ECMWF Copernicus Procurement

Invitation to Tender

Copernicus Climate Change Service

Copernicus Atmosphere Monitoring Service

Provision of Website improvement and support services

Volume II

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1   Introduction

The Copernicus programme is a user-driven programme which provides six free-of-charge operational services to EU, national, and regional institutions, as well as to the private sector (http://copernicus.eu/main/services).

The European Centre for Medium-range Weather Forecast (ECMWF) as the entrusted Entity for two of these operational services, namely the Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Service (C3S), invites tenders for the provision of services related to the improvement and ongoing support of its two Copernicus websites: http://climate.copernicus.eu and http://atmosphere.copernicus.eu.

The successful bidder shall provide the following activities that are contributing to effective implementation of ECMWF Copernicus Communication in the areas of digital outreach and data service strategy:
- technical support and maintenance of the C3S and CAMS websites;
- migration of the current website to the data service infrastructure, the Climate Data Store (CDS)[1];
- implement and integrate new Copernicus web templates with existing C3S and CAMS websites;
- define best user journey flows to achieve seamless C3S website integration with the CDS as well as CAMS website integration with the Atmosphere Data Store (ADS)[2]; and
- implement seamless C3S website integration with the CDS as well as CAMS website integration with the ADS.

Since its establishment in 2015, ECMWF's Copernicus Communications department has supported the European Commission in raising the profile of the Copernicus brand and the Copernicus programme. The department has led a wide range of communication and outreach activities aimed at raising awareness of the Copernicus Climate Change Service and Copernicus Atmosphere Monitoring Service respectively. Those activities included managing and maintaining CAMS and C3S websites and social media platforms, publishing regular newsletters, press releases, brochures and promotional material as well as running internal and external events.

To meet these needs, ECMWF has established a number of Framework Agreements with contractors covering the following activities:

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[1] Please see Section 1.2 for further information about CDS
[2] Please see section 1.2 for further information about ADS

- **COP_020 Lot 1**: Increasing visibility of the Copernicus services operated by the ECMWF by organizing major internal events (those run by C3S and CAMS, such as workshops, conferences, general assemblies, media events, public outreach road-shows etc.) from start to end, as well as coordinating and arranging participation at key external (third party run) conferences and other events on behalf of the ECMWF;
- **COP_020 Lot 2**: Expanding media presence of Copernicus services operated by the ECMWF at national, regional and international level;
- **COP_020 Lot 3**: Extending the reach of Copernicus services operated by the ECMWF across online, social media and traditional platforms;
- **COP_001_024**: Copernicus Media Partnership with EuroNews;
- **COP_024b**: Copernicus Media Partnership with EuroNews and Development and implementation of new creative solutions and novel high impact services to further expand media coverage of CAMS and C3S.

This ITT COP_017b is being launched with the aim:
- to support and maintain the C3S and CAMS websites (**WP 1**);
- to migrate the current C3S and CAMS websites to the CDS infrastructure (**WP 2**)
- to successfully implement and integrate new Copernicus web templates with existing C3S and CAMS websites (**WP 3**);
- to define best user journey flows for seamless C3S and CAMS website integration with the CDS and the ADS respectively (**WP 4**);
- to implement seamless C3S and CAMS website integration with the CDS and the ADS respectively (**WP 5**);
- to undertake the management of the contract (account management, reporting on quality measures and project status) (**WP 0**)

1.1 C3S and CAMS Key Audiences

The key audiences for Copernicus Services implemented by ECMWF are as follows:

- Scientists, academics and researchers;
- Commercial and private sector including upstream, midstream and downstream specialist businesses, SMEs, start-ups, experts and consultants;
- EU institutions and bodies, international organisations and agencies, policy makers and public authorities;
- Educational institutions and their constituents (students and educators);
- Interested segment of the general public;
- Media (as both audience and multipliers to reach other key audiences).

1.2 The CAMS and C3S websites

Two Copernicus ECMWF websites were initially developed in August 2015, with an additional major re-development and re-launch completed in September 2018 following an extensive usability research and testing phase in 2017. The current contract for C3S and CAMS website support and maintenance expires in November 2019. The current websites can be found via the following links: http://climate.copernicus.eu and http://atmosphere.copernicus.eu.

The websites are built using Drupal 8 with the colours, typeface, logos and domain all specified by the European Commission DG GROW and must be adhered to.

