

EXPRESSION OF INTEREST

ECMWF/EOI/2020/BOND09a

PROCUREMENT OF
Logistics Services
for the Move of Data Centre Equipment and Tape
Media to Bologna, Italy

Volume II:

Service Requirements and EOI Questionnaire

6 February 2020

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Background

Definitions

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

Agreement	Terms and conditions agreed between ECMWF and the Contractor
Centre	ECMWF
Hosting Agreement	Agreement between the Government of the Italian Republic and ECMWF concerning the premises of the Centre located in Italy, dated 22 June 2017, and Supplementary Agreement between the Government of the Italian Republic and Regione Emilia-Romagna on the one hand and ECMWF, on the other, concerning the premises of the Centre located in Italy, dated 22 June 2017.
ECMWF	European Centre for Medium-Range Weather Forecasts
Expression of Interest (EOI)	(this procurement exercise) Preliminary stage of the tender process used to inform ECMWF of the service options available and assess supplier capabilities. The EOI may be used by ECMWF to shortlist suppliers to participate in an Invitation to Tender (ITT).
Invitation to Tender (ITT)	the subsequent stage of the tender process used to select and enter into contract with one or several suppliers.
Requirement	a singular documented physical or functional need that a design, product or process aims to meet
Response	a response to this EOI
Respondent	an organisation participating in this EOI
You	the recipient of this EOI

Introduction to ECMWF

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an independent intergovernmental organisation supported by 34 states. ECMWF is both a research institute and a 24/7 operational service, producing and disseminating numerical weather predictions to its Member States. These data are fully available to the national meteorological services in the Member States. The Centre also offers a catalogue of forecast data that can be purchased by businesses worldwide and other commercial customers.

The organisation was established in 1975 and now employs around 350 staff from more than 30 countries. A description of ECMWF's activities and infrastructure can be found at: <http://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.

ECMWF is currently in the process of procuring a new High Performance Computer which will be housed in the new Data Centre, together with its associated hardware, including storage facilities. A critical part of this computing environment is the storage archives, which provides applications and users with an extensive repository of data, and the methods allowing an efficient access to this repository.

Scope of the EOI

The purpose of this Expression of Interest (EOI) is to help ECMWF understand the service options available in moving a substantial amount of existing equipment and tape media from its Shinfield Park data centre in Reading, UK to its new data centre in Bologna, Italy. Once the options are understood, ECMWF is likely to tender for these services. It should be noted that due to the nature of the equipment, most will likely be dismantled in the UK, packaged and rebuilt in Bologna by the OEM vendor. However for servers, switches and media, a more complete moving service could be offered, which would include de-racking, packaging, transporting and re-racking the equipment by the Contractor.

In the event that ECMWF agrees to tender for the services, the requirements are likely to be split into two Lots, one for the equipment and one for the tape media move, with both being issued in the second quarter 2020. Tenderers would be able to bid for either one or both Lots. In this EOI, it is acceptable to only answer the questions relevant to your area of interest.

It is anticipated that the moves would take place in early 2021.

Respondents are encouraged to submit a complete response to this EOI exercise as ECMWF reserves the right to use this exercise to short-list suppliers for the Invitation to Tender stage.

Timetable

ECMWF envisages the following timetable for this EOI and subsequent ITT:

Date	Description
6 February 2020	Date for release of EOI by ECMWF
11 March 2020	Deadline for submission of clarifications questions
25 March 2020, 14:00 (UK Local time)	Closing date for receipt of EOI responses
April - May 2020	Evaluation of EOI responses
June 2020	Date of release of subsequent ITT

Table 1: Envisaged timeline for this EOI and subsequent ITT

Evaluation criteria

Responses to the EOI will be evaluated based on documents listed below:

- Responses provided in Volume IA Response Submission Form
- Responses provided in the “Appendix 2 EOI Questionnaire” of this Volume II

All responses to questions will be scored by ECMWF based on the following scoring matrix:

Value	Definition
3	The response to the question is relevant, provides a level of information which fully explains the aspect or exceeds the expectation.
2	The response to the question is relevant, but incomplete or partially meets the expectation.
1	The response to the question is inaccurate or lacks substantial relevance for the purposes of the services sought.
0	The response to the question is not relevant for the purposes of the services sought.

Organisation of this document

The remainder of this Volume II is organised as follows:

- Appendix 1 High Level Scope of Requirements;
- Appendix 2 EOI Questionnaire.

