

REQUEST FOR PROPOSAL

ECMWF/RFP/2022/342

FOR

IFSHUB DEVELOPMENT: WEB FRONT-END

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1. INSTRUCTIONS TO PROPOSERS

1.1 Introduction

This Request for Proposal (RFP) 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 suppliers for provision of services seeking consultancy with expertise in web front-end applications to progress development of the IFSHub system.

The submission of a response to this RFP shall constitute an offer that may be accepted by ECMWF so as to become a binding contract. However, ECMWF is not bound to accept any quotes. If ECMWF elects to accept a quote, subject to contract, the parties shall execute a formal contract incorporating the terms and conditions contained in the RFP and any other agreed terms.

Introduction to ECMWF

ECMWF is an independent intergovernmental organisation supported by 35 States. Information on ECMWF's activities can be found at <https://www.ecmwf.int/en/about>

ECMWF has currently three sites: its Headquarters at Shinfield Park, Reading, UK, a data centre in Bologna, Italy, and an interim site in Bonn, Germany, hosting all of ECMWF's EU-funded activities.

1.2 Background to the project

The background to this RFP is described in Annex 1.

1.3 Confidentiality

The contents of this RFP together with all other information, materials, specifications or other documents provided by ECMWF, or prepared by respondents specifically for ECMWF, shall be treated at all times as confidential by the respondents unless it is already in the public domain. Respondents shall not disclose any such information, materials, specifications or other documents to any third parties or to any other part of the respondents' group or use them for any purpose other than for the preparation and submission of a response to this RFP nor shall respondents publicise ECMWF's name or the project without the prior written consent of ECMWF. Respondents shall ensure that all third parties to whom disclosure is made shall keep any such information, materials, specifications or other documents confidential and not disclose them to any other third party except as set out above.

ECMWF reserves the right to retain all documents submitted by respondents in response to the RFP. Any information in such documents that is proprietary and confidential to the respondent will be handled confidentially by ECMWF provided it is clearly and specifically identified as such. Such obligation shall not apply if such information is or was obtained from other sources that do not bind ECMWF as to confidentiality or if the information is in the public domain. ECMWF may make responses available for evaluation purposes to authorised people including its governing body, committees, and professional advisers in addition to ECMWF's own personnel under the same conditions of confidentiality.

Please also note that all personally identifiable information (PII) requested by ECMWF or provided by respondents will be treated in accordance with the ECMWF Policy on Personally Identifiable Information Protection (PIIP). It is available at <https://www.ecmwf.int>. ECMWF shall process all PII submitted by your response for the sole purposes of assessing your response. In doing so, ECMWF may share such PII with

consultants or external advisors.

1.4 Enquiries and contact procedure

Any enquiries or requests for clarification of any matters arising from this RFP should be sought from the Procurement Section at ECMWF and must be made in writing by e-mail as follows:

Contact name: Procurement at ECMWF

E-mail: procurement@ecmwf.int

The subject of the email must be: **“Clarification to RFP/2022/342**

ECMWF will endeavour to respond to requests for clarification within 5 working days of receiving them. Where ECMWF supplies further information, it will make this information available to all recipients of this RFP who have indicated their intention to submit a response and provided ECMWF with an e-mail address for communication of additional information, unless the question is specific to a respondent’s proprietary solution. The identity of the questioner will not be revealed.

1.5 Timetable for procurement

ECMWF envisages the following timetable for this RFP:

RFP issuance date	7 November 2022
Final date for receipt of clarification questions	11 November 2022 17 November 2022
Closing date/time for submission of responses	18 November 2022 , 24 November 2022, 16:00 UK local time
Evaluation of proposals by ECMWF	By 25 November 2022 end of November 2022
Negotiations with one or more Proposers	By 30 November 2022 early December 2022
Award of contract	5 December 2022 By mid-December 2022
Start of work under contract	December 2022

1.6 Submission of responses

The respondent is requested to confirm to the email address shown in 1.4 above whether or not it will be submitting a response and must provide a contact point and contact details to which all further information will be sent.

The respondent must submit their response to Procurement@ecmwf.int as an email with attachments containing its complete response to this RFP including its response to Annexes 1 and 2. The attachments must contain a printable version of the response in Microsoft Word format, Rich Text Format (RTF) or Adobe Portable Document Format (PDF) and in Microsoft Excel format for any spreadsheets. The email should confirm that the response has been submitted by a duly authorised director or senior officer of the respondent.

