CLARIFICATIONS

Procurement Process:	ECMWF Copernicus Procurement - Invitation to Tender
Reference of Procurement:	*CJS2_231*
Title of Procurement:	Web Application for Interactive Visualisation of Satellite Essential Climate Variables
Edition:	3rd edition
Date of Issue:	27/01/2026

Issued by ECMWF Administration Department, Procurement Section

CJS2_231 REQUEST FOR CLARIFICATION FORM					
#	Category	Page/Part/Article/Section	Question	Answer by ECMWF	Date - answer is published by ECMWF
1	Budget		We note you have chosen not disclosed a budget for this tender, please could you provide an indication of the expected person months to be provided by the successful supplier in this project?	No budget or indicative level of effort (person-months) is provided. Tenderers are expected to propose their own assessment of the resources and person-months required to meet all requirements of the ITT, based on the scope defined in the ITT and their proposed technical approach.	18/12/2025
2			1) The ITT does not explicitly mention which technologies or standards are expected for map generation. We find just one generic reference to OGC standards. Could you please clarify the following points? A - Is the solution expected to implement WMS or another OGC standard? B - If so, is it expected to use any WMS services already available in the CDS? C - Conversely, is the solution expected to implement a browser-based rendering approach? That is, rendering Zarr data directly on the browser.	The choice of the two approaches (WM(T)S vs browser-based rendering) is left up to tenderers. After discussion on the benefits and drawbacks of both, we would express a slight preference for browser-based rendering. However we expect that the application could be successfully implemented with either approach. Regarding WMS services already available, there is a WMTS service available for ARCO datasets on the CDS - it is available but not enforced.	13/01/2025
3	Volume II		The ITT mentions that the "Successful Tenderer will be required to ensure that all datasets are made ARCO-compliant, where they are not already". Estimating the effort required to make the data ARCO-compliant depends directly of the number and diversity of the datasets to be made ARCO-compliant. So, the list or, at least, the rough number of datasets which will effectively have to be made ARCO-compliant would be helpful.		
4	Volume II		The ITT mentions that the "Successful Tenderer will be required to ensure that all datasets are made ARCO-compliant, where they are not already". However, none of the deliverables defined in the ITT seem to cover this activity. Are we misinterpreting the deliverables that are already listed or should we add one or more dedicated deliverables?	Initially we considered this activity to be largely covered by the Deliverables titled 'Pre-processed metrics -...' (i.e. D1.1.3 and D3.1.2), though we appreciate it was not explicit. Tenderers are welcome to add one or more dedicated deliverables if they think it is warranted.	13/01/2025
5	Volume I	Eligibility	Could you please confirm whether it is sufficient for the applying company to be registered in the UK to participate in this tender? Not all of our team members are UK nationals, and we want to ensure that this does not affect our eligibility.	As stated in Section 3.2 of Volume I, eligibility is based on the entity's country of establishment. The nationality of a company's employees is not an eligibility criterion.	27/01/2026
6	Volume I	Clarification questions	Will there be an opportunity to discuss the functional requirements of the tender in a live session, such as an online meeting? A real-time discussion would allow us to clarify details efficiently and provide a more accurate estimate, rather than relying on multiple written exchanges.	Please note that no live session is planned at this stage of the ITT process. We kindly invite all candidates to submit their clarification requests directly through the clarification form provided . This ensures transparency and equal treatment for all candidates	13/01/2025
7	Volume II		Should the backend be in Python? Could it be in Java?	Python would be strongly preferred over Java, unless there is a very strong reason why Java should be used.	13/01/2025
8	Volume II		Is this work "Alongside this project, a comprehensive redesign of the ECV section of the C3S website will be undertaken to create a revitalised, dedicated space for ECVs that is both highly visible and easily navigable. Other planned enhancements include the development of an ECV dashboard that will present key climate indicators using ECV products and short pieces of accompanying text." Is considered to be done by Contractor or ECMWF team?	The work you reference is considered separate to that requested as part of this ITT, and should not be considered by Tenderers.	13/01/2025
