

INVITATION TO TENDER

ECMWF/ITT/2019/BOND01

PROCUREMENT OF ICT Racks & Accessories

at ECMWF, Tecnopolo di Bologna, Bologna, Italy

Volume II:

Specification of Requirements

23 May 2019

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Background

Definitions

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

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 in accordance with the Agreement
Centre	ECMWF
Contractor	successful Tenderer
Delivery Date	the date on a Purchase Order, on which the purchased Goods shall be deemed to be delivered at the ECMWF Site in 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
ICT Racks	Rack cabinets as specified in Appendix 1
Requirement	a singular documented physical or functional need that a design, product or process aims to meet
RPDU	Rack Mount Power Distribution units as specified in Appendix 1
Site	ECMWF's site in Bologna, Italy
Tender	a response to this ITT
Tenderer	an organisation bidding for this ITT

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 ICT Racks and associated accessories. 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>

Delivery will be at ECMWF's new data centre at Tecnopolo di Bologna, Via Stalingrado, **Bologna, Italy**.

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, which 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 an Agreement for the purchase of Racks and associated accessories as part of the fit-out of ECMWF's new data centre.

The scope of this ITT includes:

- ICT Rack cabinets and cable management accessories
- RPDUs

The expected delivery date for the goods at ECMWF's site in Bologna, Italy is November/December 2019.

Further information is included in Volume I (Instructions for Tenderers and Conditions of Tender) of the ITT.

ITT timetable

ECMWF envisages the following timetable for this ITT¹:

Date	Description
23 May 2019	Date for release of tender by ECMWF
18 June 2019	Clarifications close
27 June 2019	14:00 local UK time – Closing date for receipt of tender response
June/July 2019	Evaluation of tenders
July/August 2019	Product demonstrations and supplier reference site visits for shortlisted suppliers (dates/times to be arranged by ECMWF)
July/August 2019	Preferred Tenderer(s) notified and negotiations of contractual terms
August/September 2019	Signing of the Contract
November/December 2019	Delivery to Bologna

Table 1: Envisaged timeline for this ITT

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.

Evaluation method and selection criteria

Tenderers will be evaluated, utilising the Evaluation criteria detailed in Table [2] below, based on both written proposals and product reviews at supplier reference sites. 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
General Requirements	Pass/Fail
Compliance with Racks Technical Requirements	18%
Compliance with RPDUs Technical Requirements	28%
Pricing and Agreement	
<ul style="list-style-type: none"> • Racks 	42%
<ul style="list-style-type: none"> • RPDUs 	12%

Table 2: Evaluation Criteria & Weighting

The evaluation of the Tenderer’s compliance with technical and operational requirements will be based on the Tenderer’s response to section “Appendix 1 Technical Requirements” of this volume II document. “General Requirements” aimed at establishing whether the Tenderer has previous experience in delivering similar projects and whether they hold appropriate qualifications will be assessed on Pass/Fail basis. Inability to provide three relevant references may be scored as “Fail”.

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 2 Pricing ” 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 the responses to this Volume II document and 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. The ECMWF evaluation team shall be permitted to review other parts of the Tender if the team considers this is necessary to determine which Tenders should be fully evaluated in the second stage.
2. The second stage will involve visits to a Tenderer reference site where all proposed products can be demonstrated. The visits will be arranged with the key Tenderer staff nominated for this ITT and is expected to take place in June/July 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 or solutions and both parties shall have the opportunity to clarify any outstanding elements of the ITT response.

3. 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 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 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.

² ECMWF will review the initial evaluation results for the shortlisted Tenderers and may adjust these results in line with their findings during the product demonstrations and/or the site visit and any revisions made in the 'best and final offer' Tender.

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

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 Technical Requirements;
- Appendix 2 Pricing .

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.
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.

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 **Proposed Product Description** columns, Tenderers should give minimum sufficient detail to explain how 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. This can be provided as part of submitted product specifications.
- 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 Proposed Product Description column, describe how the Requirement will be fully met. Specify, where applicable, associated timescale and cost.
1	Tender does not meet the ECMWF Requirement at the time of response. The Requirement will be met as part of a future commitment. In the Proposed Product Description column, describe how the Requirement will be fully met. Specify, where applicable, associated timescale and cost.
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 Checklist			
Requirement number	Requirement	Tenderer Response	Self-Score
M(1)	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.		
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.

Appendix 1 Technical Requirements

A1.1. General requirements

A1.1.1. Overview

The specific requirements for Racks and PDUs in scope for this ITT are provided in sections A1.2 and A1.3 of this document. ECMWF will not consider a tendered solution that fails to meet a specified mandatory requirement unless the Tenderer offers valid reasons why the specification in question is either unnecessary or irrelevant to the tendered solution.