The websites contain static content covering news, events and tendering opportunities, resources for press such as brochures and staff photos as well as multi-media files such as video. They also provide sign-up functionality for the CAMS and C3S newsletters, which are issued quarterly.

The two websites provide access to atmospheric or climate data respectively.

In June 2018, the C3S has launched the CDS (Climate Data Store), a one-stop shop that provides information about the past, present and future climate, on global, continental, and regional scales. It contains a variety of data types, including satellite observations, in-situ measurements, climate model projections and seasonal forecasts. The CDS content can currently be accessed via separate URL (https://cds.climate.copernicus.eu) or via hyperlinks on the C3S website.

The CAMS has an extensive interactive product catalogue, to be available through the ADS (Atmosphere Data Store) early Q4 2019 and built as a mirror to the CDS. It will serve as a gateway to maps and data relating to atmospheric composition monitoring.

1.3 Technical information for the current websites

Content Management System	Drupal 8	*Drupal is an open source content management system written in PHP*
Server-side Programming Language	PHP	*PHP is a popular scripting language for creating web pages*
Climate-side Programming Language	Javascript	*JavaScript is a lightweight, object-oriented, cross-platform scripting language, mainly used within web pages.*
Javascript Library	jQuery	*jQuery is a JavaScript library that simplifies HTML document traversing, event handling, animating and Ajax interaction*
Markup Language	HTML5	*HTML5 is the fifth revision of the HTML standard*
Site Elements	External, embedded, inline CSS, Gzip compression. Strong	

	ETag, HTTP Strict Transport Security,	
SSL Certificate Authority	IdenTrust	*IdenTrust is a SSL certificate authority*
Traffic Analysis Tools	Google Analytics, New relic, Matomo	*Google Analytics is a free service to get detailed statistics about the visitors of a website, provided by Google. New Relic is a web application performance management tool. Matomo (formerly Piwik) is an open source web analytics program*
Web Server	Nginx	*Nginx is a lightweight open source web server*
Web hosting Provider	Amazon Web Services	*AWS is a US-based cloud computing provider*
Server Location	Germany	
Content Language	English	
Top Level Domain	.eu	

Specific objectives and technical requirements are described in section 2 of this document. General performance requirements are presented in section 3. Information about the tender format and content is presented in section 4.

2   Technical requirements

ECMWF is looking for delivery of technical support and services related to the C3S and CAMS websites and the successful Tenderer will therefore be expected to work closely with the Copernicus ECMWF communications and technical teams, especially the Climate Data Store team in a collaborative and synergetic way that maximises the impact of all service work packages in order to achieve overall results in line with the ECMWF's Copernicus services expectations, strategy and vision.

One single contract shall be awarded covering the five work packages specified in the following sections.

2.1   Work package 0: Contract management

This work package shall focus on contract management, including internal controls and coordination of subcontractors, risk management and tracking of the key performance indicators. Updates of the progress on contract implementation, planning, controls and key performance indicators shall be provided by the successful Tenderer via the deliverables as indicated below. The Tenderer shall provide a short description of the key elements to be taken into consideration and provide a risk and mitigation plan.

If relevant, a list of sub-contractors describing their contribution and key personnel, legal name and address shall be provided. The Tenderer shall describe how the Framework Agreement (in particular Clause 2.9) has flowed down to all their sub-contractors.

The expected schedule of review and progress meetings is attached to the work packages delivery.

A proposed payment plan shall be provided as part of the proposal. The payment plan shall be based on milestones completion and associated deliverables.

The table below provides the deliverables and milestones for the work package. Tenderers shall complete Volume III C as part of their bid, which should include the deliverables and milestones already indicated in the tables below and will form a preliminary version. Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All milestones and deliverables shall be numbered as indicated. All document deliverables shall be periodically updated and versioned as described in the tables.

ECMWF shall provide the successful Tenderer the templates of the contractual deliverables upon the start of the contract.

