

INVITATION TO TENDER

ECMWF/ITT/2019/BOND02

PROCUREMENT OF STRUCTURED CABLING SYSTEM

at ECMWF, Tecnopolo di Bologna, Bologna, Italy

Volume II:

Specification of Requirements

5 July 2019

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Background

Definitions

Definitions used in this Invitation to Tender (ITT) are listed here:

Acceptance Date	the date or dates on which the system testing has been successfully completed in line with Appendix 1 of this Volume II and accepted by ECMWF
Agreement	Volume III of this ITT including all schedules thereto
Contract	the documents defining the Parties' rights and obligations comprising the Agreement, ECMWF's Letter of Acceptance of Tender, the ITT Documentation and the Contractor's Tender
Centre	ECMWF
Contractor	successful Tenderer
Data Hall (DH)	a space within the data centre that is used to host IT infrastructures and the high-performance computers and related services
Data Storage (DS)	a space within the data centre that is used to host tape library infrastructure and related services
Delivery Date	the dates, as specified in the Agreement, or on a Purchase Order, on which the Works shall be deemed to be delivered at the ECMWF Site of Reading or Bologna
ECMWF	European Centre for Medium-Range Weather Forecasts
High Performance Computer Facility (HPCF)	super-computing facility used to produce weather forecasts and scientific research
ITT	this Invitation To Tender
Manufacturer	original equipment manufacturer of the supplied hardware and software components
Preferred Bidder	the Tenderer(s) selected by ECMWF to participate in contract negotiations with ECMWF
Requirement	a singular documented physical or functional need that a design, product or process aims to meet
SCS	Structured Cabling System as defined in Appendix 1
Services	all the services listed in the Specification or on a Purchase Order, to be provided by the successful tenderer to ECMWF under this Contract
Specification	Requirements for the design, supply, installation, testing, commissioning and handover of the Structured Cabling System as specified in Appendix 1

Tender	a response to this ITT
Tenderer	an organisation bidding for this ITT
Tests	the tests that will be performed on the Works outlined in Appendix 1 of Volume II
Works	all hardware & software furnished and all Services to be performed by the successful tenderer under this Contract
You	the recipient of this ITT, a prospective "Tenderer"

Introduction

This Invitation To Tender (ITT) has been prepared by the European Centre for Medium-Range Weather Forecasts, (governed by its Convention and associated Protocol on Privileges and Immunities which came into force on 1 November 1975, and was amended on 6 June 2010) ("ECMWF") for the purposes of obtaining proposals from Tenderers for the procurement of Structured Cabling System (SCS). ECMWF is an independent intergovernmental organisation supported by 34 States. Information on ECMWF's activities can be found at:

<https://www.ecmwf.int/en/about>

ECMWF's new data centre

In June 2017 ECMWF Member States approved the proposal by the Italian Government and the Emilia Romagna Region to host ECMWF's new data centre in Bologna. The new data centre is currently being built on the site of the new Tecnopolo di Bologna campus that is redeveloping the unused buildings and grounds of a former tobacco factory. ECMWF's headquarters are to remain in the UK. Details about the new data centre can be found here:

<https://www.ecmwf.int/en/about/media-centre/press-kit-bologna-host-ECMWFs-new-data-centre>

ECMWF expects the Bologna data centre will be run with a small staff complement, that includes a 24 hour a day, 7 days a week, 365 days a year (24x7x365) operations team responsible for the monitoring of the infrastructure.

Scope of the ITT

The purpose of this Invitation to Tender (ITT) is for ECMWF to enter into a contract for the design, supply, installation, testing, commissioning and handover of a Structured Cabling system to support the internal systems and services throughout the new data centre. The system is to be installed at ECMWF's facility at Tecnopolo di Bologna, Via Stalingrado, Bologna, Italy from late 2019 onwards.