Partial responses to this ITT will not be considered. Tenderers are expected to offer products that fulfil each one of the mandatory requirements.

As optional, the Tenderer may offer an alternative product. Alternatives should either provide a significant cost benefit to ECMWF or offer superior quality with no, or limited cost implications. ECMWF reserves the right not to consider alternatives as part of the evaluation process.

A1.1.2. Rack classes

ECMWF is currently setting up a new Data Center in Bologna, Italy. As part of this project, ECMWF requires the provision of equipment racks and accessories as detailed in this Appendix 2 to house its ICT. The delivered racks should meet the following configuration requirements:

Rack type	Number of racks	Vertical cable management quantity <u>per rack</u>	Horizontal cable management quantity <u>per rack</u>	PDU type	PDU quantity <u>per rack</u>
Server Racks	12 + 2 spare	2	4	16A 3Ø	2
Data Handling Server Racks	16	2	4	16A 3Ø	2
Data Handling Storage Racks	26	2	2	16A 3Ø	2
Network Racks	12	2	6	16A 1Ø	2
Shared Storage	8	2	2	16A 3Ø	2
Fibre Channel	4	2	6	16A 1Ø	2
TC Racks	8	2	6	16A 1Ø	2

A1.1.3. Packaging, protection and delivery

All plant, equipment, apparatus, materials and parts shall be delivered to the Site in new condition and properly packed and protected against damage due to handling or due to adverse weather or other circumstances. As far as practicable, they shall be kept in the packing cases or under protective coverings until they are inside the loading bay.

Any item suffering damage in transit or on the Site will be rejected and shall be replaced by the Contractor without extra cost to ECMWF.

The packaging of each rack must be clearly marked with the rack class name as set out in this SOR.

Delivery of the racks shall be to the Bologna site:

ECMWF, Tecnopolo di Bologna, Via Stalingrado, 40128 Bologna BO, Italy

The delivery of the racks shall be in phases to take into account the amount of racks that can be safely delivered in to the loading bay (15x11M), see figure below for site layout.



Figure 1 ECMWF Site layout

A1.1.4. References & Tenderer Credentials

Please answer the questions below providing more information on your credentials and how you will fulfil the Tender Requirements.

Tenderer Credentials & References			
Requirement number	Requirement	Detailed Description	Self-Score
R(3)	Tenderers must list the core competencies of their organisation. This must include the details of what is considered to be the key technology areas supported by the organisation. (Maximum 500 words).		
R(4)	Tenderers are invited to indicate the technical and quality management certifications/accreditations/awards relevant to this ITT that their organisation holds.		
R(5)	Tenderers must confirm that they are able to deliver the purchased goods to the specified ECMWF site in Bologna, Italy		
M(6)	Tenderers must propose a delivery plan taking into account the capacity of the loading bay at the Site.		
M(7)	Tenderers are invited to identify 3 comparable projects (together with references) by answering Question 4 in Volume IA of this ITT.		

A1.1.5. Product Demonstrations & Site Visits

During stage 2 of the evaluation process ECMWF may require to visit a Tenderer Reference Site where the proposed products can be demonstrated. For convenience, it is ECMWF's preference that the reference site is located in the UK.

Product Demonstrations & Site Visits			
Requirement number	Requirement	Detailed Description	Self-Score
R(8)	Please provide the following information about your proposed reference site: name, address, site description		

A1.2. Racks Design Requirements

A1.2.1. Proposed Product

Please provide details of the proposed Racks.

Rack Enclosure – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(3)	Please provide product name				
M(4)	Please provide product code				
R(11)	Please provide the name of the equipment Manufacturer				
M(12)	Tenderers are invited to provide the full product specification as attachment				

Roof mounted containment – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(13)	Please provide product name				
M(5)	Please provide product code				
R(15)	Please provide the name of the equipment Manufacturer				
M(6)	Tenderers are invited to provide the full product specification as attachment				

Horizontal cable management – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(7)	Please provide product name				
M(18)	Please provide product code				
R(8)	Please provide the name of the equipment Manufacturer				

M(9)	Tenderers are invited to provide the full product specification as attachment				
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Vertical cable management – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(21)	Please provide product name				
M(10)	Please provide product code				
R(23)	Please provide the name of the equipment Manufacturer				
M(11)	Tenderers are invited to provide the full product specification as attachment				

A1.2.2. Design requirements

Please state how the proposed product(s) meet each one of the design requirements below.

Vertical cable management – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
M(25)	Each rack shall be designed to provide a secure managed environment for server and networking equipment.				
M(26)	Each rack shall be designed to accommodate power and cable management accessories.				
M(12)	Each rack shall have a cable management system installed on top of the rack that allows cables from different racks to be interconnected. This cable management system should be capable of being sectioned off.				
M(13)	Each rack shall be supplied with 5x 1U blanks.				
M(14)	Each Rack should be Standard 19" type 48U, Width ≥ 750mm x Depth ≥1200mm.				
M(15)	Each rack shall be fitted with standard locks with keys supplied.				