Deliverables for these work packages shall include the following reports:

WP0 Contractual Obligations Template				
#	Responsible	Nature	Title	Due
D0.y.z-YYYYQQ	Tenderer	Report	Quarterly Implementation Report QQ YYYY *QQ YYYY being the previous quarter*	Quarterly on 15/01, 15/04, 15/07 and 15/10
D0.y.z-YYYY	Tenderer	Report	Annual Implementation Report YYYY *YYYY being the Year n-1*	Annually on 28/02
D0.y.z	Tenderer	Report	Final report	60 days after end of contract
D0.y.z-YYYY	Tenderer	Other	Preliminary financial information YYYY *YYYY being the Year n-1*	Annually on 15/01
D0.y.z-YYYY	Tenderer	Report	Draft Implementation plan YYYY *YYYY being the Year n+1*	Annually on 28/02
D0.y.z-YYYY	Tenderer	Report	Finalised Implementation plan YYYY *YYYY being the Year n+1*	Annually on 31/10
D0.y.z-YYYY	Tenderer	Other	Copy of prime contractor's general financial statements and audit report YYYY *YYYY being the Year n-1*	Annually
D0.y.z-YYYY	Tenderer	Other	Letter from auditor specific to C3S contract YYYY *YYYY being the Year n-1*	Annually

2.2 Work package 1: Technical support and maintenance of the C3S and CAMS websites

Objective

The purpose of this work package is to maintain the current and future versions of the C3S and CAMS websites.

Description of work

The Tenderer shall propose for:

- Regular technical support and maintenance of the C3S and CAMS websites;
- Regular back-ups of the websites, updated every 24 hours;
- Regular minor development of the C3S and CAMS websites;
- Liaison with the ECMWF where necessary to maintain the C3S and CAMS website domains;
- Quarterly review meetings via teleconference.

Additional website development and design activities

The websites and associated services will continue to develop so ECMWF is expected to require specific development and design activities. An initial budget for 40 person-days shall be set aside for these activities in advance but it may be altered during the contract implementation depending on specific needs and within the maximum budget boundaries of the Framework Agreement.

ECMWF shall launch specific on-demand requests for development and design activities including a request for a quote and implementation plan. If possible, these requests shall be launched as batches of a minimum of 5 person-days. The quote shall be assessed in line with pre-agreed daily fee rates as fixed in the pricing tables in the approved tender.

Timeline

WP1 shall run from T0 to the end of June 2021.

Deliverables and milestones

Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All document deliverables shall be periodically updated and versioned as described in the tables of Volume III C.

Deliverables for this work package shall include at least the following:

- Maintenance of the websites;
- Successful implementation of the additional development and design services;
- Reports related to the specifications of developments and/or technical actions description as part of this WP duties;
- Monthly and quarterly reporting on risk mitigation, quality assessment (e.g. % uptime of the websites), and continuous evaluations and recommendations for service improvement.

2.3 Work package 2: Migration of the existing C3S and CAMS websites to the Climate Data Store Cloud infrastructure.

Objective

The websites are currently implemented and operated on Amazon Web Services virtual environment. The purpose of this work package is the migration of the current C3S and CAMS websites to the Climate Data Store (CDS) Cloud infrastructure. ECMWF shall ensure that the required machines space and computing power is prepared and made available in this Cloud infrastructure at the start of the contract.

Description of work

The Tenderer shall:

- Write the roadmap/strategy for the C3S and CAMS migration, including the necessary specifications required for the deployment in the targeted CDS Cloud infrastructure;
- Prepare and implement the migration of the websites to the new Cloud environment. It shall include the set-up and application of a clear testing procedure;
- Support the operational switch from the old to the new websites.

Timeline/workload

WP2 shall run from T0 to T0+3 months at a maximum. An effort of ½ full time equivalent (FTE) expert during this period shall be foreseen as a guidance for the expected workload.

Deliverables

Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All document deliverables shall be periodically updated and versioned as described in the tables of Volume III C.

Deliverables for this work package shall include at least the following:

- Specifications of the migration roadmap, processes and risks, to be validated by ECMWF;
- Testing scenarios of the new websites in their new environment;
- Two-weekly status meetings via teleconference with the related ECMWF teams (CDS team and Copernicus Communications team).

2.4 Work package 3: Technical implementation and integration of new Copernicus web templates with existing C3S and CAMS websites.

Objective:
The purpose of this work package is the implementation of the new Copernicus web templates provided by the European Commission, to be implemented for the C3S and CAMS websites.

Description of work:
The Tenderer shall quote for:

- Analyse and propose the best implementation approach for the new Copernicus visual design based on the outputs provided by the European Commission ensuring that they complement current C3S and CAMS website design structure and content;
- Apply the templates for the refreshed websites ensuring that they comply with best practise web

standards of accessibility;

- Ensure the service elements (access to data, products, maps and charts) are integrated seamlessly in to the refreshed sites with no disruption to service;
- Test and launch both websites with the new templates based on the Drupal 8 (or above) making sure to provide ECMWF with secure login for editing.