Appendix 1 High Level Scope of Requirements

A1.1. Equipment to move

The equipment to be moved, which will be dismantled and partially packaged by the OEM vendor, includes:

- 20 disk systems, 14 systems of which will be separated into their 2U component trays and wrapped. The remaining six 'OEM' systems will be shipped in four wooden crates, with their disks boxed separately.
- Two IBM TS4500 tape libraries will be shipped, each comprising 15 frames, together with their tape drives. A further 165 tape drives need to be shipped from a different set of tape libraries. Some tape media shelving will also be transported.
- For weight and dimensions of all this equipment see Table 2.

Equipment will be wrapped by the vendor, but not necessarily packaged ready for transport. The successful supplier will need to provide safe packaging to move the equipment between sites.

System Type	Package dimensions (hxwxd)	Number	Total Weight (KG)	Level of packaging provided by OEM vendor or Centre
Disk systems type I	8.7cm x 48.3cm x 55.6cm	120 boxes	3,500	Wrapped but not packaged ready for transport
Disk system type II	8.6cm x 45cm x 77cm	2 boxes	68	Wrapped but not packaged ready for transport
Disk rack wooden crate	226cm x 71cm x 112cm	4 units	4,500	Packaged ready for transport
Disk drives	40cm x 75cm x 60cm	64 boxes	1,000 (780g/disk)	Packaged ready for transport, but may require pallets
Tape library frames	120cm x 72cm x 78cm	30 units	12,300 (410kg/frame)	Wrapped but not packaged ready for transport
Tape drives	30cm x 35cm x 100cm	19 pallets, 9 boxes per pallet	1,650 (10KG/drive)	Wrapped but not packaged ready for transport

Table 2: Vendor packed Equipment to Move

The equipment to be moved, which will need a full transport service, consists of 140 servers and 6 fibre channel switches, mostly 1U, along with shelving for tape media. These will need to be de-racked, packaged at the Shinfield Park site for transport, and re-racked by the supplier at the Tecnapolo, Bologna. See Table 3 for details for sizing and weights.

System Type	Package dimensions (hxwxd)	Number	Total Weight (KG)	Level of packaging provided by OEM vendor or Centre
Servers	120cm x 56cm x 80cm	140 units	2,100 (15KG/server)	None

Switches	30cm x 51cm x 51cm	6 units	90 (15KG/switch)	None
Tape media shelving	208cm x 156cm x 39cm (EDP - MMEX)	8 shelving units	4,000 (500KG/Shelf unit)	None

Table 3: Full Packaging and Transport Service

A1.2. Tape media to move

The media needs to be safely moved within the range of the environmental conditions as detailed in Table 4, which outlines the conditions for all stages of the transport. The intention is to move the DR (Disaster Recovery) copy of the tapes first, and only after damage assessment will the primary tapes be authorised to be transported. The LTO DR media move is likely to happen prior to the main move of the equipment. Table 4 shows the number and estimated weights of the media, without packaging.

Much of the data on the primary copy does not have a backup, therefore it is imperative to minimise the risk of damage or loss. Processes must be in place to ensure their safety. All tape media will be re-acclimatised to the Halls in the Tecnopolo for a minimum of 24 hours prior to being read or written.

As with the servers and switches, it would be useful if the successful supplier could provide a complete package and unpackage service for the media as well as transporting them.

Tape media	Cartridge dimensions (hxwxd)	Numbers	Weight Unpackaged (KG)	Environmental conditions during transit
Enterprise tape cartridges	2.5cm x 11cm x 13cm	35,000 cartridges	(270g/T10kT2, 239g/JE)	<ul style="list-style-type: none"> • Temperature range: 15°C - 25°C • Relative Humidity (noncondensing) range: 15-50% • Maximum wet bulb temperature: +26°C • Maximum rate of temperature change: 5°C/hour • The humidity rate of change must be <5%RH/hour • Ambient air conditions must be non-condensing at all times. • Magnetic field: stray magnetic field at any point on tape not to exceed 50 oersteds (4000 ampere/meter)
LTO DR tape cartridges	2cm x 10cm x 11cm	25,000 cartridges	200g/LTO-7	<ul style="list-style-type: none"> • Temperature range: 15°C -25°C • Relative Humidity (noncondensing) range: 15-50% • Maximum wet bulb temperature: +26°C • Maximum rate of temperature change: 5°C/hour