M(16)	Each rack shall be fitted with castors and wind down feet.			
M(17)	Each Rack shall be fitted with removable doors.			
M(18)	The rack doors shall not impede air flow.			
M(19)	Each rack shall be internally fitted with 4x 150mm cable trays vertically mounted at the rear sides capable of receiving button mounted devices.			
M(20)	Each rack shall be capable of supporting a dynamic load of >1000kg			
M(21)	Each rack shall be capable of supporting a static load of >1200kg			

A1.2.3. Warranty

Please state the proposed product warranty terms.

Racks – Warranty terms					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
M(22)	Please provide details of warranty term. If different warranty terms apply to any of the Racks required components, please state clearly what those are. For the purposes of evaluation ECMWF will be considering the shortest warranty.				
R(38)	Tenderers are invited to describe their policy regarding maintenance, spare parts and support for the proposed product(s). In particular, any replacement policy or policies for components that will no longer be supported should be stated.				

A1.3. Rack Mount Power Distribution (RPDU) Requirements

A1.3.1. Proposed Product

PDU 16A <u>single</u> phase – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(23)	Please provide product name				
R(24)	Please provide product code				
R(25)	Please provide the name of the equipment Manufacturer				
M(26)	Tenderers are invited to provide the full product specification as attachment				

PDU 16A <u>three</u> phase (TPN) – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
R(27)	Please provide product name				
R(28)	Please provide product code				
R(29)	Please provide the name of the equipment Manufacturer				
M(30)	Tenderers are invited to provide the full product specification as attachment				

A1.3.2. Design requirements

The PDU included in the Rack will have the following features. Please state how the proposed product(s) meet each one of the design requirements below.

Vertical cable management – Proposed Product					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score

M(31)	The PDU should be zero U mounted.			
D(32)	The PDU should have a button mounting option that fits the supplied cable tray.			
M(33)	A minimum of 24 C13 outlets must be included.			
M(34)	Each socket outlet should be capable of being switched on/off remotely.			
D(35)	It is desirable that each socket outlet should have a power status indicator.			
D(36)	It is desirable that each socket outlet should be retained via a mechanical locking device.			
M(37)	The PDU must have communications available via snmp.			
D(38)	It is desirable that the PDU supports SSH/Telnet.			
D(39)	It is desirable that the PDU shall have the ability to cascade units together to save on IP ports.			
M(40)	The PDU shall have the ability to tag the socket outlets in its software with the appliance name that is connected to the socket outlet.			
M(41)	The PDU must have accessory ports capable of connecting temperature and humidity sensors.			
M(60)	The PDU must be capable of capturing and recording events.			
M(42)	The PDU must be capable of logging the voltage, current and power			
M(43)	The PDU must be able to be supported by NetZoom DCIM.			

A1.3.3. Warranty

Please state the proposed product warranty terms.

Racks – Warranty terms					
Requirement number	Requirement	Proposed Product Description	Self-Score	Alternative Product Description	Self-Score
M(44)	Please provide details of warranty term. If different warranty terms apply to any of the proposed products, please state clearly what those are. For the purposes of evaluation ECMWF will be considering the shortest warranty.				

R(64)	Tenderers are invited to describe their policy regarding maintenance, spare parts and support for the proposed product(s). In particular, any replacement policy or policies for components that will no longer be supported should be stated.				
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Appendix 2 Pricing

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, quantities, discounts, exchange rate, 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 valid 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 all import duties and taxes;
- d) Prices must be quoted in Euros (€) and ECMWF will use Euros (€) in the Contract.

Please provide pricing for each one of the Tender components in the table below. The tables should include only pricing:

Racks – Pricing				
Requirement number	Requirement	Total quantity	Proposed Product Price (Euro)	Alternative Product Price (Euro)
M(45)	Rack	88		
M(46)	Roof Mounted Containment	88		
M(47)	Horizontal Cable Management	332		
M(48)	Vertical Cable Management	176		

RPDU – Pricing				
Requirement number	Requirement	Total quantity	Proposed Product Price (Euro)	Alternative Product Price (Euro)
M(49)	PDU 16A single phase	48		
M(50)	PDU 16A three phase (TPN)	128		

Configuration		
Requirement number	Requirement	Answer
M(71)	Please confirm that the pricing above is based on the Racks being delivered in the configuration specified in Appendix 1	
M(51)	Please confirm that pricing is not conditional on any assumptions not previously stated	
R(73)	Please provide a list of import duties and taxes not included in the price.	