9	Volume II		Do we plan to implement a complete monitoring solution, or will we integrate with the existing ECMWF monitoring solution, if any?	The Successful Tenderer will integrate with existing ECMWF monitoring infrastructure, that includes Splunk and Elasticsearch, Prometheus, and Grafana. Dashboard(s), visualistions, and their constituent metrics would be expected to be implemented by the Successful Tenderer.	13/01/2025
10	Volume II		Who will manage the deployment of the application components on the DSS infrastructure?	ECMWF will provide recipes/examples for the Successful Tenderer to use, such as Helm charts, Kubernetes configurations and Dockerfiles; however ECMWF will manage the deployment process itself.	13/01/2025
11	Volume II		For the pre-calculated metrics for all satellite-derived ECV products, does the calculation change over time, or is it fixed for each period? Is only the calculation for each new day (month or year) will be added and made available alongside the previous pre calculated days?	Pre calculated metrics may be either static or time-varying, depending on the metric. Climatologies will remain fixed (e.g. the standard climate reference period 1991-2020) and only need to be updated when a new version of the underlying data becomes available. Metrics that depend on the full time series will need to be updated when new data are added and included in the computation (for example, the mean of all January values).	27/01/2026
12	Volume II		Are users connecting to the web application required to log in? If yes, are they predefined users, or can they create their own accounts in the system? Alternatively, are they anonymous users, meaning the application is open to everyone?	No, users will not be required to log in. The application should be open to everyone.	13/01/2025

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13	Volume II		The tender documentation mentions the need for high-performance visualisation, implying the use of Cloud-Optimised formats. We assume that raw products (NetCDF-4) will require conversion to Zarr or similar formats to meet latency requirements. Can ECMWF confirm if this conversion pipeline is expected to be part of the Contractor's scope? Are there any existing ECMWF-maintained libraries or reference implementations (e.g., within Earthkit) that the Contractor should utilize for this transformation to align with the Centre's long-term maintenance strategy?		
14	Volume II	Page 9, Section 2.3, Multiple Climate Data Formats	Does the provisioning of ARCO datasets for this ITT depend on the work requested in ITT CJS2_220b?		
15	Other	Tender docs	We could not find the Volume IV Forms (financial identification form and legal identification form) to complete.	This document is available in the response questionnaire for the present ITT (Section 1). Please also review the User Guide (ECMWF eProcurement Portal Guidance for suppliers .pdf).	27/01/2026

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16	Volume II	Volume II, Section 1.2.3 & Section 3.2.1 Technical / Data Architecture	Do we understand correctly that we should use existing datasets and data structures (within the DSS infrastructure) and enrich them with pre-calculated values, rather than building a completely new Data Warehouse (DWH)?	Most of the data to be used in the application should be stored in an ARCO copy of the existing DSS datasets. Some of the ECV datasets are already in this format, but other datasets will need to be converted into an ARCO format. The data will be stored in an S3 bucket in the Common Cloud Infrastructure (CCI) at ECMWF.	27/01/2026
17	Volume II	Volume II, Section 2.2 (Non-Functional Requirements) Technical / Performance	If the answer to the previous question is affirmative (using existing datasets), what is their typical access time/latency, and is this latency included within the <2 seconds response threshold mentioned in requirements?	ARCO datasets in the CDS have a very low latency. We do not expect any data to be retrieved from the CDS on-the-fly in this application.	27/01/2026
18	Volume II	Volume II, Section 1.2.3 (The DSS Infrastructure) Technical / Infrastructure	Since the metric pre-calculation engine will likely be a separate process, what are the specific hosting capabilities and scheduling restrictions within the ECMWF Common Cloud Infrastructure (CCI) for such background tasks?	The ECMWF CCI has a broad pool of resources available. Tenderers should include their foreseen solutions or resource requirements in their submission. The specific details can be discussed and agreed prior to the start of the contract.	27/01/2026
19	Volume II	Volume II, Appendix A & Section 1.2.3 Technical / Data Sources	Is there a detailed technical description available regarding the specific storage and access methods for the source datasets listed in Appendix A (e.g., S3 buckets, POSIX file system, API endpoints)?		