Timeline

WP3 shall run from T0+3 until T0+12months (end of October 2020). The implementation and integration of the new layout shall be done in the new websites Cloud infrastructure (i.e. the CDS environment) (cf. WP2).

A minimum of ½ to 1 FTE expert during this time period shall be foreseen.

Deliverables

Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All document deliverables shall be periodically updated and versioned as described in the tables of Volume III C.

Deliverables for this work package shall include at least the following:

- Specifications of the implementation approach and related processes and risks, to be validated by ECMWF;
- Testing scenarios of the websites with the new templates;
- Regular status meetings/teleconferences with ECMWF's Copernicus Communication team.

2.5   Work package 4: User experience enhancement

Objective:
The purpose of this work package is to define and analyse from a user experience (UX) perspective the integration of the Climate Data Store and the Atmosphere Data Store with respectively the C3S and the CAMS websites to facilitate the most optimal user journey.

Description of work:
The Tenderer shall propose for:

- UX experience analysis to define the best user journey flows for seamless C3S website integration with the CDS and CAMS website integration with the ADS;
- Provide an in-depth UX recommendation report;
- Arrange UX report presentation meeting with the Copernicus ECMWF at the premises in Reading, UK;
- Provide guidance and continuous advisory support for the implementation of WP5 during both planning and technical implementation phase of the C3S and CAMS integration with the CDS and ADS respectively.

Timeline:

WP4 shall run from T0+3 until T0+12 months. WP4 is dependant of WP2 completeness.

Deliverables and milestones:

Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All document deliverables shall be periodically updated and versioned as described in the tables of Volume III C.

Deliverables for this work package shall include at least the following:

- UX reports;
- Specifications document suitable for use by the WP5 developers;
- Regular status meetings/teleconferences with the related ECMWF teams.

2.6 Work package 5: C3S and CAMS websites integration with respectively the CDS and ADS.

Objective:

The purpose of this work package is the implementation of user experience recommendations and related specifications to enhance the user journey between the websites and the data stores.

Description of work:

The Tenderer shall:

- Implement the seamless C3S website integration with the CDS and CAMS website integration with the ADS based on the in-depth UX recommendation report and guidance provided by the WP4 contractor. The bid should include details of planning, implementation and hand-over phase to ECMWF as well as technical and human resources needed for successful delivery.
- The Tenderer shall give a short overview of the proposed approach to demonstrate understanding of the tasks and best technical solution for ECMWF that will be flexible enough to incorporate recommendations from additional UX analysis feedback (WP4).

Timeline/workload:

In terms of timeline, this WP in dependant of WP3 and WP4 as the development should be made after the implementation of the new templates and taking into account the UX recommendations.

It is anticipated that the successful contractor provides a minimum of one Full Time Equivalent person for a period a 6 to 12 month, starting at T0 +12. Considering that the websites and the data stores are using Drupal, Drupal (8) skills shall be an important requirement of this (these) person(s).

Deliverables:

Volume III C will be used by the contractor to describe the complete list of deliverables, milestones and schedules for this work package. All document deliverables shall be periodically updated and versioned as described in the tables of Volume III C.

Deliverables for this work package shall include at least the following:

- Specifications of the developments, the implementation approach and related processes, to be validated by ECMWF;
- Testing scenarios of the websites and the CDS in this new integration context;
- Regular status meetings/teleconferences with the related ECMWF CDS team and the CDS infrastructure subcontractors.

3 General requirements

3.1 Implementation of schedule

The Framework Agreement is aimed to start on **1 November 2019** and will run until **30 June 2021**. One single service contract shall be launched for the full duration of the Framework Agreement.

Tenderer should provide an outline time plan and schedule as part of the tender response (a detailed plan will need to be provided by the successful Tenderer in T0 + 1 month) The proposed time plan and schedule shall address the main tasks, inputs, outputs, intermediate review steps, milestones, deliverables and dates. Regular progress meetings will be held with ECMWF during the contract to assess projects status, risks and actions.

3.2 Deliverables

Expected top level deliverables are outlined in section 2. Some additional deliverables may be agreed with the successful tenderer during the negotiation stage.

Tenderers are expected to work with ECMWF to ensure the websites have adequate documentation, including terms of use and data protection statements, etc reflecting ECMWF's specific requirements.