The subject of the email must be: **“Response to RFP/2022/342**

Please note that ECMWF reserves the right to contact bidders during the evaluation process in order to clarify points in their response, therefore the contact point should be monitored during this period.

1.7 Timeliness of response

ECMWF will not consider any late or partial responses to this RFP nor will it consider requests for extension of the time or date fixed for the submission of proposals. It may, however, at its own absolute discretion extend the time or date fixed for submission and in such an event ECMWF will notify all Proposers who have provided ECMWF with an e-mail address for communication of additional information.

Technical failure, including of a computer, browser, e-mail system or internet connection, is not a valid reason for late or failed submission of a response, unless as a result of a failure of the ECMWF's IT systems, and in the case that there was no reasonable course of action the respondent could have taken to submit the response on time. **It is important that you do not leave the submission of your response to the last minute.**

1.8 Costs of preparation of response

Recipients of this RFP will be responsible for and bear all of their own costs, liabilities and expenses which may be incurred in the preparation of their responses to this RFP.

1.9 Evaluation method and selection criteria

Responses to this RFP will be evaluated based on the criteria and weights shown in the table below:

Evaluation criteria	Weighting
Track Record	10%
Quality of Resources	15%
Technical Solution Proposed	30%
Management and Implementation	15%
Price	30%

ECMWF reserves the right to negotiate with one or more respondents before taking a decision on the placing of a contract. This may involve a meeting either in person (on site in Reading or Bonn) or via video-conferencing. ECMWF cannot reimburse the respondents for any costs relating to such meetings. Following notification of the result of your bid you may request feedback on the evaluation from ECMWF.

1.10 Warnings/disclaimers

Nothing contained in this RFP or any other communication made between the respondent and ECMWF or its representatives shall constitute an agreement, contract or representation between ECMWF and any other party (except for a formal award of contract made in writing by ECMWF). Receipt by a respondent of this RFP does not imply the existence of a contract or commitment by or with ECMWF for any purpose.

ECMWF reserves the right to change any aspect of, or cease, the RFP at any time.

While ECMWF has taken all reasonable steps to ensure, as at the date of this document, that the facts which are contained in this RFP are true and accurate in all material respects, ECMWF does not make any representation or warranty as to the accuracy or completeness or otherwise of this RFP, or the

reasonableness of any assumptions on which this document may be based. ECMWF accepts no liability to respondents whatsoever and however arising and whether resulting from the use of this RFP, or any omissions from or deficiencies in this document.

ECMWF may use the information included in a response for any reasonable purpose connected with this RFP.

1.11 Validity

The proposal shall remain valid for a minimum of three months after the closing date for this RFP.

2. SCOPE OF SERVICE REQUIREMENTS

See Annex 1.

3. REQUIRED INFORMATION

3.1 Summary

Respondents should include a brief executive summary at the beginning of the proposal.

3.2 Company and contact details

Please give details of your company, stating its full registered address and company registration number. ECMWF may check the financial status of the company.

Please supply details of the person at your organisation who can be contacted by ECMWF in relation to your proposal. Please give their name, title, address and location, telephone number and e-mail address.

3.3 Track record, customers and references

Please describe in brief terms your company's history and your recent provision of the services requested in this RFP. Please supply a list of three customers to whom similar services to those requested in this RFP have been provided.

ECMWF reserves the right to seek references from one or all of these customers.

3.4 Staff resources

- (a) Please give details of your staff numbers, skills and locations relevant to the services requested (including CVs or an outline of the particular qualifications and experience by key staff proposed);
- (b) Please set out any key skill or employee dependencies and the availability of replacement skills in those areas, particularly as regards the envisaged permanent point of contact.

3.5 Commercial arrangements

Respondents shall provide a total fixed price for the first work package (WP1) described in Annex 1, showing the breakdown in costs by using the table below (*please delete the examples which are for guidance only*). The price shall be inclusive of all constituent elements, such as unit price, overhead rates (if any), expenses etc. The price shall be firm and fixed and quoted either in Pound Sterling (£) or Euro (€) net of taxes and VAT. For the purposes of comparison, prices will be converted into a single currency at

a conversion rate to be established as the average ECB exchange rate for the calendar month prior to the closing date of the RFP.