20	Volume II	Volume II, Section 2.2 & Section 4 Technical / Technology Stack	Can the Tenderer utilise the Earthkit library to facilitate the conversion of data from the CDS into a common format (e.g., Zarr/ARCO) for visualisation on the application side?	No - earthkit is not currently optimised for converting datasets into ARCO formats.	27/01/2026
21	Volume II	2.3	Are existing ARCO/Zarr datasets already available on CDS, or is the tenderer expected to convert all NetCDF datasets?		
22	Volume II	2,3	Is there a preferred tooling stack for ARCO conversion?		
23	Volume II	2.3	Where should ARCO-compliant datasets be hosted (CDS infrastructure, ECMWF cloud, tenderer-managed cloud)?	ECMWF Common Cloud Infrastructure (CCI).	27/01/2026
24	Volume II	2.3	What are there minimum numbers of datasets that must be fully supported in WP1?	As specified in section 3.2, 'two pre-selected Flagship ECV datasets shall be prepared for inclusion in the application' in WP1. This section also states that these are titled 'Soil moisture gridded data from 1978 to present' and 'Earth's radiation budget from 1979 to present derived from satellite observations' on the CDS. With regards to the specific selections within these datasets that would be considered sufficient for WP1, please see Clarification #65.	27/01/2026
25	Volume II	2.3	Is there an expected ingestion frequency for ICDRs (monthly, quarterly, ad hoc)?	The frequency of the delivery of ICDRs to C3S varies by ECV product. Some ICDRs are delivered on a very regular basis (approximately 10-14 days), and others are delivered yearly. Ideally they would be ingested at a frequency similar to their delivery. However, we realise this may not be reasonable for those delivered on a very regular basis, and therefore would accept for such deliveries to be aggregated and ingested once every 6 months, though it would be seen as advantageous if more frequent ingestions were possible, to help keep the application particularly up to date.	27/01/2026
26	Volume II	2.3	Will new datasets always follow existing schemas, or must the system handle schema evolution?	If your question has been understood correctly, then in the case of a new dataset, it is possible that the system would need to handle some schema evolution. However, as a rule ECV datasets follow well-defined schemas based on CF (Climate and Forecast) and related conventions. In the case of an update to an existing dataset, it is possible the system would need to handle some minor evolution, such as the addition of a new variable or an extension to an existing dimension.	27/01/2026
27	Volume II	2.3	Is automated ingestion expected, or is manual triggering acceptable for WP1?	For WP1 manual triggering would be acceptable.	27/01/2026
28	Volume II	2.3	Are there validation or QA steps required before ingestion completes?	If your question has been understood correctly, the answer is no. Validation on the dataset has already been conducted prior to acceptance by C3S. If the question refers more to ensuring the ingestion process itself preserves the input data without any changes, then yes we would expect QA/QC.	27/01/2026
29	Volume II	2.3	for user computations - Is server-side computation mandatory, or is client-side computation acceptable for some operations?	Where appropriate, client-side computation would be encouraged	27/01/2026

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30	Volume II	2.3	Should results of user computations be cacheable or persisted?	Results may be cached or persisted at the tenderer's discretion where they deem it appropriate	27/01/2026