Tenderers are advised to take into account the relevant terms and conditions on IPR as laid down in "Clause 3: Intellectual Property Rights" of Volume V Framework Agreement.

3.3 Documents and reports

All project reports, material and other documents shall be produced in English. The quality of these shall be equivalent to the standard of peer-reviewed publications and practice. Unless otherwise agreed by ECMWF, documents and reports shall be made available to ECMWF in electronic format (PDF/Microsoft Word/Microsoft Excel or compatible).

3.4   Key Performance Indicators

The service shall report to ECMWF on a quarterly and annual basis. At the end of each calendar quarter, a review shall take place that will include the assessment of a set of Key Performance Indicators (KPIs). ECMWF shall provide the successful Tenderer an initial set of KPIs essential for reporting to the European Commission during the negotiation stage.

As part of their bid, Tenderers are however invited to specify their own set of KPIs appropriate for the service. These KPIs will be aligned to ECMWF's own initial set of KPIs and in agreement with ECMWF, will be used to further refine the KPIs during the lifetime of the contract.

4   Tender format and content

General guidelines for the tender are described in Volume IIIB. Specific requirements to prepare the proposal for this particular tender are described in the next subsections.

The Tenderer shall provide an executive summary of the proposal, describing the objectives, team and service level.

4.1   Page limits

As a guideline, it is expected that individual sections of the Tenderer's response do not exceed the page limits listed below. These are advisory limits and should be followed wherever possible, to avoid excessive or wordy responses.

Section	Page Limit
Executive Summary	2
Track Record	2 (for general) and 2 (per entity)
Quality of resources to be Deployed	2 (excluding Table 1 in Volume IIIB and CVs with a maximum length of 2 pages each)
Technical Solution Proposed	20 (Table 2 in Volume IIIB, the section on references, publications, patents and any pre-existing IPR are excluded from the page limit and have no page limit)
Management and Implementation	5 (excluding Table 4 and Table 5 in Volume IIIB) + 2 per each Work package description (Table 3 in Volume IIIB)
Pricing Table	No limitation

4.2 Specific additional instructions for the Tenderer's response

The following is a guide to the minimum content expected to be included in each section, additional to the content described in the general guidelines of Volume IIIB. This is not an exhaustive description and additional information may be necessary depending on the Tenderer's response.

4.3 Track Record

Tenderers are required to demonstrate expertise in website maintenance and development. In addition, Tenderers are required to detail their UX experience expertise and ability to identify and propose seamless user journey for two Copernicus services implemented by the ECMWF. When detailing experience, and examples or case studies, tenderers are encouraged to provide evidence of such, and how this could be of benefit to ECMWF Copernicus services. ECMWF may ask for evidence, reference or performance review related to the examples provided.

4.4 Quality of Resources to be deployed

The Tenderer shall propose a team with the skills required for providing operational services that meet the technical requirements set out in section 2. The team shall include a Service Manager with at least 5 years of experience in management of similar projects to that of the ITT. The Tenderers shall describe the experience of the Service Manager and the technical project team in performing activities related to the various aspects of this tender.

4.5 Management and Implementation

As part of their response, it is imperative that Tenderers demonstrate strong management skills, with particular emphasis on the following areas:
- Resources management: skillsets/availability of experts/geographic coverage
- Time management: ability for quick mobilisation of necessary resources
- Subcontract management / Conflict resolution
- Planning: which tools will be used?
- Quality assurance: how this is controlled/monitored / thresholds applied
- Risk management: how this is assessed and mitigated

Deliverables should be consistent with the technical requirements specified in section 2, additional deliverables may be added if required. The number of milestones is not restricted, but they should be designed as markers of demonstrable progress in service development and/or quality of service delivery.

Tenderers are free to make proposals that they consider necessary for the effective management and implementation of the contract.

Tenderers shall also provide a list of sub-contractors (if applicable) describing their contribution and key personnel, legal names and addresses, and complete an organigram as described in section 4.2 of Volume IIIB.

Reference is also being made to the further requirements detailed in Section 4 of Volume IIIB.

4.6   Prices and resources

The tendered price shall not exceed the price as indicated in the Contract Notice and shall include the personal costs, travel expenses and other costs for all work, tasks and deliverables proposed in the provided Pricing Table template in Volume IIIA.

Payments shall be conducted on a cost-reimbursement basis. Payment milestones shall be aligned with the implementation milestones as proposed in the implementation plan.