The scope of this ITT will include:

- Supply and installation of a fully labelled, tested and warranted SCS comprising of:
 - Fibre optic backbone cabling comprising of OS2 single-mode type;
 - Fibre optic horizontal cabling comprising of OM4 multi-mode type;
 - Category 6 UTP horizontal distribution cable;
 - Horizontal and vertical primary and secondary ICT containment;
- As-built documentation for the installed system;
- Provision of electronic cable and containment records;
- Supply and installation of fly leads and patch cords to support the connectivity requirements. This shall include OS2 LC and OS2 MPO connector types, OM4 LC and MPO connector types and Category 6 unshielded copper patch cables. The patch cables shall be supplied and installed within the ICT communications racks.
- Co-ordination with the all relevant stakeholders and other trades to deliver end-to-end working and compliant system;

- Delivery of warranties and operations/maintenance manuals for the SCS;
- Training of the building’s facilities management team so that they are able to operate the installed SCS.

Further information is included in Appendix 1 “SCS Performance Specification”.

ITT timetable

ECMWF envisages the following timetable for this ITT¹:

Date	Description
5 July 2019	Date for release of tender by ECMWF
5 August 2019	Clarifications close
14 August 2019	14:00 local UK time - Closing date for receipt of tender response
27-30 August 2019	Presentation by shortlisted tenderers and visits to reference sites (dates/time to be announced by ECMWF)
August/September 2019	Evaluation of tenders
September 2019	Preferred Tenderer(s) notified and negotiations of contractual terms
End of September 2019	Signing of the Contract
End of November 2019	Deployment to Bologna

Table 1: Envisaged timeline for this ITT

Evaluation method and selection criteria

Tenderers will be evaluated, utilising the Evaluation criteria detailed in Table [2] below, based on both written proposals and any oral presentations. However, ECMWF reserves the right to use information other than that provided by the Tenderers in its evaluation.

The following are the key evaluation criteria and their associated weighting that will be used as part of the evaluation process. ECMWF will be looking for strong capability in all the following aspects:

Evaluation criteria	Weighting
Appendix 2 “Capability Questionnaire”	70%
<ul style="list-style-type: none"> • A2.1 Compliance with Requirements 	20%
<ul style="list-style-type: none"> • A2.2 Relevant Experience 	5%

¹ ECMWF reserves the right to amend these dates at any point. If ECMWF decides to amend any of the dates or milestones portrayed above then it shall notify the Suppliers who have expressed an interest or Tenderers via the eprocurement portal.

<ul style="list-style-type: none"> • A2.3 Delivery Team • A2.4 Delivery Methodology • A2.5 Quality Management • A2.6 Support Services 	15% 15% 5% 10%
Appendix 3 Pricing and Agreement	30%

Table 2: Evaluation Criteria & Weighting

The evaluation of the Tenderer’s Technical Proposal will be based on the Tenderer’s response to section Appendix 2 “Capability Questionnaire” of this Volume II document. You will receive marks against each section of Appendix 2.

The evaluation of the Tenderer’s response to the Pricing and Agreement criteria will be based on the Tenderer’s financial submission in response to section Appendix 3 “Pricing and Agreement” of this volume II document.

The evaluation process will be split into three stages.

1. The first stage of the evaluation will be based on the information provided in Volume IA Tender Submission Form and responses to “A2.1 Compliance with Requirements” of this Volume II document. This will determine a shortlist of Tenderers for consideration for the second stage. Tenderers who are not shortlisted to stage two will not be considered further for this ITT.
2. The second stage of the evaluation will be based on a full evaluation of the Tenders, including the response to Volume IA, and will determine a shortlist of Tenderers for invitation to the third stage. Tenderers who are not shortlisted to stage three will not be considered further for this ITT.
3. The third stage will involve either a presentation / Q&A session on ECMWF premises in Reading by the short-listed Tenderer(s) and/or a site visit(s) for ECMWF staff to a reference site where a system similar to the proposed can be demonstrated. Both options should involve the key bidder staff nominated for this ITT and are expected to take place during the month August 2019 - ECMWF envisages giving at least one week’s notice of such. At these events, the Tenderer will have the opportunity to showcase the aspects of their proposed solution and both parties shall have the opportunity to clarify any outstanding elements of the ITT response. Following the event(s) and any subsequent clarifications, the shortlisted Tenderer(s) will be invited to submit their ‘best and final offer’ Tender to ECMWF, for final evaluation².

