REQUEST FOR PROPOSAL

To: ALL BIDDERS

CTBTO Ref. No.: **2025-0082/MAEDA** *ym*
(PLEASE QUOTE ON ALL COMMUNICATIONS)

Tel. No.:	+43 (1) 26030-6350
E-mail:	procurement@ctbto.org

Attn:

Phone:
Fax:
Email:

Date: 02 Jun 25

Subject: Provision of Software Development and Maintenance Services to Support Quality Management, Performance Monitoring, and Evaluation on a Call-off Basis

Deadline for Submission: 30 Jun 25   **Vienna Local Time:** 17:00

The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (hereinafter referred to as the 'Commission') hereby invites you to submit a proposal that meets the requirements of the attached documents.

You are kindly requested to complete and return the acknowledgement form by email as soon as possible.

If you have any questions you should contact the email address indicated above.

Yours Sincerely,

_____
Selma BUKVIC
OiC, Procurement Services Section

CTBTO
PREPARATORY COMMISSION

preparatory commission for the
comprehensive nuclear-test-ban
treaty organization

ACKNOWLEDGEMENT FORM

Solicitation No: 2025-0082	**Closing Date:**	30 Jun 25
Title: Provision of Software Development and Maintenance Services to Support Quality Management, Performance Monitoring, and Evaluation on a Call-off Basis	**Vienna Local Time:**	17:00

Procurement Staff: Yo Maeda   **CTBTO Req. No.:** 0010027146

Please complete 'A' or 'B' or 'C'
and Return

WITHIN FIVE (5) DAYS

THE PREPARATORY COMMISSION FOR THE
COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION (CTBTO)

by email to
procurement@ctbto.org

A: We shall submit our proposal

By: _____
      (date)

Company Name: _____

Contact Name: _____

Email/Tel: _____

B: We may submit and will advise

By: _____
      (date)

Company Name: _____

Contact Name: _____

Email/Tel: _____

C: We will not submit a proposal for the following reason(s)

___   our current workload does not permit us to take on additional work at this time;
___   we do not have the required expertise for this specific project;
___   insufficient time to prepare a proper submission;
___   other (please specify) _____

Company Name: _____

Contact Name: _____

Email/Tel: _____

INSTRUCTIONS FOR PREPARATION AND SUBMISSION OF PROPOSALS

1.   General

The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (the Commission) with its headquarters in Vienna is the International Organization mandated to establish the global verification system foreseen under the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which is the Treaty banning any nuclear weapon test explosion or any other nuclear explosions. The Treaty provides for a global verification regime, including a network of 321 stations worldwide, a communication system, an International Data Centre and on-site inspections to monitor compliance with the Treaty.

This Request for Proposal (RFP) is for the provision of services and supply and delivery of equipment as described in the Terms of Reference.

The Proposal shall meet all requirements stated in the Terms of Reference and be submitted in accordance with these Instructions for Preparation and Submission of Proposals. For this project, the Commission is seeking capabilities, which will ensure that the services are delivered, and the tasks are accomplished expeditiously and at a reasonable cost.

2.   Documents included in this RFP

This RFP consists of the following documents:

(a) Letter of Invitation
(b) These Instructions for Preparation and Submission of Proposals, including the Bidder's Statement form, and the following Attachments:
  - Attachment 1: Minimum Content of Technical Proposal and Technical Compliance Matrix
  - Attachment 2: Technical Evaluation Criteria and Method
  - Attachment 3: Financial Proposal Form
  - Attachment 4: Procedure for submission of electronic offers in 2 sealed files
(c) Statement of Confirmation
(d) Vendor Profile Form
(e) The Commission's Model Contract and its Annexes A – B;
  o The Commission's General Conditions of Contract (Annex A), incorporate herein by reference, found at www.ctbto.org under CTBTO General Conditions of Contract
  o Terms of Reference (Annex B)
Note: In the event of award, the Proposal will be incorporated as Annex C to the Contract.

3.   Amendment of RFP Documents

At any time prior to the closing date for submission of Proposal, the Commission may, for any reason, modify the RFP documents by amendment. The Commission may consider extending the deadline in order to allow adequate time for considering the modifications in the preparation of the Proposal.

4.   Language of the Proposal

The Proposal and all correspondence and documents relating to it shall be in English.

5. Format and Submission of the Proposal

The Proposal shall be typed, dated and signed by an official legally authorized to enter into contracts on behalf of your organization. The Proposal shall not contain any interlineation, erasures or overwriting except as necessary to correct errors, in which case such corrections shall be initialled by the authorized person(s) signing the Proposal.

The Proposal shall be submitted electronically according to the attached "PROCEDURE FOR SUBMISSION OF ELECTRONIC OFFERS IN 2 SEALED FILES".

Proposals sent by regular e-mail unless clearly submitted as electronically sealed bids as indicated above and following the instructions outlined in Attachment 4 will not be considered and may lead to the rejection of the bidder from the procurement process.

The Proposal shall be received not later than the closing date indicated in the Letter of Invitation.

6. Request for Clarifications and Contacting the Commission

The Commission will issue clarifications, if required. Bidders are requested to e-mail any questions pertaining to this RFP as soon as possible after receipt of the solicitation documents, but in any case no later than 7 business days prior to the Closing Date. No requests for clarifications will be entertained after this time. Questions will only be accepted via e-mail be sent to:

E-mail: procurement@ctbto.org
Subject: Request for Clarifications re RFP No. 2025-0082

The Commission will make all reasonable efforts to issue the clarifications not later than 5 business days prior to the Closing Date.

Except in case of responding to a RFP clarification, no bidder shall contact the Commission on any matter relating to the Proposal after its submission and until the award of the Contract. Any attempt to influence the Commission in its evaluation of the Proposal or the contract award decision may result in the rejection of the Proposal.

7. Eligible Goods and Services

The goods and services (if any) to be rendered under the Contract shall have their origin in the States Signatories of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) which is available in the CTBTO website at www.ctbto.org under Status of Signatures and Ratifications | CTBTO. For purposes of this paragraph, "the origin" means the place from where the materials, goods and/or from which the services are supplied.