				<ul style="list-style-type: none"> • The humidity rate of change must be <5%RH/hour • Ambient air conditions must be non-condensing at all times. • Magnetic field: stray magnetic field at any point on tape not to exceed 50 oersteds (4000 ampere/meter)
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Table 4: Tape Media to Move

A1.3. Additional requirements

ECMWF may have additional requirements to move various IT equipment from its Shinfield Park data centre in Reading, UK to its new data centre in Bologna, Italy. Any such requirements, along with technical information and level of service expected from the supplier, will be detailed in the Invitation to Tender documents.

Appendix 2 EOI Questionnaire

In order to complete this questionnaire the Respondent must populate the Detailed Description column. Please adhere to the following guidance :

- Respondents should give sufficient detail when providing answers to questions.
- Attachments/Annexes should not be submitted, unless the Question expressly requests or authorises their submission.
- Respondents should avoid referencing web sites or providing hyperlinks, as this does not provide an acceptable means of informing their submission.

Any additional features not listed below, but which the Respondent feels may be relevant, should be clearly identified and supported by descriptive material.

A2.1. Logistics

No.	Question	Detailed Description
1.	The desired timing to get any one transport of either equipment or media from Reading to Bologna is 36 hours maximum, with the whole movement of equipment and media being completed over a three-week period. From your experience, would this be realistic, but if not, please describe your reasoning and the associated risks we should consider, including customs / import issues?	
2.	Please propose a transport method and route for the tape media and equipment, and which you would recommend, particularly given the importance of preserving the primary copy of data tapes.	
3.	Explain what protection and security is available during the transportation? For example, air sprung suspension lorries, any recommendations of lorry size, strategy and routing of moving the equipment and media to minimise the risk of damage or loss.	
4.	If required, would a member of ECMWF staff be able to accompany the transport of tape media across to its destination?	
5.	What lead time do you envisage from signature of contract to delivery of service?	
6.	It is anticipated that the transportation will be done in this order:	

	<ul style="list-style-type: none"> a. Most secondary DR tape media (These could be moved several weeks ahead of the main move to assess the method of moving the tapes) b. Disk systems, servers and switches c. Primary tape media (These can only be transported once the secondary tapes have been received and a damage assessment made) d. Tape library and drive systems e. Remainder of secondary tape media <p>Do you have any recommendations on the order of transportation?</p>	
7.	Currently the expected date for the move is in early 2021. Do you have any comments in considering the timing?	

A2.2. Technical

No.	Question	Detailed Description
8.	Please provide details of what vehicle tracking and/or environmental monitoring would be used during the move.	
9.	For both equipment and media explain the temperature, humidity and any other environmental monitoring and controls you may offer, in order to meet the requirements specified in Table 2. If these environmental conditions cannot be met, please explain why and what options you would propose.	
10.	Provide options for what type of tape media packaging is available, the number of media per transport case and the sizing of the transport cases? Each tape volume is in a 'half-inch' cartridge, approximately (2.5cm x 11cm x 13cm). There are three media types being transported; Oracle T10000T2, IBM JE and LTO.	
11.	<p>The delivery arrangements to the Tecnopolo will be into a loading bay of 11x15m, a storage area of 8x16m and three further rooms of 5.5m² which is where the equipment and media will be unpacked, before being moved into two data halls of 18m x 19m each. All packaging will have to be removed before entering the data halls. The tape media will be imported into pre-installed tape libraries or moved onto shelving space within. All equipment will have pre-allocated racks ready to be built into.</p> <p>Would you envisage any issues with the size of the build areas?</p>	

12.	Are there any IT based packaging standards that you adhere to or recommend?	
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A2.3. Legal and Insurance

No.	Question	Detailed Description
13.	Please provide details for both the equipment and media of what levels of insurance cover you provide for the services, and how responsibilities are apportioned during the different stages of the service.	
14.	Dependant on the method and route of transportation recommended, there may be inter-border, customs, or other foreseen risks/issues with transporting the equipment and media over one of these borders. Please highlight these together with any mitigation. . It is reasonable not to comment on the Brexit situation as it will be difficult to determine the UK's situation in 2020/2021 and should be irrelevant for ECMWF.	
15.	Please provide, as a separate attachment, a copy of your standard terms and conditions for this type of transport service. Please confirm that you agree to the clauses referred to in the endnote ⁱ which will have to be included in any future contract terms and conditions.. ECMWF reserves the right to negotiate the terms and conditions for any contract.	