31	Volume II	2.3	Which and how many pre calculated metrics are mandatory for WP1?	Information on this is given in the 'Flagship ECV Metrics' box on Page 14 of 38 of the Volume II. Please also note that 'the specific details of each metric will be discussed and agreed by ECMWF and the Successful Tenderer prior to the start of the contract'.	27/01/2026
32	Volume II	2.3	Visualizations: What level of vertical profile complexity is expected in WP1?	If your question has been understood correctly and you are referring to different depths of some of the Soil Moisture data, we would expect the 'Surface soil moisture - volumetric', 'Root zone soil moisture - volumetric', and 'Freeze/Thaw classification' data. The former represents approximately the first 0-7cm of soil, and for the Root-zone data though four levels are provided (0-10cm, 10-40cm, 40-100cm, and 0-1m), only the 0-1m is required for inclusion in the application at this stage.	27/01/2026
33	Volume II	2.3	Visualizations: Should 3D visualisation support time animation, or static views only?	We would expect that it supports time animation.	27/01/2026
34	Volume II	2.3	Visualizations: Are reprojections expected to be on-the-fly, or can pre-generated projections be used?	We leave it to Tenderers to decide, based on their relative merits and trade-offs. Both types have been used in ECMWF's existing applications.	27/01/2026
35	Volume II	2.3	Visualizations: Are temporal aggregations dataset-specific, or should users be allowed to request any aggregation?	It will be dataset-specific in that the users should only be allowed to request aggregation periods that are suitable for the data in question, based on their temporal resolutions.	27/01/2026
36	Volume II	2.3	Visualizations: Are there mandatory colour-blind safe palettes?	As described in Section 2.2 Non-Functional Requirements, requirement 8 'Accessibility', there is a requirement to 'support for colour blindness and other common accessibility needs'. We leave it to Tenderers with their industry knowledge to recommend suitable colour-blind friendly palettes. During the contract, ECMWF will also likely provide support and input on this.	27/01/2026
37	Volume II	2.3	Visualizations: Should colour scales be dataset-specific and locked, or fully user-editable?	As described in Section 2.3 Functional Requirements, requirement 24 'Selectable colourmaps', 'users will have the option to visualise their variable(s) using a selection of predefined colourmaps'. Therefore, users should have the option to choose from a range of appropriate colourmaps, but these do not need to be fully user-editable.	27/01/2026
38	Volume II	2.3	Visualizations: How to handle missing data (if any)? Is interpolation required if data is missing for certain time steps?	As described in Section 2.3 Functional Requirements, requirement 27 'Visual indications of uncertainty, flagged data and gaps in coverage', there is expected to be 'hatching or shading to distinguish these regions..and the user interface shall clearly indicate any spatial and/or temporal gaps'. Therefore, there is no requirement to perform interpolation, and this would not be recommended.	27/01/2026
39	Volume II	2.3	Visualizations: Are there preferred UI patterns or reference applications for the scrollbar and animation controls?	Usually, Mantine UI is used for sliders and animation controls. For example: https://apps.climate.copernicus.eu/nec-explorer/	27/01/2026
40	Volume II	2.3	Visualizations: Is comparison between two time points or periods (e.g., before vs after) required for WP1?	Although it is not an explicit requirement for the application, it would be advantageous to have it if possible, though it would not necessarily need to be implemented in WP1.	27/01/2026