8. Type of Contract and Payment

The Commission intends to conclude firm fixed unit prices Call-off Contract based on the attached Model Contract. The terms and conditions of payment for services are described in Clause 13 of the attached Model Contract.

9.   Preparation of the Proposal

The Proposal shall contain, but not necessarily be limited to, the information described below.

The Proposal shall be composed of the following separate parts:

I.   **Technical Proposal**; and
II. **Financial Proposal**;

providing, but not limited to, the following information:

PART I: TECHNICAL PROPOSAL

Please state the reference number and the date of this RFP in the Proposal and any correspondence relating to it.

The Technical Proposal shall follow Attachment 1 Minimum Content of Technical Proposal and Technical Compliance Matrix and contain but not limited to the following information:

Personnel
The Proposal shall state the contact details and address (name, telephone and fax numbers, and e-mail address) of the person/point of contact in your company dealing with this RFP.

Statement of Confirmation, Vendor Profile Form and Bidder's Statement form
The attached Statement of Confirmation, Vendor Profile Form and Bidder's Statement form shall be duly signed and submitted together with the Proposal.

Description of Services
An explanation of the bidder's understanding of the services to be provided and an overall preliminary operational plan for the execution of the services by providing a section-by-section response to the Terms of Reference indicating how the Bidder meet or will meet each of the technical requirements.

Specifications
The Proposal shall include a detailed description of the items proposed and include relevant technical literature.

The Proposal shall also provide any other relevant issue which the bidder would like to bring to the attention of the Commission whether or not having cost implications. This shall include details of warranties/manufacturer's guaranties in respect to any Equipment item.

Commission's Inputs
A description of the expected inputs/resources to be made available by the Commission and at what stage of the services.

Qualifications
Documentary evidence of your qualifications to provide the Services, which shall establish to the Commission's satisfaction that the bidder has technical capability necessary to perform the Contract and other necessary ongoing services as required.

Personnel
Curriculum vitae of key personnel proposed for this contract, including technical experience to perform the Work.

Please note that it is the bidder's responsibility alone to obtain **work permits or visa or similar** for the personnel proposed to implement this project. The Commission will make no effort nor accept any responsibility for obtaining work permits or visa or similar for the Contractor's personnel.

Use of former Preparatory Commission for the CTBTO ("Commission") employees in the preparation of Quotations:

A bidder must <u>not</u>, in the absence of prior written approval from the Commission, permit a person to contribute to, or participate in, any process relating to the preparation of a Quotation or the procurement process if the person:

    a. At any time during the 12 months immediately preceding the date of issue of the Solicitation was an official, agent, servant or employee of, or otherwise engaged by the Commission;

    b. At any time during the 24 months immediately preceding the date of issue of the Solicitation was an employee of the Commission personally engaged, directly or indirectly, in the definition of the requirements, project or activity to which the Solicitation relates.

PART II: FINANCIAL PROPOSAL

The Financial Proposal shall be submitted in the format set out in Attachment 3 "Financial Proposal Form" attached herewith. Bidders shall provide all the information requested in this matrix but may provide additional related content as attachments.

In presenting the cost for each item, adequate justification and calculation must be included in the cost Proposal. All individual costs shall be stated in EURO or US Dollars and be computed to constitute the relevant total price.

Note that clear and detailed explanations would enable us to evaluate the Proposal promptly and proceed with fewer requests for clarifications/justifications in a later stage. This is also a factor influencing the decision for Contract award.

Taxes

In principle the Commission is exempt from taxes. Since the arrangement under which such exemption is respected varies from country-to-country, the selected bidder will be informed by the Commission whether tax exemption will occur at source or whether taxes paid by the selected bidder will be reimbursed by the Commission upon submission of the original supporting documentation.

(1)   For Austrian companies

The price quoted shall be net of Taxes. All applicable Taxes payable by the selected bidder at the conclusion or implementation of the Contract in respect of the goods/services shall be quoted separately or be separately identified on the Proposal together with information on the nature of the tax and its method of calculation.

(2)   For European Union (EU) Companies

The price quoted shall be net of Taxes. All applicable Taxes payable by the selected bidder at the conclusion or implementation of the Contract in respect of the goods/services shall be quoted separately or separately identified on the Proposal together with information on the nature of the Tax and its method of calculation. Due to the VAT exemption applicable to the Commission, no VAT will be charged to the Commission by the EEC Suppliers under the Contract (Ref. EU VAT Council Directive 2006/112/EC, Article 151).

(3) For Non-EU Companies

The price quoted shall be net of Taxes. All applicable Taxes payable by the selected bidder at the conclusion or implementation of the Contract in respect of the goods/services shall be quoted separately or be separately identified on the Proposal together with information on the nature of the tax and its method of calculation. For deliveries to Vienna, Austria, and due to the tax exemption at source applicable to the Commission, no Taxes shall be charged to the Commission under the Contract.

10.   Completeness and Correctness of the Proposal

The Commission reserves the right to verify all information furnished by you in the Proposal through a source of its choice. Any inaccurate information so given may lead to the rejection of the Proposal.

11.   Validity of the Proposal

The Proposal shall be valid for 90 (ninety) days after the deadline for its submission to the Commission, unless an extension of validity has been requested by the Commission.

12.   Correction of Errors

The Commission will check the Proposal for any arithmetic errors. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.

13.   Evaluation of the Proposal

(a)   The Commission, based on the evaluation criteria and method given in Attachment 2, will determine the Proposal that 'most effectively satisfies the technical and operational requirements set out in the solicitation documents'.

(b)   The Commission reserves the right, as it deems appropriate, to award to a single bidder, to award to multiple bidders in any combination or not to award to any of the bidders as a result of this RFP.

14.   Negotiations of the Proposal and Award

The Commission reserves the right to request clarifications on the Proposal and to enter into negotiations regarding technical or commercial aspects of the Proposal before awarding the contract under this RFP.

15. **Modification and Withdrawal of the Proposal**

Bidders may modify or withdraw their Proposals after their submission, provided that written notice of the modification or withdrawal is received by the Commission by the closing date and time for the submission of the Proposal. The Proposal may not be modified subsequent to the closing date and time.