Resource type	Daily fee rate £/€	Expected number of days	Total cost £/€
<i>Eg Consultant</i>	350	4	
<i>Eg Manager</i>	600	2	
<i>Travel of ... to ...</i>	50	2	
Total Fixed Price for WP1	_____	_____	£/€

In addition, respondents shall provide the daily rate(s) for the various resource types, which will be used to calculate the price of subsequent work packages. The daily rate(s) shall remain fixed for at least 12 months from the start of the contract. Respondents shall also describe the methodology which will be applied for daily rate(s) variations, if any, beyond the initial 12 months of the contract.

3.6 Responses to the Specification of Requirements

Respondents should demonstrate their ability to meet the requirements set out in Annex 1. Respondents should also provide a detailed implementation plan of proposed activities for the duration of the contract, describing the main objectives, the respective proposed activities and a set of Deliverables and Milestones. Deliverables should be consistent with the technical requirements specified in Annex 1. Milestones should be designed as markers of demonstrable progress and/or quality of service delivery.

The following management aspects should be described in the proposal: quality assurance and control, communication management (ECMWF, stakeholders, internal communication), conflict resolution, subcontractor management, personal data management.

A list of subcontractors, if any, describing their contribution and key personnel, legal name and address, should also be provided.

3.7 Terms and Conditions

The terms and conditions for this contract are at Annex 2.

Please note that as a result of ECMWF's immunity from jurisdiction, any contract resulting from this RFP must contain an arbitration clause which is offered by ECMWF to all contracting parties. Further information may be found at <https://www.ecmwf.int/en/about/suppliers> in document "ECMWF's status: Arbitration and VAT".

Please confirm that you agree to the Terms and Conditions at Annex 2. The proposal which you submit, clarified if necessary, will be part of the contract.

3.8 Additional matters

Please set out any additional information or other relevant matters which you think have not been adequately addressed in the RFP and/or merit further consideration in your response.

ANNEX 1: SPECIFICATION OF REQUIREMENTS

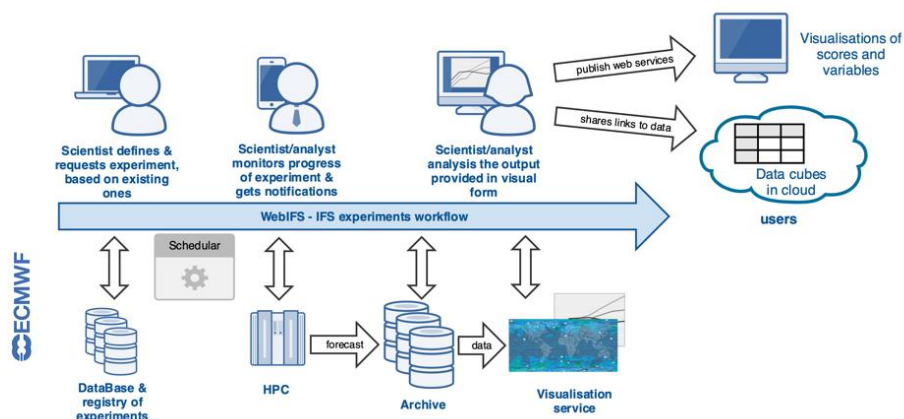
1. BACKGROUND INFORMATION

ECMWF provides weather forecasts in a time critical operational environment to support the work of national weather services across Europe. To support the research necessary to improve the weather forecast model (IFS - Integrated Forecasting System) it is necessary for scientists to run a large number of "experiments". An experiment is an instance of the forecasting system in a specific configuration for testing a particular development. Currently the setup and running of such experiments requires researchers to log into various ECMWF computer systems and run various GUI tools and scripts on different platforms.

ECMWF is developing a new web based tool - "IFShub" - enabling researchers to configure & manage their experiments and have fast access to results of the experiments via a consistent and intuitive user interface, easily accessible from any platform with a web browser.

This multi-year project started in 2020 and is being done in stages which will deliver the overall workflow in step-by-step increments. The workflow should feel fully integrated to the user, but the system will be divided into various self-contained and standalone components, linked together by a central IFShub backend.

The figure below gives a high-level view of what the future IFShub workflow is anticipated to look like.