41	Volume II	2.2	Are there language/localisation requirements?	Only English is required	27/01/2026
42	Volume II	2.2	Are there existing DSS infrastructure constraints or reference architectures we must align with?		
43	Volume II	2.2	Is deployment expected on an existing Kubernetes cluster, or should the application provision its own?	Deployment would be expected on an existing Kubernetes cluster.	27/01/2026
44	Volume II	2.2	Are there preferred CI/CD tools or security policies?	GitHub Actions which deploy onto our Kubernetes clusters with self-hosted runners.	27/01/2026
45	Volume II	2.2	For WP1, is a simplified Docker-based deployment acceptable?	Yes.	27/01/2026
46	Volume II	2.2	Is Matomo already deployed, or should the application include Matomo setup and configuration?	An applications-specific Matomo instance can be spun up by ECMWF on request.	27/01/2026
47	Volume II	2.2	Are automated tests required as part of the CI pipeline?	Ideally yes - especially in any backend software that performs computations on the data.	27/01/2026
48	Volume II	2.2	What user load should the system be designed to handle?	Difficult to say, but our most popular applications at present have a typical daily load of up to 1000 unique visitors.	27/01/2026
49	Volume II	2.2	Is horizontal scaling expected, and should it be demonstrated in the WP1?	Horizontal scaling would be expected; it would be advantageous but not essential to demonstrate this in WP1.	27/01/2026
50	Volume II	2.2	Are there defined performance benchmarks (e.g., page load time, response latency)?	Response latency for e.g. getting timeseries from clicking on the map should be < 2 seconds. Anything more expensive should have informative loading messages. Page load time should also be < 2 seconds, with progressive rendering if needed.	27/01/2026
51	Volume II	2.2	What is the acceptable rendering time for large datasets or visualisations?	Please refer to Clarification #50	27/01/2026
52	Volume II	2.2	Should performance monitoring be included as part of the solution?	Yes, we would encourage performance monitoring as part of the solution, we leave it to the Tenderers to suggest appropriate metrics	27/01/2026
53	Volume II	2.2	Are there existing design guidelines, branding, or style guides to follow?	Please see answer to clarification #72	27/01/2026
54	Volume II	2.2	Is responsive design sufficient, or is mobile-specific optimisation required?	Responsive design would be the minimum requirement, it would be advantageous to have some level of mobile-specific optimisation but it is not essential.	27/01/2026

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55	Volume II	2.2	What level of documentation is required for the WP1?	Work Package 1 is a proof-of-concept phase. No formal documentation deliverables are required at this stage. If the outcomes of WP1 are satisfactory and we proceed to the second Service Contract, the contractor will then be expected to produce documentation as part of the continued contract.	27/01/2026
56	Volume II	2.2	what method of authentication and authorization for users to be considered?	Please see answer to clarification #12	27/01/2026
57	Volume II	2.2	Mentioned that, for POC the web app should be selfhosted by Tenderer. Are there any specific tools that we need to use that support on ECMWF infra?	As long as the application has a Docker-based deployment, that should be a good start for the POC.	27/01/2026
58	Volume II	2.2	do we need to create IOS and Android native/hybrid apps or can be accessible within browser in mobiles?	Mobile accessibility is to be delivered through responsive design or mobile-specific optimisation, but not through separate native or hybrid mobile apps.	27/01/2026
59	Other	References	Are there specific reference applications ECMWF recommends we review (internal or external)?	We would ask you to refer to the 'Examples of Interactive Visualisation Applications' on page 4 of 38 of Volume II. We would also now include the Copernicus MyOcean viewer in that list.	27/01/2026
60	Volume II	Data	Are the Flagship ECV datasets already quality-controlled and stable, or should data issues be expected during development?	No issues should be expected with the Flagship ECV datasets.	27/01/2026
61	Volume II	2.2	Are metrics expected to be recomputed periodically, or are they static once generated?	Please see answer to clarification #11	27/01/2026
62	Volume II	3.7	What kinds of AI use cases are of most interest to ECMWF		
63	Volume II	benchmarks	Will ECMWF provide reference implementations or validation benchmarks for the required metrics?		
64	Volume I	3.12	Is the intention to award to a single Tenderer or multiple Tenderers under the Framework Agreement?	One contract with one Tenderer	27/01/2026
65	Volume II	3.2 Flagship ECV Metrics	The ECV flagship datasets include data from multiple sources/products/sensors with various overlapping coveage. Is it correct that visualizations and pre-calculated variables must be produced for each of these sub-datasets, or will a subset of most representative data be selected?	For WP1 the following datasets are sufficient: Soil moisture dataset: Variables: Surface soil Moisture - volumetric; Root-zone soil moisture - volumetric; Freeze/Thaw Classificiation Sensor type: Combined (for the volumetric soil moisture variable) Aggregation period and version: Month average only (but daily for Freeze/Thaw), and latest available version. Earth radiation budget: With regards to the product families we would express a preference for the ESA/C3S or EUMETSAT product family. The Total Solar Irradiance dataset may also be included.	27/01/2026
66	Volume II	3.2 Flagship ECV Metrics	Please provide an estimate of the size (in GB) of each of the two ECV flagship datasets. (e.g. in their current compressed NetCDF format)		
67	Volume II	Appendix A	Please provide an estimate of the approximate sum total size (in GB) of the raw data for the ECV Products to be included in Work Package 3: Addition of all satellite-derived ECVs in the C3S ECV portfolio.		