16. **The Commission's Right to Reject the Proposal**

The Commission reserves the right to accept or reject the Proposal or to annul this procurement process at any time prior to the award of contract without having to inform the bidders of the grounds therefore, without thereby incurring any liability to the bidders.

17. **Costs of preparation and submission of the Proposal**

Bidders shall bear all the costs associated with the preparation and submission of their Proposal and the Commission will not be responsible or liable for those costs, regardless of the outcome of this RFP.

18. **Proprietary Information**

All documentation and information contained in this RFP are proprietary to the Commission and shall not be duplicated, used or disclosed -in whole or in part- for any purpose other than to evaluate them and respond to the Commission's request for Proposal or otherwise without prior written agreement of the Commission.

BIDDER'S STATEMENT
PLEASE STATE BELOW & SUBMIT WITH PROPOSAL

Delivery Time:

Shipping weight (kg) and Volume (m^3) – if applicable:

List of recommended consumables and spares including prices and details on local availability, if applicable (please tick):

☐ For one year period ☐ For a period of ………………………….

Warranty period applicable (it shall be for a **minimum of 24 months**, starting from the acceptance of the goods/services by the Commission) – please tick below:

☐ For a two-year period ☐ For a period of ………………………….

Availability of local service in Vienna, Austria (if any):

State country of origin or assembly of all items quoted:

Quantity discount and early payment discount (if any):

Include documentary evidence of qualifications to perform the order, which shall establish to the Commission's satisfaction that the bidder has the financial, technical and production capability necessary to perform the order in its entirety and to provide spare parts and other necessary on-going services as required.

Included in this quotation : **Yes** ☐ **No** ☐

Confirmation that the bidder has reviewed the Commission's Model Contract and the Commission's General Conditions of Contract, and agreed to all terms and conditions.
Yes ☐ **No** ☐
Remarks:

With regards to the software provided with the equipment, state and confirm whether the software licenses are transferable to third parties, i.e. the Commission or the Commission's State Signatories (Member States).

Yes ☐ No ☐ Not applicable ☐
Remarks:

Name:

Name & Title of Contact Person:

Signature & date:

Attachment 1

Minimum Content of Technical Proposal and Technical Compliance Matrix

Below sets out the **Minimum content of the Proposal and the <u>Mandatory Requirements</u> of the Technical Proposal**. Bidders are requested to demonstrate compliance with the requirements and add any further information in support of their Proposal. Please refer to the relevant section of the Terms of Reference for further explanation of the requirements. The information provided will form an integral part of the technical evaluation process.

Part II of this document must be completed and returned as part of the Proposal.

Part I - Minimum content of the Proposal

Item	Minimum content
1. Executive Summary	• Provide an overview of proposal
2. Experience, Resources and Project Management	
2.1 Corporate Profile and Values	• Background of company, ownership, size, location, profile • Discuss and show the relationship of any sub-contractors.
2.2 Corporate Experience	• Experience in managing and executing work of similar scope and complexity. Please provide a description of past projects of similar scope and complexity.
2.3 Project Management Team and Staffing	• Provide management structure and key personnel of the project.
2.4 Availability of resources	• Please address in as much detail as reasonable what resources you deem necessary for the successful implementation of the project and when they will be made available during the intended project implementation, in terms of: – key personnel; – hardware; – software; – Other resources.
2.5 Quality Management Plan	• Provide a Quality Management Plan that describes how quality of services will be maintained throughout the Contract period. • Include QA certifications and applicable references.
3. Meeting the Requirements	

3.1	Assumptions	• The bidder should detail key assumptions that impact the Technical Proposal. • The bidder shall clearly state how many person days are expected to be necessary for the bidder's staff to familiarize themselves with the existing applications.
3.2	Understanding of the project	• The bidder's response should demonstrate a good understanding of the project as described in the Terms of Reference, and describe in detail how the required tasks/services will be accomplished. Elaborate on possible approaches and challenges to providing the requested services specified in section 2 of the Terms of Reference; • The bidder's response should describe in detail the expected inputs/resources to be made available by the Commission.
4.	**Experience of the Contractor**	
		• Provide a list of projects proving experience in the technologies below. For each project specify the role that each proposed personnel had on the project: • Apache Superset: Please include a portfolio of dashboards and charts, highlighting the challenges the bidder had to solve. • Apache Airflow: Please highlight the type of data sources, the complexity of the DAG implementation etc. • Python development: Please highlight how you approached quality assurance using unit and integration testing. • Elasticsearch: Please mention the number and size of indexes that were created. • Gitlab: Please highlight the challenges you had to overcome in this development.
5.	**Skills and Experience of key staff**	
		• Provide the resume of the proposed key personnel which describes in detail all qualifications and experience specified in section 4 of the Terms of Reference.
6.	**Model Contract**	
		• A statement that the bidder has carefully reviewed the Model Contract and its Annexes and is in agreement with all its terms and conditions. Deviations, if any, shall be clearly indicated and justified in the Financial Proposal in an exception list.
7.	**Attachments (as set out in section 9 of the Instructions for the Preparation of Proposals)**	
		• Statement of Confirmation • Vendor Profile Form • Bidder's Statement

Part II – Technical Compliance Matrix including all mandatory requirements

Ref No. of ToR	Requirements	Bidder's Response		
		Yes / No	Cross-reference to section/page in the Proposal	Comments
Requirements for the Contractor				
3	The bidder shall be established for at least 4 years.			
3	The bidder shall have a minimum of 5 years of experience using a formal project management methodology.			
3	The bidder shall have a minimum of 5 years of experience in providing software development services using an Agile methodology.			
3	The bidder shall have a minimum of 3 years of experience working with modern issue tracking and ticket management systems (e.g., Jira).			
3	The bidder proposes at least 4 staff members who meet the requirements outlined in the Team Roster, as described in Section 4 of Annex B Terms of Reference.			
3	The bidder demonstrates, in the form of a plan, the ability to adjust the working hours of relevant staff (e.g., project manager and lead developers) assigned to a Software Team, to overlap by at least two hours with the Commission's working hours (9 a.m. to 5 p.m. CET), upon the Commission's request.			