Progress on this project to date has resulted in

- A requirements gathering exercise, to understand the needs and frustrations of users across ECMWF, and scoping the functionalities which should be implemented within IFShub.
- The first components of the IFShub system to be delivered will be "WebPrepIFS", a replacement for the standalone Java GUI application "prepIFS" which allows users to configure their IFS experiments. To support this, and many of the other anticipated components of IFShub, an "Experiment Manager" component will also be required, and an associated backend database to store the configurations and history of user's experiments. Preliminary work has taken place:
 - A full technical analysis of the existing prepIFS functionality (and implementation details), which will need to be replicated or improved in the WebPrepIFS component, and some suggestions of APIs which will need to be exposed by the IFShub backend to support this

- A prototype (PostgreSQL) database containing experiment configurations, together with a python REST-API to access and update it. This will become a significant component of the IFShub backend.
- A python implementation of part of the prepIFS Java application which is responsible for running a rule-based application specific language (prepIFS "checks"), which applies a set of predefined rules to update a user's configuration.

The project documentation, showing the above progress in greater technical detail is available for viewing here <https://confluence.ecmwf.int/display/WIFS/IFShub>

2. OBJECTIVE AND SCOPE

ECMWF seeks consultancy with expertise in web front-end applications to progress development of the IFShub system. The objective of this package is to deliver modern, flexible, performant and effective front-end web applications to provide functionalities for the creation and management of user experiments. The work will start with a review of the requirements and the design of front-end applications. Once agreed with ECMWF, the work will consist in their implementation using the REACT framework.

3. SPECIFIC TASKS AND DELIVERABLES FOR WORK PACKAGE 1

3.1 Specific Tasks and Deliverables:

The contractor will be expected to conduct the tasks and achieve the deliverables specified below.

1. From the user stories provided, iterate with the product owner to create the application wireframes. The contractor needs to support a flexible multi-phase approach by documenting each phase appropriately.
2. Design the API in cooperation with ECMWF developers, using openAPI3.0, and setup a swagger environment.
3. Develop and deliver the REACT front-end application. We will follow an agile approach with 2 weeks sprints and a regular delivery of the application.
4. Provide technical documentation for the front-end application in code, following TScore specifications

3.2 Requirements – User stories:

Web PrepIFS / Experiment manager

Requirements: As a user,	Comments – Backend requirements
List experiments	
I want to see the list of my experiments	API to be designed with ECMWF developers. API to interact with the back-end database.
I want to see the list of experiments from other users	
I want to be able to filter this list: <ul style="list-style-type: none"> • By users • User selected criteria 	
I want to be able to sort them by specific variables	
View / Edit Experiment	
I want to be able to create a new experiment from an existing one.	API to be designed with ECMWF developers. We expect here to provide json schemas (http://json-schema.org/) and use tools such as (https://react-jsonschema-form.readthedocs.io/) The functionalities of the previous application will be reviewed and some of them will be implemented.
I want to be able to create a new experiment from scratch	
I want to be able to create a new experiment from a configuration file.	
I want to load, edit, modify, delete an existing experiment.	
I want to search for variables.	
Once done, I want to trigger some checks to make sure my new setup is valid.	Check done on the backend , API will be made available
Once done, I want to be able to save the experiment.	API will be made available
I want to download the generated configuration file for the experiment.	API will be made available
I want to be able to submit an experiment	API will be made available
I want to be able to see the history of changes for the experiment	API will be made available
Compare Experiments	
I want to be able to see the difference between 2 experiments	API to be designed with ECMWF developers
I want to be able to copy changes selectively from one experiment to another.	
I want to be able to only see the differences newer than the reference experiment.	API to be designed with ECMWF developers

3.3 Web design principles

The contractor is expected to follow ECMWF's web design principles:

- The design is clearly decoupled in backend and frontend, with a clearly defined and well-designed RESTApi.
- The back-end contains the business logic and is mainly developed by ECMWF developers.
- The front-end is a modern application, taking advantage of the fast evolution of the technology. The application is designed and developed by experts of the field.
- The API establishes the contract between backend and frontend: its design will be done in cooperation with developers, UX, and products owners, making sure that it covers all the required functionalities for the front-end and all error handling.

3.4 Web Infrastructure and work practices

The contractor is expected to use ECMWF's web infrastructure and to follow ECMWF's work practices:

- All new ECMWF web applications (Front-end and Back-End) are deployed on dedicated KUBERNETES clusters.
- The back-end is micro-service oriented and written within a Django framework. The code is stored in a single GIT repo hosted on Bitbucket at ECMWF
- The front-ends are written in TypeScript using the REACT framework, and packaged using node.js. A template will be provided to ensure a consistent look and feel. Front-end code is stored in its dedicated GIT repos hosted on Bitbucket at ECMWF
- The git workflow principles are followed during development and release. New features are developed in features branch and merged in develop when ready to be tested, before being merged to the master branch and released.
- Developments are done on a dockerised local environment, mimicking the Kubernetes production environment.
- A continuous integration is in place using Bamboo. It consists in running tests and preparing the container images ready to be shipped to the Kubernetes cluster.
- There are 3 Kubernetes namespaces: apps-dev is dedicated to development, apps-test to integration and test before release and apps-prod to operation. apps-test and apps-prod are dimensioned the same way to allow realistic performance and load testing.
- A continuous deployment is in place using bamboo to deploy automatically to apps-dev and apps-test. The deployment to apps-prod is for now done manually during a system session.
- Operational monitoring is done using several tools such as opsview and Prometheus for the Kubernetes aspect
- Splunk is used to monitor the usage of the application and to collect statistics.

4. MODALITY OF WORK

ECMWF envisages the following modality of work:

- A description of Work Package 1 is provided above. Subsequent Work Packages will be defined based on needs, upon successful delivery of work (i.e. acceptance of Deliverables) under the preceding Work Package.
- Each Work Package period shall be broken into 2-weeks sprints. Prolonged holiday periods shall be accounted for when establishing the duration of each Work Package and/or sprints.
- ECMWF expects at least 75% time commitment from the contractor (i.e. 30 to 40 working days of work for each Work Package).
- ECMWF envisages regular visits to our offices in Reading or Bonn, minimum once per sprint (for sprint wrap-up and for planning the next sprint).
- ECMWF will provide staff to follow the work and provide feedback and advice if/when needed. At the end of each Work Package ECMWF will evaluate the work and provide feedback to the contractor. The evaluation will include the decision on whether to continue or end the work and terminate the contract.
- Once a subsequent Work Package is defined, the contractor shall submit a quote, including the expected number of working days for each resource type and applying the daily rates agreed in the contract, as per provisions of Section 3.5 of the RFP. Work on any subsequent Work Package shall commence only upon ECMWF's acceptance of the respective quote.

5. CONTRACT TIMELINE

ECMWF intends to award a contract for a period of 4 months starting in December 2022, with a possibility of extension for an additional 2-months period. Depending on the evaluation of each Work Package, ECMWF reserves the right to end the work and terminate the contract.

CONTRACT FOR PROCUREMENT

ECMWF/RFP/2022/342

for

IFSHUB DEVELOPMENT: WEB FRONT-END

TERMS AND CONDITIONS OF CONTRACT - SERVICES

1 INTRODUCTION AND DEFINITIONS

- 1.1 These Terms and Conditions (“T&C”) shall apply to the procurement of any intangible beneficial function (e.g. advice, consultancy or some form of specialist activity) which is not ancillary to the supply of goods. These T&C shall also apply to any tangible items (e.g. documents, datasets and other materials) which are provided by the supplier or its agents, contractors or employees, as part of or in association with the function (“Deliverables”). In these T&C, the function and the Deliverables shall be referred to collectively as the “Services”.
- 1.2 ECMWF and the person or entity whose offer is accepted by ECMWF (“Contractor”) are “Parties” to these T&C. No third party is entitled to claim any rights under these T&C.
- 1.3 No variation of these T&C shall be valid unless it is confirmed in writing by authorised signatories of both Parties.

2 SUPPLY OF SERVICES

- 2.1 The Contractor shall from the date set in the Request or any other date agreed upon by the Parties in writing (“Commencement Date”) and for the duration of the Contract provide the Services to ECMWF in accordance with the terms of the Contract.
- 2.2 The Contractor shall meet any performance dates requested by ECMWF detailed in the Request for Proposals (“the Request”).
- 2.3 In providing the Services, the Contractor shall
 - co-operate with ECMWF and comply with all instructions of ECMWF;
 - perform the Services with care, skill, diligence in accordance with best practice in Contractor’s industry, profession or trade;
 - ensure that the Services and Deliverables will conform with all descriptions and specifications set out in the Request, and that the Deliverables shall be fit for any purpose expressly or impliedly made known to the Contractor by ECMWF;
 - acquire for itself and at its own expense, all equipment, tools, vehicles and such other items as are required to provide the Services;
 - use high quality goods, materials, standards and techniques, and ensure that the Deliverables will be free from defects in workmanship, installation and design;
 - obtain and at all times maintain all necessary licences and consents, and comply with all laws applicable to the Contractor;
 - if applicable, comply with all relevant rules and regulations in force at ECMWF premises;
 - hold all materials and data supplied by ECMWF to the Contractor in safe custody at its own risk and return them in good condition, unless agreed otherwise by ECMWF.
- 2.4 ECMWF shall
 - if necessary, provide the Contractor with reasonable access at reasonable times to ECMWF’s premises for the purpose of providing the Services;
 - provide such information to the Contractor as the Contractor may reasonably request and ECMWF considers reasonably necessary for the purpose of providing the Services.

