher points. | 10 % |

## 8.2 Award criteria 1 - Price

For the purpose of evaluation, price is assessed according to a total price of the first light sensor, plus the price of the next six light sensors, four times service checks of seven light sensors and 50 hours of post ordered software update development.

Price must be stated in Norwegian kroner excl. VAT.

The lowest price will receive the highest score (10 points), and the score for the other offers will be assessed in relation to the lowest price.

The Customer reserves the right to choose a different evaluation method if the price differences in the tenders result in the selected evaluation model not giving a correct picture of relevant differences between the offers. The same reservation is made if the Tender submits unrealistic or tactical pricing.

| No | Award criteria 1 | Description |
|---|---|---|
| 1.1 | Price - prototype | Developing, testing, adjusting and correcting until acceptance.<br>Including<br>• cost for delivery in Bergen, Norway<br>• 1-year warranty<br>• 10-year free software bugfix<br>• Electronical set-up- and user manuals |
| 1.2 | Price - Production | Price for each light sensor from number two. The light sensors must be function tested and pressure tested.<br>Including cost for delivery in Bergen, Norway and 1-year warranty. |
| 1.3 | Price - Service | Service: Periodic maintenance / maintenance / calibration.<br>The Customer pays for transport toward and back from the Tender for service and pays for new parts / spare parts if it's necessary to change. |
| 1.4 | Price - Software updates | Specify the hourly rate for developing software to adapt to new or other applications or operating systems according to Customer needs. |
| The price shall be filled out in price and product sheet- Appendix 2. | | |

## 8.3 Award criteria 2 – Quality, functionality, technical solution

The Tender shall prepare a solution description based on the requirements set by the Customer in section 7. The solution must describe what the Tender can commit to deliver. It is important that the Tender points out in the solution description where the offered solution is better than the minimum requirements set by the Customer in section 7.

The Customer will evaluate the solution description and award good solutions.

Emphasis is placed on intensity, bandwidth, wavelength, wavelength channels, range, capacity, robustness, functionality and ease of use.

Best scores on functionality will receive 10 points, and points for the other offers will be assessed in terms of this.

| No | Award criteria 2 | Description |
|---|---|---|
| 2.1 | Quality, exterior | The solution must describe all the exterior listed in "Technical Specification" section 7 (item 1.1 to 1.5).<br>The solution must describe the exterior with design and materials.<br>The Tender must describe how robustness is safeguarded in the design, considering that the light sensors shall be processed on board and lowered into the sea from vessels in the open sea.<br>Size, weight and shape will matter.<br>It would be an advantage if the light sensors can withstand greater depths than the minimum 3000-meter requirement because the rest of the CTD equipment can withstand 6000 meters depth. |
| 2.2 | Quality, function-ality | The solution must describe all the functionality listed in "Technical Specification" section 7 (item 2.1 to 2.16).<br>All functionality that deals with measurement capability, degree and reporting, such as intensity, sensitivity, wavelength, bandwidth and range, will be positive if offered is better than requested.<br>It is preferable with more than 10 wavelength channels, the better wavelength resolution (many and narrower bandwidth) the better.<br>It is preferable that the light sensor has an even broader light intensity range. Preferable all the way up to bright daylight $10^3$ µmol quanta/$m^2$/s. The more it covers into the high intensity part (>$10^1$) and lower intensity (<$10^{-11}$) will be awarded.<br>Good solutions for calibration of the light sensor will be beneficial.<br>Good solutions for saving battery power, using standby mode and / or a system that stops the light measurement when the light sensor is out of water will be beneficial. |
| 2.3 | Quality, user interface | The solution must describe all user interfaces listed in "Technical Specification" section 7 (item 3.1 to 3.6). By "User Interface" is meant functionality for the user.<br>The solution must describe good ideas and solutions based on the requirements of "Technical Specification".<br>Easy and safe operation of the battery (recharge and change), power/standby “switch” will be beneficial.<br>Easy operating of settings, downloading/deleting of stored data and uploading of upgrades will be beneficial.<br>Simple laptop settings and controls, user-friendly software, wireless connectivity is beneficial. |
| **Documentation**<br>Description shall be filled out in price and product sheet in Appendix 2. | | |

### 8.4 Award criteria 3 – Delivery time and support

The Tender shall prepare a description of based on the requirements set by the Customer in section 7 (item 4.1 to 4.9). The solution must describe what the Tender can commit to deliver. It is important that the Tender points out in the description where the offered solution is better than the requirements set by the Customer in section 7.

| No | Award criteria 3 | Description – Delivery time and support |
|---|---|---|
| 3.1 | Delivery time - prototype | The Tender will be rewarded by committing to supply the first light sensor (prototype), faster than the minimum requirement of twelve months (item 4.1) |
| 3.2 | Delivery time - production | The Tender will be rewarded by committing to supply light sensors ordered according to the option, faster than the minimum requirement of six months (item 4.2) |
| 3.3 | Services / support | The Tender will be rewarded by committing to offer better solutions at the item 4.3-4.9 |
| **Documentation**<br>Description shall be filled out in Price and product sheet, Appendix 2, or in separated documents shown to in Price and product sheet, Appendix 2 | | |

## 9. REQUIREMENTS FOR THE TENDER

### 9.1 Application for participation (STAGE 1)

Submission of request for participation the following documentation must be included with the application:

| No. | Criteria | Documentation |
|---|---|---|
| a. | Qualification criteria | The European Single Procurement Document (ESPD). To be completed and submitted via the Mercell Portal.<br>Descriptions in Mercell and uploaded Documents to fullfil all Qualification criteria in section 5.2 and to give good descriptions to section 6 Selection criteria for participation. |
| b. | Declaration of commit-ment, Appendix 4 | Tenders use of Sub-contractors or other businesses. |

## 9.2 Documents to be submitted to the tender (STAGE 2)

Only pre-qualified Tenders will receive the invitation to participate in stage 2 of the procurement.

| No | Award criteria | Documentation |
|---|---|---|
| a | Price | Prices must be entered in the price and product sheet (Appendix 2) and submitted with the bid. |
| b | Quality | Tender's solution description must be entered in the price and product sheet (Appendix 2) and submitted with the bid. |
| c | Delivery date | Tender's solution description |
| **Documentation**<br>Description shall be filled in Price and product sheet, Appendix 2, or filled in separate documents shown to in Price and product sheet, Appendix 2 | | |

All documents reagarding the Tender's sollutions description, the price and product sheet, and other descriptions and documents must be named and marked with Appendix 2 (2.1, 2.2 or 2 a, 2 b and so on). Use the price and product sheet to name and arrange the other subappendices.

## 9.3 Tender submission

The tender must be delivered via Mercell, and this requires the Tender to be registered as a user in Mercell. Questions about how to use Mercell should be directed to Mercell Support.

- Telephone: (+47) 21 01 88 60

- email: support@mercell.com

It is recommended to submit the tender well in advance of the deadline. It is possible to change the tender until the tender deadline expires. The last tender submitted will be the final tender.

## 9.4 Responsibility of the Tender

It is the responsibility of the Tender to ensure that the tender is complete.

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