Table 1 - Evaluation Criteria

STEP1: MANDATORY REQUIREMENTS (PASS/FAIL)

Compliance with all mandatory requirements is required in order to pass stage 1 of the technical evaluation and to be further considered for stage 2 of the evaluation process

No.	Ref No. in TOR	Technical Evaluation: PASS/FAIL Criteria	Points and Scoring PASS/FAIL
		Requirements for the Contractor	
1	3	The bidder shall be established for at least 4 years.	PASS/FAIL
2	3	The bidder shall have a minimum of 5 years of experience using a formal project management methodology.	PASS/FAIL
3	3	The bidder shall have a minimum of 5 years of experience in providing software development services using an Agile methodology.	PASS/FAIL
4	3	The bidder shall have a minimum of 3 years of experience working with modern issue tracking and ticket management systems (e.g., Jira).	PASS/FAIL
5	3	The bidder proposes at least 4 staff members who meet the requirements outlined in the Team Roster, as described in Section 4 of Annex B Terms of Reference.	PASS/FAIL
6	3	The bidder demonstrates, in the form of a plan, the ability to adjust the working hours of relevant staff (e.g., project manager and lead developers) assigned to a Software Team, to overlap by at least two hours with the Commission's working hours (9 a.m. to 5 p.m. CET), upon the Commission's request.	PASS/FAIL

STEP2: WEIGHTED CRITERIA

Only bidders who pass all above criteria will be considered for stage 2 of the technical evaluation process

No.	Ref No. in TOR	Technical Evaluation: Weighted Criteria	Max Points	Weight/Factor	Max Score
		Quality of the proposal	Max Points	Weight/Factor	Max Score
1	Overall	Completeness: Extent to which all aspects of the ToR have been addressed in sufficient detail.	5	2	10
2	Overall	Clarity: Understanding of the scope, and of the duties and responsibilities of the Contractor as per Terms of Reference (TOR). Proposal Quality and compliance with the RFP requirements.	5	2	10
3	Overall	Effectiveness: Suitability of proposed technical approach/methodology for approaching work and completing deliverables as set out on the TOR	5	2	10
3	Overall	Risk Menagment	5	1	5
		Subtotal	20		35
		Requirements for the Contractor	Max Points	Weight/Factor	Max Score
4	3	At least 3 years of experience with Apache Superset (can be with multiple projects with a total of 3 years).	5	2	10
5	3	At least 3 years of experience with Apache Airflow (can be with multiple projects with a total of 3 years).	5	2	10
6	3	At least 2 Python development projects for a total of 5 years including DAGs scripts and a FLASK application	5	2	10
7	3	At least 3 years of experience with Elasticsearch (can be with multiple projects with a total of 3 years).	5	2	10
8	3	At least 2 Gitlab projects for a total of 5 years including the development of CI/CD pipelines.	5	1	5
		Subtotal	25		45
		Requirements for the Contractor's Personnel	Max Points	Weight/Factor	Max Score
9	4	A university degree in a scientific or technical subject with a computing emphasis	5	1	5
10	4	A minimum of 3 years of professional experience with Apache Superset.	5	2	10
11	4	A minimum of 3 years of professional experience with Apache Airflow.	5	2	10
12	4	A minimum of 5 years of professional experience within Python development DAGs scripts and FLASK.	5	2	10
13	4	A minimum of 3 years of professional experience within Elasticsearch.	5	2	10
14	4	A minimum of 3 years of experience developing software in UNIX/Linux environments.	5	1	5
15	4	A minimum of 3 years of experience with Oracle database.	5	1	5
16	4	A minimum of 3 years of experience with Postgres database.	5	1	5
17	4	A minimum of 5 years of experience with agile methodologies.	5	1	5
18	4	A minimum of 3 years of DevOps experience, deploying micro-services using containers (e.g. Docker). Experience with orchestrating micro-services (e.g. Kubernetes) is an advantage.	5	1	5
19	4	A minimum of 3 years of experience building and updating CI/CD pipelines using Gitlab	5	1	5
20	4	A minimum of 3 years of professional experience with Jira.	5	1	5
21	4	Ability to communicate fluently in English. Certification in English is an advantage.	5	1	5
		Subtotal	65		85
		TOTAL - Technical Evaluation	110		165

In order to pass this stage, bidders must obtain a minimum score of 99

The technical evaluation process will be done in two stages:

Stage 1: Technical proposals will first be evaluated against the mandatory requirements outlined in the Sheet "Table 1 - Evaluation Criteria", on a PASS/FAIL basis. Compliance with all mandatory requirements is required in order to pass stage 1 of the technical evaluation and to be further considered for stage 2 of the evaluation process.

Stage 2: The technical proposals that have passed stage 1 of the technical evaluation process, will be evaluated against the weighted criteria set forth in the Sheet "Table 1 - Evaluation Criteria".

In order to pass this stage, bidders must obtain a minimum score of 99 and in accordance with the scoring indicated in the Sheet "Table 2 – Scoring".
Failing one of the criteria in Stage 2 will not result in the entire technical proposal failing; provided that the technical proposal obtains a minimum score of 96 as already stated.

TABLE 2 - Scoring

Points	Explanation - to be considered when assigning the points
0	Unsatisfactory - Response incomplete, inadequate and/or non-responsive to the criterion. Bidder does not clearly understand the criterion.
1 - 2	Weak - Does not meet the minimum technical, functional, or performance related criterion.
3	Good - Meets the minimum requirements of the criterion.
4	Very good - Exceeds the minimum requirements of the criterion in some areas.
5	Excellent - Exceeds the minimum requirements of the criterion in all areas.

2. Financial Evaluation and Commercial Evaluation

Once the technical evaluation is finalized, the financial offers of the technically compliant bidders will be evaluated in accordance with the formula given below:

X= Max Available Points * Y/Z

Legend:
X= points to be assigned to the offer being evaluated
Y= price of the lowest priced, technically compliant offer
Z= price of the offer being evaluated

The weight of the technical and financial components is 60% and 40% respectively, subject to contractual acceptability.
The Contract(s) will be awarded to the bidder who receives the highest combined score resulting from the technical and financial evaluations, subject to contractual acceptability.