A2.4. Financial

No.	Question	Detailed Description
16.	Please provide, as a separate attachment, budgetary quotes for transporting (and packaging where appropriate) the items referenced in Tables: 2, 3 and 4 above.	
17.	If You offer a full de-racking/re-racking service for the servers and switches, and/or a packaging/unpackaging service for the media, please give further details.	
18.	Would your intent be to carry out the equipment and media moves directly or subcontract some or all elements of the move? What are the benefits or risks of either?	

ⁱ **Please note that as a result of ECMWF's immunity from jurisdiction, any future contract resulting from the ITT stage must contain the following arbitration clause which is offered by ECMWF to all contracting parties:**

"This Agreement [OR Contract OR Licence] is governed by and shall be construed in accordance with the laws of England and Wales. The parties shall attempt to settle any dispute between them in an amicable manner. If the dispute cannot be so settled, it shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by three arbitrators appointed in accordance with the said rules; sitting in London, England. The proceedings shall be in the English language and for the avoidance of doubt this arbitration agreement shall also be governed by the laws of England and Wales. In accordance with Sections 45 and 69 of the Arbitration Act 1996, the right of appeal by either party to the English courts on a question of law arising in the course of any arbitral proceedings or out of an award made in any arbitral proceedings is hereby agreed to be excluded.

Nothing in this Agreement [OR Contract OR Licence] is meant to be construed as a waiver of any of the privileges and immunities conferred upon ECMWF, an inter-governmental organization, through its Convention and Protocol."

Please also note that ECMWF is exempt from VAT.

(1) Supply contracts subject to Italian VAT must therefore contain the following VAT provision:

"As a rule, ECMWF is exempt from all taxes and duties, including VAT, pursuant to the provisions of Article 4 of its Protocol on Privileges and Immunities available at <https://www.ecmwf.int/en/about/who-we-are/official-documents>. ECMWF's Codice Fiscale no. is 91148050684. ECMWF does not undertake "economic activities". Therefore, it is not a taxable person under Article 9 of Directive 2006/112/EC as implemented in Italy by article 4 of the Presidential Decree n. 633 dated October 26, 1972. Consequently, ECMWF does not have a VAT number. Accordingly, the Contractor shall take all necessary steps to facilitate ECMWF's exemption from VAT which might otherwise be payable in relation to the order. For these purposes, it shall request the necessary instructions from ECMWF and provide in due time the information which ECMWF requires.

ECMWF will not pay any other taxes or duties relating to the Agreement [OR Contract OR Licence]."

(2) Supply contracts subject to UK VAT must contain the following VAT provision:

"As a rule, ECMWF is exempt from all taxes and duties, including VAT, pursuant to the provisions of Article 4 of its Protocol on Privileges and Immunities available at <https://www.ecmwf.int/en/about/who-we-are/official-documents>. ECMWF does not undertake "economic activities". Therefore, it is not a taxable person under Article 9 of Directive 2006/112/EC. Consequently, it does not have a VAT number. Accordingly, the Contractor shall take all necessary steps to facilitate ECMWF's exemption from VAT which might otherwise be payable in relation to the order. For these purposes, it shall request the necessary instructions from ECMWF and provide in due time the information which ECMWF requires.

ECMWF will not pay any other taxes or duties relating to the Agreement [OR Contract OR Licence].”

Export:

“Where appropriate, it is the Contractor’s sole responsibility to obtain the consent of the relevant authorities and ensure compliance with all legal, regulatory and customs requirements before exporting the various items of equipment or software prior to delivery. ECMWF shall co operate and make all reasonable efforts to assist the Contractor in securing such consent. The Contractor acknowledges that all items imported or exported by ECMWF under this [Contract OR Agreement] are deemed, by ECMWF and by virtue of its Convention and Protocol, as strictly necessary for the exercise of ECMWF’s official activities and exempt from all prohibitions and restrictions on import and export across the ECMWF Member States.”