68	Volume II	General	Has the ECMWF ECV team already conducted user research or other user engagement to guide the design and requirements for the visualization application?	No, ECMWF has not carried out specific user research or engagement activities for this visualisation application.	27/01/2026
69	Volume II	Page 3 / Section 1.1	Are there specific ECVs or use cases you expect to drive most traffic initially?		
70	Volume II	Page 5 / Section 1.3	What would make ECMWF say this application is clearly successful one year after launch?		
71	Volume II	Page 7-8 / Section 2.2	Are there existing C3S or ECMWF frontend components, design systems, or visual standards the application is expected to align with or reuse?	Yes - a comprehensive stytle guide providing recommended visual standards is in development and will be available before the project begins. In terms of frontend components, we usually use the Mantine UI library.	27/01/2026
72	Volume II	Page 8 / Section 2.2	Are there existing performance bottlenecks in similar CDS applications we should explicitly design around?		
73	Volume II	Page 8 / Section 2.2	What are the expected data volumes per ECV and per request at peak usage?		
74	Volume II	Page 8 / Section 2.2	What caching mechanisms are currently in place, and where is the application expected to implement its own caching?		
75	Volume II	Page 8 / Section 2.2	How should concurrency and rate limiting be handled for user-initiated computations?	Existing applications can make requests with an application-specific (not user-specific) token, which adds a configurable layer of QoS to control concurrency and rate limiting. We are also open to proposals from the tenderer, but the application needs to be accessible without the user being forced to log in.	27/01/2026

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76	Volume II	Page 8 / Section 2.2	What authentication or authorization mechanisms, if any, are expected for access?	Please refer to Clarification #12	27/01/2026
77	Volume II	Page 9 / Section 2.3	What level of precision and numerical consistency is required between pre-computed and on-the-fly metrics?		
78	Volume II	Page 10 / Section 2.3	Are there particular user interactions you consider especially valuable to highlight?	Please may you raise another clarification request and be more explicit.	27/01/2026
79	Volume II	Page 10 / Section 2.3	Are there preferred libraries or internal tooling for geospatial reprojection and CRS handling?	No preference. In existing applications, on the client side, we use features of mapping software like OpenLayers and MapLibre to provide reprojection, but we are open to proposals for alternatives.	27/01/2026
80	Volume II	Page 10 / Section 2.3	Is there a preferred mapping / 3D globe stack already approved or in use within ECMWF (e.g. Cesium, deck.gl, Mapbox), particularly with respect to licensing?	We have worked with Cesium and MapLibre in the past, but are open to proposals which suggest alternatives.	27/01/2026
81	Volume II	Page 11 / Section 2.3	Are there preferred patterns for handling pre-computed metrics versus on-the-fly computation within the DSS?		
82	Volume II	Page 11 / Section 2.3	Are there preferred data access patterns or APIs within the DSS that should be used or avoided?	Accessing datasets directly from the DSS catalogues should be avoided. Accessing data directly from ARCO datasets is encouraged.	27/01/2026
83	Volume II	Page 13 / Section 3.2	What level of flexibility is expected in choosing frontend and visualization libraries, provided requirements are met?	We are open to any visualisation libraries that meet the requirements of the application, but would recommend OpenLayers, MapLibre and Plotly to maximise consistency with other applications. These are purely recommended libraries, and not enforced.	27/01/2026
84	Volume II	Page 14 / Section 3.2	Are there internal teams expected to build on this, and should developer experience be treated as a priority?		