As a result, Preferred Bidder(s) will be established with whom final contract negotiations will be opened. ECMWF reserves the right to negotiate with one or more Tenderers before taking a decision on awarding the Contract. Within one (1) month following the notification of award of the Contract, the unsuccessful

² ECMWF will review the initial evaluation results for the shortlisted Tenderers and may adjust these results in line with their findings during the presentation / Q&A session and/or the site visit and any revisions made in the ‘best and final offer’ Tender.

Tenderer may request, in writing, feedback from ECMWF on the evaluation of the Tenderer's Tender submission³.

ECMWF Questions during Evaluation

During the evaluation of Tenders, ECMWF reserves the right to ask questions to clarify aspects of Tenderers' submissions. ECMWF will expect Tenderers to answer such questions promptly (normally with one business day of receipt). ECMWF will address questions by email or via the ProContract eProcurement Portal to the contact you nominate in your Volume IA Tender Submission Form and you should ensure that your contact's emails and Portal access are monitored at all times during our evaluation.

Organisation of this document

In accordance with the evaluation method and selection criteria listed in the previous section, the remainder of this ITT is organised as follows:

- Tender Requirement Instructions;
- Appendix 1 SCS Performance Specification;
- Appendix 2 Capability Questionnaire
- Appendix 3 Pricing and Agreement.

Tender Requirement Instructions

Tenderers should note that they need to ensure that Requirements are fully addressed, since a partial response may not be considered or evaluated. This includes the Requirements present in this section, in the appendices and in the embedded Excel spreadsheets.

In this document, Requirements are categorised by the bold notations **M**, **D** or **R** to the left of the pertinent section.

Requirement category	Definition
M	denotes a MANDATORY Requirement: a Requirement that must be adhered to, or a performance Requirement that must be met in order that the tendered solution can be accepted by ECMWF. ECMWF will not consider a tendered solution that fails to meet a mandatory specification Requirement (marked M) unless the tenderer offers valid reasons why the feature in question is either unnecessary for, or irrelevant to, the tendered solution or is deemed as an improvement over that specified.
D	denotes a DESIRABLE feature. The extent to which any tender offers features listed as desirable (marked D) will be one of the factors taken into account in selecting the winning tender. If offered, the feature must be included in the overall price for the Works.

³ It is at ECMWF's sole discretion if, following any request from a Tenderer, it provides feedback on the Tenderer on their Tender submission

R	denotes a REQUEST for information. A response must be given to all such requests. Requests for information (marked R) are intended to provide a description of the construction, philosophy, operation and the cost implications of the tendered solution in areas that are regarded as being of particular importance. A clear response to such requests will be of assistance to ECMWF in the tender evaluation process.
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Table 3: Categories of Requirements

With regard to the Tenderer’s ability to accommodate the Requirements, the Tenderer must use the following schema for completing the **Detailed Description** and **Self-Score** columns:

1. When populating the **Detailed Description** columns, Tenderers should note that, where relevant, when addressing that a Requirement is met, tenderers must give minimum sufficient detail to explain the way in which the Requirement is met - a simple expression, such as “compliant” or “agreed”, will not normally suffice.
 - Unless stated otherwise, the Detailed Description should be no longer than 250 words. Where word counts above 250 words are allowed, the higher limit will be clearly stated. Any text above the maximum specified word count will not be evaluated.
 - Attachments/Annexes should not be submitted, unless the Requirement expressly requests or authorises their submission.
 - Tenderers are reminded that referencing web sites or providing hyperlinks does not provide an acceptable means of informing their submission. Any references of these types will be ignored and will not be evaluated.

2. Any additional features not listed in the ITT as Requirements, but which the tenderer feels may be relevant, should be clearly identified and supported by descriptive material.
 - Note that ECMWF seeks focused responses, rather than responses which include a significant amount of standard marketing material. If you wish to include marketing material in your proposal documentation set, it should be provided as discrete documents and limited to only marketing material which is directly relevant to the response and marked as "Marketing Material". ECMWF reserve the right not to evaluate Marketing Material if it deems it to be irrelevant.