Attachment 3 - Financial Proposal Form

1. The bidder is requested to fill in the cells in yellow. Please do not modify the cells in bule and grey.

2. Please specify currency (USD or Euro only). The unit prices shall be firm and fixed throughout the Contract duration.

3. This is a unit-based Contract. The exact number of working days will be determined/called-off in the form of Work Orders (WO) at the rates quoted in this Attachment.

4. The person-days noted are an estimate, and the Commission reserves the right, at its sole discretion, to call-off fewer person-days or no person-days at all.

5. Estimated costs for travel based on the most economic and direct route shall be specified in the Financial Proposal.
   Bidders shall indicate whether the travel costs (without DSA) are firm and fixed for the duration of the Contract, or they are estimated.
   In the case the travel costs are estimated, payment shall be based on actual costs against relevant supporting documentation e.g. invoices for travel, and shall not exceed 10% of the estimate.

6. If applicable, Daily Subsistence Allowance (DSA) shall be calculated based on the values provided by the International Civil Service Commission (ICSC) https://icsc.un.org/.
   Daily subsistence/per diem will be reimbursed at the applicable Daily Subsistence Allowance (DSA) rate of the United Nations (and UN EUR/USD exchange rate, if applicable).

7. The bidder is requested to submit the dully signed Financial Proposal Form in PDF format and in Excel Format.

8. In principle the Commission is exempt from taxes.
   All applicable Taxes payable by the selected bidder at the conclusion or implementation of the Contract in respect of the goods/services shall be quoted separately or be separately identified on the Proposal.

ATTACHMENT 3 : Financial Proposal Form

1. Labor Rates

TOR	On-boarding / On site / Off site	Indicative Number of Days per year	Unit	Fixed Period			Optional Period 1	Optional Period 2	Fixed Period			Optional Period 1	Optional Period 2
				Year 1	Year 2	Year 3	Year 4	Year 5	Year 1	Year 2	Year 3	Year 4	Year 5
				Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD
Section 2 Scope of Work	On-boarding		Man day		NA	NA	NA	NA	$ -	NA	NA	NA	NA
	Off site (anywhere else)	493	Man day						$ -	$ -	$ -	$ -	$ -
	On site (CTBTO HQ Vienna)	7	Man day						$ -	$ -	$ -	$ -	$ -
Total		500							$ -	$ -	$ -	$ -	$ -
Total per Period									$ -			$ -	$ -
Grand Total for 1. Labor Rates									$ -				

1) Please specify currency (USD or Euro only). The rates shall be firm and fixed throughout the term of the Contract

2) Please confirm that the On-site unit price does not include the DSA and return travel.

3) Please indicate how many person days are expected to be necessary for on-boarding.

2. Travel

TOR	Indicative Number per year	Unit	Fixed Period			Optional Period 1	Optional Period 2	Fixed Period			Optional Period 1	Optional Period 2
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 1	Year 2	Year 3	Year 4	Year 5
			Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Unit Price in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD	Total Price per year in EUR or USD
Section 2 Scope of Work Return travel to Vienna for on-site work	1	Return Trip						$ -	$ -	$ -	$ -	$ -
Grand Total for 2. Travel								$ -				-

1) Please specify currency (USD or Euro only).

2) Bidders shall indicate whether the travel costs (without DSA) are firm and fixed for the duration of the Contract, or they are estimated.

3. DSA

If applicable, Daily Subsistence Allowance (DSA) shall be calculated based on the values provided by the International Civil Service Commission (ICSC) https://icsc.un.org/.

Daily subsistence/per diem will be reimbursed at the applicable Daily Subsistence Allowance (DSA) rate of the United Nations (and UN EUR/USD exchange rate, if applicable).

Signature of Bidder:

Date:

CTBTO | COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION

Attachment 4

"Procedure for Submission of Electronic Offers in 2 Sealed Files"

The Commission invites you to submit your sealed offer (Bid, or Proposal) in response to the solicitation forming part of this request.

Please be sure to follow the instructions below very carefully, so that the documents you submit are encrypted, and cannot be opened without an encryption key (password). If the documents are not encrypted, they will not be accepted as part of this tender process.

CRITICAL INFORMATION:

Create separate zip files for the technical offer and the financial offer (labelling them clearly in the title) with different encryption keys. Instructions for how to do this are provided below.

Step 1: You provide the encryption key (password) for the *Technical Offer only* (in accordance with the below instructions)!

Step 2: After the Commission has performed the evaluation of the Technical Offer, if your Technical Offer is considered to be acceptable, the Commission will request the encryption key (password) for the Financial Offer you have already submitted by the tender Deadline.

Should you have any questions, please send an email to procurement@ctbto.org.

We recommend that you leave yourself plenty of time to complete the below process (including getting any necessary assistance from the Commission), as late offers will not be accepted.

INSTRUCTIONS:

1. In a **WINDOWS** environment, one way of meeting the requirements is as follows.

    We recommend using the open-source, free software **7-zip**, but if you are comfortable with other tools, the result should be the same, as long as you can apply encryption to the archive. In the below, we'll use 7-zip as an example. (You can download the 7-zip code for Windows at: 7-zip.org)

2. In **LINUX** environment, you can use, for instance, "sha1sum" on the command line.

Creating the archives for submission

Regardless of whether the offer is a single file, or a collection of files, the files are easier to manage if delivered as a single, compressed file. Compressing the archive is a common way to meet size limitations in email systems.

As an example of how to submit your offer in the required format: assuming you are supplier "SOFTCOMP" and have the following files related to the offer for "RFP 2020-0010/EDWALD". *(You will need to replace these elements with the real information for your actual offer in line with the relevant Instructions for Preparation and Submission of Proposals/Bids.)* Assuming further that you have installed the 7-zip software on the Windows system you are using.