85	Volume II	Page 16 / Section 3.3	Are there constraints on server-side computation time or resource usage per user request?		
86	Volume II	Page 17 / Section 3.4	Are there established standards for ARCO/Zarr chunking and storage layouts we should follow?		
87	Volume II	Page 19 / Section 3.5	What are the expectations around backward compatibility when ECV definitions change?		
88	Volume II	Page 22 / Section 3.7	What user problems have you already observed that AI could realistically help with?		
89	Volume II	Page 3 / Section 1.1	What is the estimated ratio between researchers and the general public within your "broad audience"? This will help us prioritize the layout for either desktop-first or mobile-responsive design.		
90	Volume II	Page 7-8 / Section 2.2 (Ref 6)	Are there specific branding guidelines? Is the design expected to align with an existing C3S or ECMWF design system, or can a new visual language be proposed for the "striking" visualization?		
91	Volume II	Page 8 / Section 2.2 (Ref 8)	Is compliance with a specific international accessibility standard, such as WCAG 2.1 AA, expected?		
92	Volume II	Page 8 / Section 2.2 (Ref 8)	Should accessibility be formally tested and documented as part of the evidence of consideration, or is following "best-practice" design sufficient?		
93	Volume II	Page 8 / Section 2.2 (Ref 10)	Are separate mobile/tablet layouts expected, or should the application utilize a single, unified responsive system?	Please see answer to clarification #54	27/01/2026
94	Volume II	Page 8 / Section 2.2 (Ref 10)	The document mentions that some features may not be optimized for smartphones—can you identify which high-complexity features (e.g., 3D globe rotation or user-initiated computations) are considered "optional" for mobile?		
95	Volume II	Page 10 / Section 2.3	For color-blindness support, should the application default to accessible colormaps for all users, or provide a "high-contrast/accessible mode" toggle in the settings?		
96	Volume II	Page 13 / Section 3	Should UX/UI work be treated as an iterative process across all Work Packages (WPs 1–3), or is the majority of the design expected to be finalized upfront?		
97	Volume II	Page 13 / Section 3.2	Regarding WP1, how many development sprints (i.e., blocks of 2 weeks) do you anticipate for the delivery of the proof-of-concept (POC)?		
98	Volume II	Page 13 / Section 3.2	How many initial design iterations are expected during the development of the POC to ensure alignment with the "flagship" ECV requirements?		

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99	Volume II	Page 13 / Section 3.2	Regarding the application design draft deliverable: what level of fidelity is required, and is its primary purpose to inform the development process or to validate the concept internally/externally?		
100	Volume II	Page 16-17 / Section 3.3 & 3.4	For WP2 and WP3, should the UI be considered final and polished, or will it remain an evolving element as "user-initiated computations" are added?		
101	Volume II	Page 17 / Section 3.4	Is there an expectation that new UI patterns will need to be designed as additional, more diverse ECVs are added during WP3?		
102	Volume II	Page 19 / Section 3.5	Is visual design refinement expected during the maintenance phase (WP4), or will that phase focus strictly on functional upkeep and data updates?		
103	Volume II	Page 20 / Section 3.6	Regarding the End-User Documentation (WP5), would you prefer a centralized "Help Center" (e.g., a static wiki or FAQ) or the implementation of context-sensitive help directly within the UI, such as interactive onboarding tours?		
104	Volume II	Page 22 / Section 3.7	Is UX design for Artificial Intelligence—specifically for improving application usability—a core component to be explored within WP6?		
105	Volume II	Page 7 / Section 2.2	Will you require a formal Quality Assurance Plan as a deliverable, or is the contractor's internal testing strategy sufficient?		
106	Volume II	Page 7 / Section 2.2	Aside from standard backend unit tests, what are the expectations for frontend and end-to-end testing? Are there any preferences for the tools which will be used?		