3 PRICE, CURRENCY, AND VAT

- 3.1 Unless otherwise agreed the total price payable by ECMWF shall remain fixed for the duration of the Contract, not be subject to any adjustment on the basis of the Contractor’s cost experience in

performing the contract, and must contain all charges, disbursements, ancillary costs and fees e.g. for accompanying licences.

- 3.2 The currency of the Request shall be in Pounds Sterling (£) / Euro (€). The Contractor's prices shall be quoted in Pounds Sterling / Euro. The Contractor's invoices shall be submitted in Pounds Sterling / Euro. Payments by ECMWF to the Contractor shall be made in Pounds Sterling / Euro.
- 3.3 The Contractor shall take all necessary steps to facilitate ECMWF's exemption resulting from its Protocol on Privileges and Immunities from taxes, including VAT, and customs duties which might otherwise be payable in relation to the Goods. It will do so by carrying out the necessary formalities so as to bring about the exemption from taxes and duties which might otherwise be levied on the expenses it will incur, before it submits the invoice to ECMWF; and by complying with all necessary formalities so that ECMWF itself may be exempt from paying such taxes and duties. For these purposes, it shall request the necessary instructions from ECMWF and provide in due time the information which ECMWF requires.
- 3.4 ECMWF will not pay any other taxes or duties relating to the Goods. The Contractor shall be liable for all other taxes, assessments, fees, licences, administrative customs charges or other governmental assessments or charges that are applicable to the performance of this Contract. It is each Party's responsibility to inform itself of its liabilities in each country where such liabilities may arise.

4 INVOICING AND PAYMENT

Save where different payment terms are specified in the Request, ECMWF shall pay all invoices within 30 days of receipt provided the Contractor has complied with its obligations under the Contract, particularly with Article 2 of these T&C, and the invoice is correct, stating the applicable Services, the price, the Contractor's VAT number, any Order number and has been issued to Finance Section at ECMWF, Shinfield Park, Reading, RG2 9AX, United Kingdom, and sent thereto or to finance@ecmwf.int. The Contractor shall supply ECMWF with all necessary information as advised by ECMWF regarding the Services, in good time before the performance, to enable ECMWF to avail itself of its exemption from customs duties and taxes.

5 KEY PERSONNEL AND PERSONNEL

- 5.1 If ECMWF chooses to define key personnel in the Request, such personnel shall not be released or replaced by the Contractor without prior written consent by ECMWF. ECMWF's consent shall not be withheld unreasonably. Replacements shall be of at least equal status or of equivalent experience and skills to the key personnel being replaced and be suitable for the responsibilities of that person in relation to the Services.
- 5.2 Any personnel, including key personnel, shall be exchanged at ECMWF's request subject to four weeks written notice, unless extraordinary circumstances require a shorter notice period. In that case, ECMWF has to provide the Contractor with a written statement of grounds.
- 5.3 Personnel other than key personnel, may be exchanged at the Contractor's discretion subject to four weeks written notice, unless extraordinary circumstances require a shorter notice period. In that case, the Contractor has to provide ECMWF with a written statement of grounds.

6 CALL-OFF CONTRACT

- 6.1 In certain cases, meeting the initial Request may require more than one order. The award of a Contract based upon one such order does in no way limit ECMWF's right to invite new bidders for future orders under the same or a similar Request.

- 6.2 In such cases, the Contractor agrees that ECMWF may order further Services following the initial acquisition under the Contract and at the Price specified in the Contract or the Price in a quotation in response to a Request, as appropriate.