We will only go through the creation of the Technical Offer (Proposal/Bid) component; the Financial Offer (Proposal/Bid) component is similar.
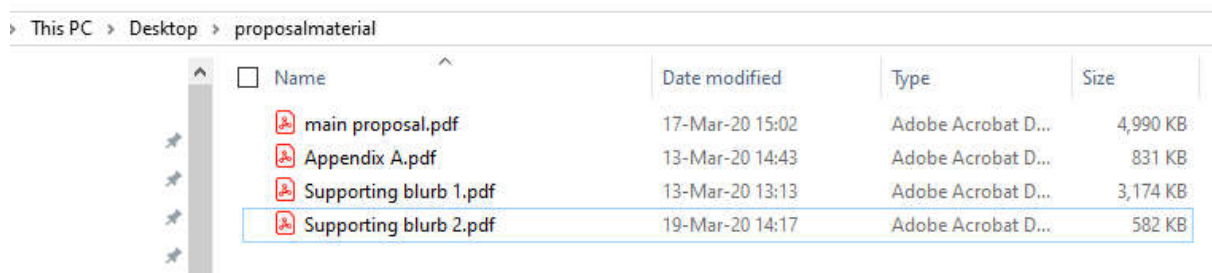
Figure 1 An example set of files to be submitted

Select the four files and right-click; a Dialog box pops up, with one of the options being "**7-ZIP   >**". Hover your cursor over the " >" part and a few more options appear, select the "**Add to archive**" option.

Another dialog box pops up (see 'Figure 2, *Creating an Archive*', next page):

Using the standard Windows methods, select a suitable location for the archive (if you don't change it, the archive gets created right where the selected files are), and give it a name in the form of: "SOFTCOMP-2020-0010-EDWALD-TECHNICAL-BID", of course replacing all the elements with the true values for the offer in question: the actual company indicator, and the actual RFP/ITB identification string. Note that it is not possible to put a slash "/" in the file name, and therefore put a dash "-" instead. Leave the file extension ".zip' as is.

Leave all the other settings as is, except: **add a password to the encryption** (see figure 2 below). This is done by typing the same password (of your choosing) twice in the two text fields in the lower right hand corner.

Make a note of this password. You must choose different passwords for the two zip archives, that is, the Technical and the Financial Proposal/Bid.

Figure 2 Creating an Archive

Now, we seek the "SHA1 Hash", and electronic fingerprint of the archive you have just created. The hash is a string calculated from your file(s) and can be used to guarantee that the file has not been modified since you created it. Any change to the file will result in a different hash value.

There are many ways of calculating this; two common options are decribed below.

If the appropriate functionality is available in your Windows environment: Select the compressed archive in the Windows file manager, (eg. SOFTCOMP-2020-0010-EDWALD-TECHNICAL-BID.zip) and right click. One of the options to select is "**CRC SHA >**". Hovering over the " **>**" brings a few more options to light, select the **SHA-1** option. A smaller dialog pops up: (see Figure 3, *SHA1* below). Clicking Ctrl-C grabs the contents of this box. You can close the box after copying the contents. (You can paste the contents into a mail message, for instance.)

Figure 3 SHA1

If this CRC SHA function is not available by 'right-click' on your Windows version, you can also do this from 'the command line', a slightly more complicated way. Open a CMD window (see sidebar below), move to the folder where your archive is, and execute the command: "`certutil  -hashfile  SOFTCOMP-2020-0010-EDWALD-TECHNICAL-BID.zip  sha1`" where you obviously replace the name of the file with your real file name. The output of this command is the SHA1 "hash". You can copy-and-paste the string for use in the email (below).

Sidebar: How to open a CMD window in Windows:

The way to open a Command window (or 'terminal') depends on the version of Windows you have. The different methods are very clearly described in the following article, but a quick internet search will find multiple descriptions.

https://www.lifewire.com/how-to-open-command-prompt-2618089

Finally,

1. Create a new email, Subject: example- "SOFTCOMP-2020-0010-EDWALD". Add the two compressed archives, that is, the Technical Offer and the Financial Offer archives as attachments. The text of the email should contain the SHA1 information for both archives. **SEND THIS TO:** sealed_bids@ctbto.org   (note that there is an underscore "_" between "sealed" and "bids"). (Should the email become larger than your mail system allows, you can

try sending the two archives in separate emails. Take care to include the right SHA1 information with each file.)

2. Create a new email, Subject: example- "SOFTCOMP-2020-2010-EDWALD-Technical Offer" the contents of which must contain the Encryption Key for the Technical Offer (the password you used when creating the Technical Offer). (Again, note the underscore between 'bid' and 'keys'.)
**SEND THIS TO:** bid_keys@ctbto.org

IMPORTANT NOTE: As stated above, only send the Encryption Key for the Technical Offer to the bid_keys@ctbto.org mailbox when sending your Technical and Financial Offer to the sealed_bids@ctbto.org mailbox. You shall only send the Encryption Key for the Financial Offer to the Commission if and when informed by the Commission that your Technical Offer had been evaluated as "technically acceptable".

The Financial Offer Encryption Key will need to be provided by you to the same e-mail (bid_keys@ctbto.org) within 48 hours of the Commission's request, clearly marked in Subject: Encryption Key for (example): "SOFTCOMP 2020-2010 EDWALD-Financial Offer". If your Offer is not considered "technically acceptable", the Commission will not request an Encryption Key for your Financial Offer, and it will remain unopened.

As mentioned above, should you have questions or difficulties, please send an e-mail to procurement@ctbto.org.