3. When populating the **Self-Score** column, the Tenderer must self-score following the definitions in the table below to provide an indication of compliance with the Requirement

Self-Score Value	Definition
3	Tenderer fully meets or exceeds the ECMWF Requirement.
2	Tenderer partially meets the ECMWF Requirement. The Requirement will be met as part of a future commitment. In the Detailed Description column, describe how the Requirement will be fully met. Specify, where applicable, associated timescale and cost.

1	<p>Tender does not meet the ECMWF Requirement at the time of response. The Requirement will be met as part of a future commitment.</p> <p>In the Detailed Description column, describe how the Requirement will be fully met. Specify, where applicable, associated timescale and cost.</p>
0	Tenderer cannot meet the ECMWF Requirement.

Table 4: Self-scoring values and definitions

Self-Scores will be validated by ECMWF to ensure they have been completed accurately. Where ECMWF’s assessment is different to the Tenderer’s Self-Score, ECMWF may ask the Tenderer to review and justify its Self-Score.

Tenderers must address the Requirements listed in the table below together with the Requirements listed in the Appendixes.

Tender Requirement			
Requirement number	Requirement	Detailed Description	Self-Score
M(1)	<p>Tenderers must ensure that all Requirements in this ITT are addressed and a response, in electronic format, is posted to ECMWF’s eProcurement Portal prior to the deadline; partial responses will not be considered.</p> <p>N.B. efforts have been made to remove duplicate Requirements, where this may occur, please still address the Requirement and/or reference your first response.</p>		
M(2)	Tender documentation must be written in English.		

Tenderers should note that responses to all Requirements specified in Volumes I and II of this ITT must be submitted by the Tender Closing Date. Tenderers invited to make presentations or give presentations to ECMWF in Stage 3 of the evaluation process may be required to address the Requirements.

Appendix 1 SCS Performance Specification

Please see separate files:

File name
ITT_BOND02 Volume II Appendix 1 - Specification
ITT_BOND02 Volume II Appendix 1 - Drawings

Appendix 2 Capability Questionnaire

A2.1. Compliance with Requirements

Overall understanding of scope of works			
Requirement number	Requirement	Detailed Description	Self-Score
M(3)	Tenderers must confirm that they have read and understood and accept all Requirements included in Appendix 1 SCS Performance Specification		
M(4)	Please provide a summary of how your organisation will meet the stated requirements including details on technical capability, financial capability, labour resources, capacity to complete the works within the indicated timescale, ability to manage the project, previous experience. Please keep your answer focused and specific to the scope of work. You may provide your response in a separate attachment which should be limited to 5 pages.		
M(5)	Please describe what steps you propose to take to ensure compliance with all applicable international, national and local standards.		

Exclusions and deviations to Requirements			
Requirement number	Requirement	Detailed Description	Self-Score
M(6)	Please list any assumptions that you have made in preparing your response.		

Compliance with Specifications			
Requirement number	Requirement	Detailed Description	Self-Score
R(7)	For each of the following system components, please state proposed System Supplier, part number, supplier lead time product specification and product certifications:	Please provide your response against each one of the listed components.	N/A

M(8)	• OS2 fibre optic cable;		
M(9)	• OS2 fibre optic patch cord;		
M(10)	• OM4 fibre optic cable;		
M(11)	• OM4 fibre optic patch cord;		
M(12)	• Category 6 unshielded twisted pair (UTP) cable;		
M(13)	For all cable types (fibre and copper), please confirm that the proposed solution from a single System Supplier that meets the minimum requirements specified. If components are proposed from multiple System Suppliers, please specify which supplier will warranty the complete installation.		
M(14)	How does the proposed solution meet the objective of minimising the cost in use?		
M(15)	How will you ensure that all equipment is installed such that it is fully maintainable? The backbone cabling installation must cater for concurrent maintenance of equipment and components without affecting the system integrity or performance		

A2.2. Relevant Experience

Previous experience with similar projects			
Requirement number	Requirement	Detailed Description	Self-Score
M(16)	Please list the core technical competencies of your organisation. This must include the details of what is considered to be the key technology areas supported by the organisation.		
M(17)	Please provide details of 3 similar projects that you have delivered recently. Make sure you include details on project scope, methodology, challenges and outcomes. In answering this question Tenderers may refer back to their responses in Volume IA		

A2.3. Delivery Team

Project organisational structure			
Requirement number	Requirement	Detailed Description	Self-Score
M(18)	Please list the core technical competencies of your organisation. This must include the details of what is considered to be the key technology areas supported by the organisation.		