Data Protection:

“Data Protection Law” the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulations; “GDPR”) and any alternative data protection law applicable to the Parties;

1. Data Protection

1.1 In this Clause [], “process”, “data processor”, “data subject” and “personal data” shall have the meaning given in the GDPR.*

1.2 Where the processing of personal data by the Contractor is required under this [Contract OR Agreement], the Contractor shall process such personal data in accordance with Data Protection Law. If the Contractor processes personal data outside the European Economic Area (EEA), or allows such personal data to be accessed from outside the EEA, it shall do so in a manner which satisfies applicable Data Protection Law for the implementation of adequate safeguards for transfers of personal data to third countries not subject to an adequacy decision of the European Commission (e.g. under an agreement between the Contractor and the third-country recipient organisation using European Commission approved Model Contract Clauses or, in the case of the United States of America, covered by the Commission approved “Privacy Shield” or any subsequent similar arrangement).

1.3 The Contractor shall implement appropriate technical and organisational measures to ensure the security of personal data processed pursuant to this [Contract OR Agreement]. Upon termination or expiry of this [Contract OR Agreement] or upon ECMWF’s request, the Contractor shall either delete or return to ECMWF all personal data processed under this Contract, unless Data Protection Law requires otherwise.

1.4 If so required under applicable Data Protection Law, the Contractor shall designate a Data Protection Officer (DPO) and supply appropriate contact details of its DPO to ECMWF and the data subjects. ECMWF may publish that information through the ECMWF Websites for use by the data subjects, whose personal data is processed by the Contractor. The Contractor shall promptly report to ECMWF any change to the identity of the Contractor's DPO.

1.5 The Contractor shall, without delay, pass on to the DPO of ECMWF any requests or complaints made by data subjects relating to the processing of their personal data in the exercise of their rights under applicable Data Protection Law. The Contractor shall provide, free of charge, all support necessary for ECMWF to respond to and/or fulfil all such requests and complaints.

1.6 The Contractor shall notify ECMWF of any security incidents, events or weaknesses (e.g. data breaches or suspected data breaches) impacting or capable of impacting the security of personal data processed under this [Contract OR Agreement].

1.7 The Contractor shall process, or permit to be processed, personal data only for the purposes of the provision of the [Works OR Services] and shall ensure that personnel of the Contractor is subject to an obligation of confidentiality in respect of the processing of personal data under this [Contract OR Agreement].

1.8 For the avoidance of doubt, when processing personal information under this [Contract OR Agreement], sub-processors engaged by the Contractor may qualify as Subcontractors and checks and controls pursuant to this [Contract OR Agreement] may be carried out with the aim of ensuring compliance with this Clause 19.

1.9 ECMWF shall comply with its own policies and procedures in respect of the protection of personally identifiable information, which it deems adequate to those of the General Data Protection Regulation.

1.10 In processing personal data pursuant to this [Contract OR Agreement], the Contractor shall:

1.10.1 act only on instructions from ECMWF;

1.10.2 unless otherwise requested by ECMWF, process personal data only to the extent, and in such manner, as is necessary for the provision of the [Works OR Services];

1.10.3 ensure that appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data;

1.10.4 from time to time, comply with any reasonable request made by ECMWF to ensure compliance with the measures mentioned in Clause 19.10;

1.10.5 not disclose or transfer personal data to any Subcontractors other than where strictly necessary for the provision of the Works and in such event the Contractor shall obtain ECMWF's prior written consent to such transfer or disclosure;

1.10.6 not cause or permit personal data to be transferred outside the European Economic Area without ECMWF's prior consent;

1.10.7 provide at no charge such assistance as ECMWF may reasonably require in order for ECMWF to deal with any request for subject access under the Data Protection Law; and

1.10.8 comply with all relevant provisions of Data Protection Law.

1.11 The Contractor shall permit ECMWF or its authorised representatives to inspect and audit the Contractor's and its Subcontractors' data processing activities in relation to this Contract and shall comply (and shall procure that its Subcontractors comply) with all reasonable requests or directions by ECMWF to enable it to verify and/or procure that the Contractor or Subcontractor (as the case may be) is in full compliance with its obligations under this Contract.

1.12 ECMWF, an 'international organization' under Chapter V of the GDPR, shall comply with its own policies and procedures in respect of the protection of personal data, notably the Policy for Personally Identifiable Information Protection, as amended. ECMWF's DPO can be reached as follows: pji-protection-officer@ecmwf.int or ECMWF PII Protection Officer; ECMWF, Shinfield Park, Reading, RG2 9AX, United Kingdom.