7 WARRANTY REMEDIES; TERMINATION

- 7.1 If the Services are not performed in accordance with Clause 2.3 and the Contractor fails to correct any breach in due time, ECMWF shall be entitled to avail itself of any one or more of the following remedies at its discretion: (a) to rescind or suspend the Contract with immediate effect; (b) to refuse to accept any further Service performance and to source alternatives without any liability to ECMWF; (c) to carry out at the Contractor's expense any work necessary to make the Services comply with the Contract; and (d) to claim such damages as may have been sustained in consequence of the Contractor's breach of Contract; and (e) to reclaim any advance payments ECMWF may have made; and (f) to offset any such claims for damages or refunds against any outstanding portion of the price.
- 7.2 ECMWF may resort to any one or more of the remedies stipulated in Clause 7.1, mutatis mutandis and with immediate effect upon written notification, if it comes to the conclusion:
- That the Contractor has committed errors, irregularities, fraud or breaches of other obligations under the Contract; or
 - That the Contractor is involved in any legal proceedings concerning its solvency, or ceases trading, or commits an act of bankruptcy or is adjudicated bankrupt, or enters into liquidation whether compulsory or voluntary (other than for the purposes of an amalgamation or reconstruction) or makes an arrangement with its creditors or the Contractor is placed into administration or has an administrator, receiver or manager appointed over all or any part of its assets or generally becomes unable to pay its debts; or is acquired by or merged with any third party.
- 7.3 It is left to the Contractor to provide evidence to rebut ECMWF's conclusions. ECMWF may take timely rebuttals into account, reconsider the remedies, or enter into negotiations with the Contractor.
- 7.4 ECMWF reserves the right to terminate any Contract at thirty (30) days' notice, without limiting its other rights and remedies. The Contractor has the right to terminate any Contract at sixty (60) days' notice without limiting its other rights and remedies.

8 FORCE MAJEURE

Neither party shall be liable to the other party for any delay in or failure to perform its obligations as a result of any cause beyond its reasonable control ("Force Majeure") provided the affected party notifies the other party as soon as reasonably practicable. If any Force Majeure event continues for at least 90 days, either party shall be entitled to terminate the Contract with immediate effect by notice in writing to the other party.

9 CONSEQUENCES OF TERMINATION

On termination of the Contract for any reason, the Contractor shall immediately deliver to ECMWF all Deliverables whether or not then complete, and return all material and data supplied by ECMWF. Upon inspection of the Deliverables, ECMWF may choose to keep and pay for incomplete Deliverables proportionately or otherwise return them to the Contractor and not make any payment for incomplete Deliverables.

10 INTELLECTUAL PROPERTY RIGHTS

- 10.1 ECMWF shall own the Deliverables and all intellectual property rights in the Deliverables.
- 10.2 Clause 10.1 does not apply to the Contractor's pre-existing intellectual property rights or rights that the Contractor may have developed or acquired independently of the performance of his obligations

under these T&C. In such cases, the Contractor grants ECMWF a free, non-exclusive, irrevocable, worldwide, transferable, sub-licensable and time unlimited licence to use all such intellectual property rights as are necessary for the use of the Services and in particular the Deliverables, including for their maintenance, modification, and replacement by or on behalf of ECMWF. The Contractor warrants to be entitled to grant such a licence.

- 10.3 Ownership of the Deliverables shall be fully and irrevocably acquired by ECMWF under the Contract from the moment they are accepted by ECMWF as being in compliance with the Contractor's obligations under the Contract, particularly with Article 2 of these T&C. ECMWF shall notify the Contractor in due time if it does not accept the Deliverables. If so, it shall notify the Contractor and, if necessary, return the Deliverables immediately.

11 INDEMNITY

The Supplier shall keep ECMWF indemnified against all liabilities, costs, expenses, damages and losses suffered or incurred by ECMWF or any of its Member States as a result or in connection with any claim, including but not limited to claims for actual or alleged infringement of a third party's intellectual property rights, brought against ECMWF arising out of, or in connection with ECMWF's receipt or use of the Services to the extent that the claim is attributable to the acts or omissions of the Contractor, its employees, agents, or subcontractors. This Clause 11 shall survive termination of the Contract.

12 PUBLICITY & CONFIDENTIALITY

- 12.1 The Contractor may not use ECMWF's name for advertisement, reference or publicity purposes without ECMWF's prior written consent.
- 12.2 If either party learns of confidential or proprietary information of the other party, it may not disclose such information without prior written consent of the other party. This obligation will survive the expiry or termination of the Contract for a period of five (5) years or until such earlier time as the confidential information concerned reaches the public domain other than through the receiving party's own default.
- 12.3 Either Party shall keep all of the other Party's confidential technical or commercial know-how, specifications, inventions, processes, or trade secrets ("Confidential Information") in strict confidence, unless otherwise is required by law or any regulatory authority. This obligation applies to the Parties' affiliates or Member States, their employees, agents, or sub-contractors. Each Party shall only disclose such Confidential Information to those affiliates' or Member States' employees, agents, or sub-contractors who need to know it for the purpose of discharging the disclosing Party's obligations under the Contract. Each Party must assure that all such recipients of Confidential Information comply with the obligations set out in this Clause. This Clause 12.3 shall survive the termination of the Contract.