107	Volume II	Page 7 / Section 2.2	Regarding the application's performance, can you provide the metrics that need to be fulfilled? Are there any preferences for the tools? For example, what is the expected concurrent user load that must be maintained during stress testing, given the 2-second load time requirement?		
108	Volume II	Page 8 / Section 2.2	Does ECMWF provide a dedicated staging or QA environment for final validation before production deployment?		
109	Volume II	Page 8 / Section 2.2	What is the specific range of browser versions that must be included in the browser compatibility testing matrix?		
110	Volume II	Page 8 / Section 2.2	What are the specific versions of the operating systems which needs to be supported? What about the size of the supported devices - the smallest one and the biggest one?		
111	Volume II	Page 8 / Section 2.2	Will ECMWF perform an independent audit for accessibility compliance, or must the contractor provide a formal compliance report?		
112	Volume II	Page 8 / Section 2.2	Which features will not be available on Mobile devices?		
113	Volume II	Page 10 / Section 2.3	Are there specific scientific datasets we should use to validate that the visual uncertainty indicators correctly represent the underlying data?		
114	Volume II	Page 13 / Section 3.2	What are the specific acceptance tests or success criteria that will be used to evaluate the POC during WP1?		
115	Volume II	Page 19 / Section 3.5	What is the required response and resolution time for critical bugs identified during the maintenance phase?		
116	Volume II	Pages 7 and 8	Within the tender, the term *Matamo* technology is mentioned. We believe this might be a typographical error, as *Matomo* is a well-known analytics tool used for tracking and analysing visitor behavior on websites. However, since *Matamo* appears twice in the document, we would appreciate your confirmation on whether the reference was indeed intended to be *Matomo* . Could you kindly clarify this point?	It should read Matomo.	27/01/2026
117	Evaluation criteria		Would it be possible to know the evaluation criteria?	Evaluation criteria are available on the OJEU eNotice (Ref : 823297-2025) Link available on the ECMWF supplier web page (link in the ITT reference number)	27/01/2026
118	Volume IIIA		It is understood that ECMWF will facilitate the computing and storage resources required for the development and implementation of the application. How should estimates of computing resources be provided in the proposal and Financial templates?		

#	Category	Page/Part/Article/Section	Question	Answer by ECMWF	Date - answer is published by ECMWF
119	Volume II	2.2	Could you please confirm that regarding the required performance, the indicated response time limit is expected if the following assumptions are true: no CRS reprojection, no on-the-fly computation requests, availability of adequate GPU resources and a limited number of concurrent users?		
120	Volume II	2.3	Should pre-calculated metrics be provided only as non-spatial values (such as averages, min/max, or statistical summaries) or also as geospatial layers (e.g., raster or vector data) to satisfy user requirements?		
121	Volume II	2.3	On-the-fly computations based on user-defined inputs include the ability to compute metrics such as average, trends and anomalies over user-selected time periods. Could you please clarify what else could be requested and the types of computations expected?		
122	Volume II	2.3	If ECV variables are provided in different native CRS, should they be reprojected to a common CRS for overlap and analysis? If yes, please specify the target CRS or standard to be used.		
123	Volume II	4.1	We understand that a Framework Agreement will be awarded. Could please confirm that only one PoC (SC1) will be planned with a single Consortium selected by ECMWF or clarify if more Consortia could be selected for SC1? In the latter case, could you please indicate how many PoCs are expected?		
124	Volume II	5,1	Page Limits, it is written: - Technical Solution Proposed = 20 for the technical solution and Work Packages - Management and Implementation = (...) 2 per each Work Package Why is the work packages limit included in these two chapters?		
125	Volume IIIA	"Deliverables list" Sheet	Deliverables (and Milestones) format seems to differ from: - Volume II = D0.1-QIR-YYYYQQ or D0.2-AIR1-YYYY - Volume III = DX.Y.Z-yyyyQx or DX.Y.Z-yyyy (Y is the task number and Z is the Deliverable (Milestone) number) What format must we consider in our Volume III application document ?		