In self-scoring the questions below where you have provided multiples CVs please use the lowest scoring CV for your 'self score'.

Relevant experience of key personnel			
Requirement number	Requirement	Detailed Description	Self-Score
M(19)	Please provide a name and CV for proposed Project Coordinator/s highlighting relevant experience and accreditations.		
M(20)	Please provide a name and CV for proposed Package Manager/s highlighting relevant experience and accreditations		
M(21)	Please provide a name and CV for proposed ICT Cabling Installer/s highlighting relevant experience and accreditations		
M(22)	Please provide a name and CV for proposed Lead Technical Manager/s highlighting relevant experience and accreditations		

A2.4. Delivery Methodology

Installation, testing and commissioning			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(23)	Please provide a detailed plan of works taking into account the requirements stated in Specification		
M(24)	What incentive structure do you propose to put in place to ensure on-time delivery of the Works? What other service levels would you typically include in similar contracts? Please be specific in including details about service credits.		
M(25)	Please provide method statements for key project activities.		
M(26)	What steps will you take to ensure that the installation complies with all statutory requirements, relevant standards, codes of practice, best working practice and requirements of the Client's insurers in addition to meeting with the requirements stated in the Specification		

Project management capabilities			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(27)	Please describe how you will coordinate work with other contractors on site.		

A2.5. Quality Management

Installation, testing and commissioning			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(28)	Please list all relevant certifications, accreditations and awards held by your organisation.		

M(29)	Please provide a copy of your H&S policy. What specific actions will the project team take to ensure all necessary H&S measures are enforced during project delivery?		
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A2.6. Support Services

Warranty, support and maintenance			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(30)	Please confirm that you comply with the warranty terms stated in the Specification. If your proposed warranty terms are different, please provide details.		
M(31)	Please specify how you will be servicing the system under warranty and describe your organisation in Italy. Note requirements stated in 2.11 of the Specification		

Training			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(32)	Please describe how you will provide training to ensure the Client is familiarised with the installed system		
M(33)	Please confirm that all documentation will be provided in line with the requirements stated in the Specification.		

Appendix 3 Pricing and Agreement

ECMWF expects to see full pricing transparency in your Tender response and to be able to understand the figures first time without the need to clarify with the Tenderer in question.

Where applicable, please ensure that all and any conditions and/or restrictions are made explicit e.g. unanticipated expenditures (rush charges, etc.) and including the net pass-through of third-party costs/commissions/discounts.

When providing full and transparent breakdown of any summary figures, the Tenderer must be specific on how these are derived i.e. unit costs, day rates, quantities, discounts, exchange rate, how personnel effort is split between phases of work, etc.

Pricing Requirements

Tenderers are required to quote prices on the following basis:

- a) Prices quoted by Tenderers shall be firm and fixed delivered price;
- b) Tender prices are fixed and firm for six (6) months after the closing date from receipt of tenders and ECMWF can use these prices to place orders following Contract signature;
- c) Prices should be quoted exclusive of taxes;
- d) Prices must be quoted in Euros (€) and ECMWF will use Euros (€) in the Contract.

Requirements for Pricing and Agreement			
Requirement number	Requirement	Detailed Description	Self-Scoring
M(34)	Tenderers must provide their pricing in the provided excel template named "ITT_BOND02 Volume II Appendix 3 Pricing Section" . Tenderers are requested not to change the structure of the provided template. If you have made any assumptions in preparing your commercial proposal please list those clearly and coisicely in M(6).		
M(35)	Tenderers must confirm that costs cover all the Works as described in the Specification		
M(36)	Please confirm that you have read and agree the terms included in Volume III. If you are unable to agree to any of the contract terms please provide mark-up with comments.		