13 INSURANCE

The Contractor shall carry public liability and professional indemnity insurance (or equivalent cover or contingency arrangements) for at least £2 million for all liabilities that may arise out of the Contractor's performance or non-performance of its obligations under the Contract. Upon request, the Contractor shall provide evidence of such insurances or such other cover or contingency arrangements as the Contractor maintains, to the satisfaction of ECMWF.

14 PERSONAL DATA

- 14.1 Where the processing of personal data by the Contractor is required under the Contract, the Contractor shall process personal data in accordance with the General Data Protection Regulation 2016/679/EU ("GDPR"), as amended, and any other data protection law applicable to the Contractor

(“Data Protection Law”) during the term of this Contract. 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).

- 14.2 The Contractor shall implement appropriate technical and organisational measures to ensure the security of personal data processed pursuant to this Contract. Upon termination or expiry of this Contract 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.
- 14.3 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 its 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.
- 14.4 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.
- 14.5 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 the Contract.
- 14.6 The Contractor shall process, or permit to be processed, personal data only for the purposes of performing its obligations under the Contract and shall ensure that personnel of the Contractor is subject to an obligation of confidentiality in respect of the processing of personal data under the Contract.
- 14.7 ECMWF, an ‘international organization’ under Chapter V of the GDPR, shall comply with its own policies and procedures in respect of the protection of personally identifiable information, notably the Policy for Personally Identifiable Information Protection, as amended. ECMWF’s DPO can be reached as follows: pii-protection-officer@ecmwf.int or ECMWF PII Protection Officer; ECMWF, Shinfield Park, Reading, RG2 9AX, United Kingdom.

15 RECOVERY

ECMWF reserves a right to recover from the Contractor any amounts that have been paid to the Contractor but which are not due. When ECMWF identifies such amounts, and notifies the Contractor of its intention to recover such amounts, they shall be treated by both parties as debts and shall be payable by the Contractor immediately. If applicable, ECMWF may choose to set off such amounts in full against any outstanding claim the Contractor may have against ECMWF.

16 GOVERNING LAW AND DISPUTE RESOLUTION

- 16.1 The parties shall attempt to settle any dispute between them in an amicable manner and, if unsuccessful, first refer the dispute to proceedings under the International Chamber of Commerce’s (ICC) Mediation Rules. If the dispute has not been settled pursuant to the said Rules within 45 days following the filing of a request for mediation or within such other period as the Parties may agree in writing, such dispute shall thereafter be finally settled under the ICC Rules of Arbitration by three (3)

arbitrators appointed in accordance with the said Rules of Arbitration. The Place of Mediation and Arbitration shall be London, England. The proceedings shall be in the English language.

16.2 Nothing in the Contract shall be considered a waiver of any of the privileges and immunities vested in ECMWF by virtue of its Convention and Protocol.

16.3 Recourse to regular courts of law, also in cases of injunctive relief, is excluded.

16.4 It is the intention of the Parties that these T&C shall comprehensively govern the legal relations between the Parties, without interference or contradiction by any unspecified law. Without prejudice to ECMWF's status as an Intergovernmental Organization, reference shall be made to the substantive Laws of England and Wales where:

- A matter is not specifically covered by these T&C; or
- A provision of these T&C is ambiguous or unclear

17 MISCELLANEOUS

17.1 The Contractor may not sub-contract or assign any of its obligations under the Contract except with ECMWF's express written permission and upon the basis of specific terms, provided by ECMWF, to apply as between the Contractor and its sub-contractor or assignee.

17.2 No forbearance or delay by either party in enforcing its rights shall prejudice or restrict the rights of that party, and no waiver of any such rights or of any breach of any contractual terms shall be deemed to be a waiver of any other right or of any later breach.

17.3 If any provisions of these T&C are or subsequently become invalid for any reason, the remaining provisions shall remain in full force and effect.

17.4 All documents to be furnished or communications to be given or made under this Contract shall be in the English language or, if in another language, shall be accompanied by a translation into English certified by the Contractor, which translation shall be the governing version between the Contractor and ECMWF.