1. Please download Hash/Check app:
   https://apps.apple.com/at/app/hash-check/id1550525767?l=en-GB&mt=12

2. It is very simple to use. After installing, just open the app and click on "File" to open the zip file you want to inspect.
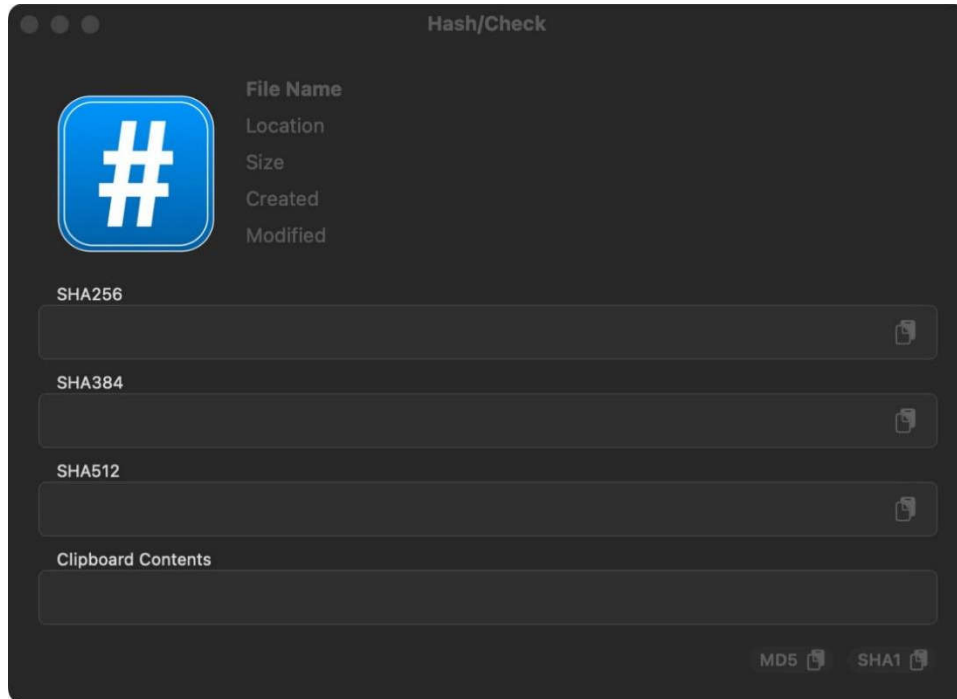
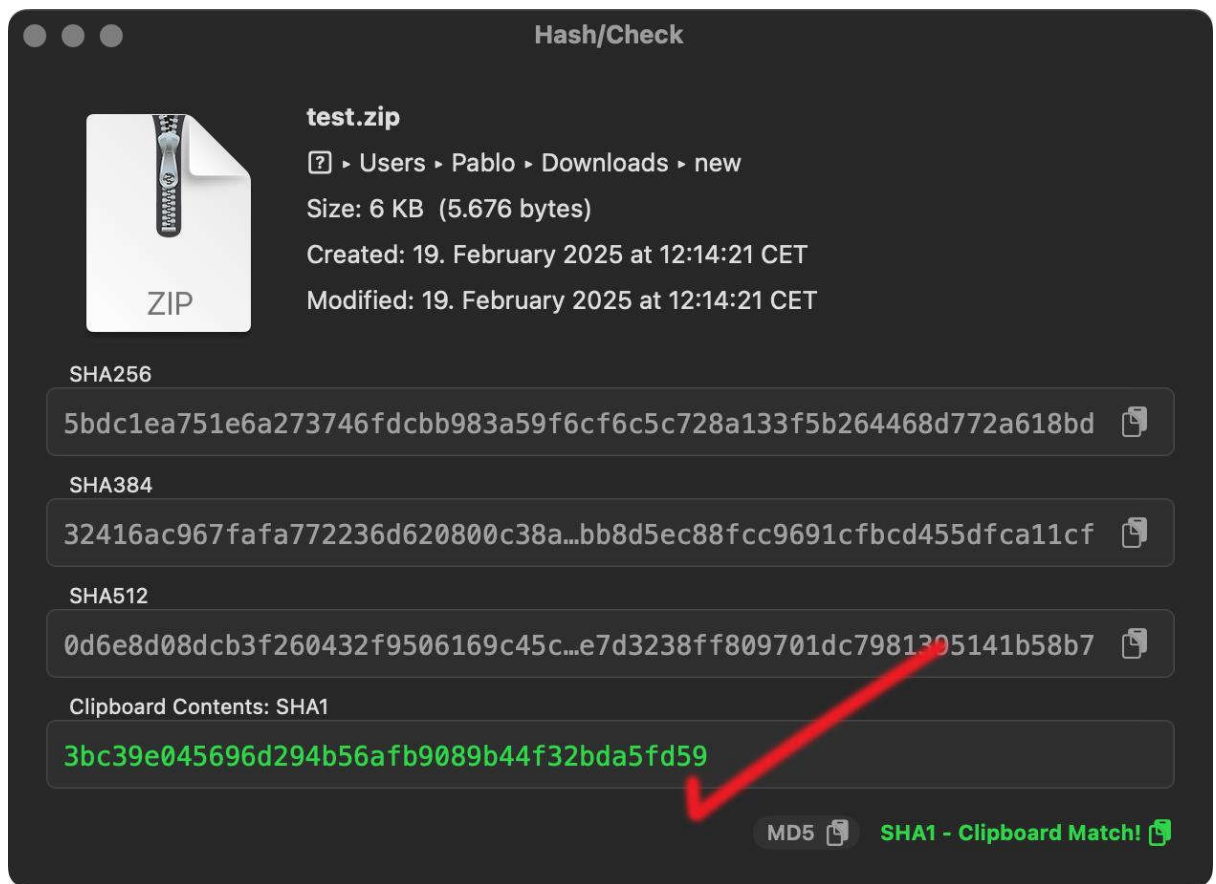3. Please use your submitted technical and financial proposals
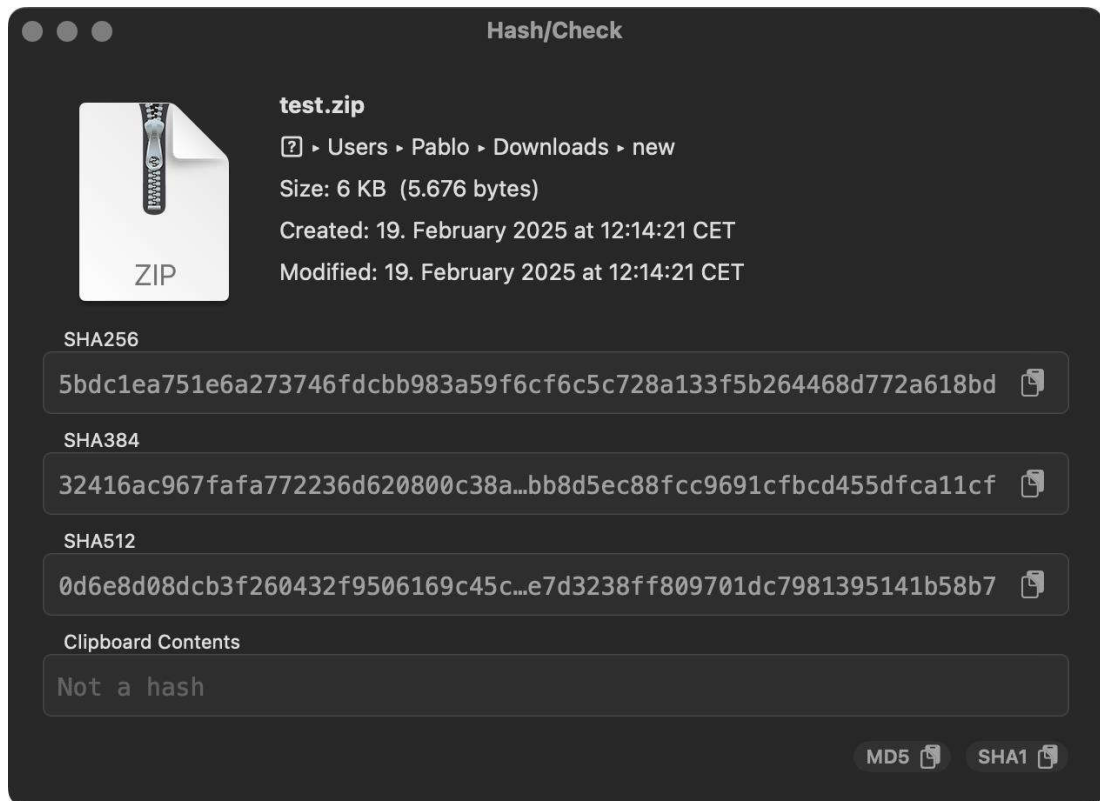
4. And it automatically creates several different hash values ... --- But the one we need SHA1 is not there ...
So you press on the little SHA1 icon on the bottom right ...
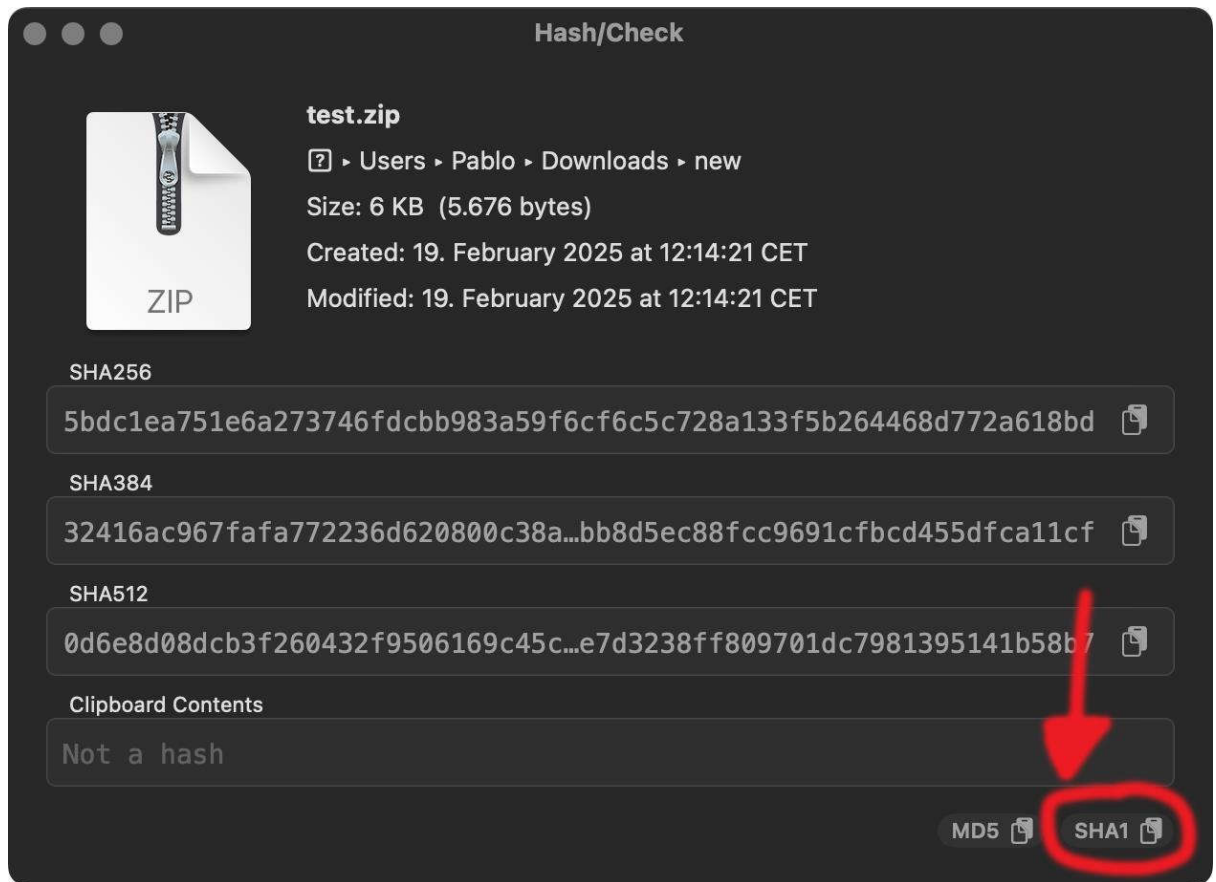
5. The SHA1 hash is calculated and copied to the clipboard automatically for further use.

--------------------------------OR--

Another alternative would be to use the terminal and the command: shasum /path/to/file
Here is a little tutorial on how to use it. It is strait forward and simple to use. Please see
attached the instructions as a pdf as well.
https://osxdaily.com/2012/02/05/check-sha1-checksum-in-mac-os-x/

Finally,

1. Create a new email, Subject: example- "SOFTCOMP-2020-0010-EDWALD". Add the two
   compressed archives, that is, the Technical Offer and the Financial Offer archives as
   attachments. The text of the email should contain the SHA1 information for both archives.
   SEND THIS TO: sealed_bids@ctbto.org   (note that there is an underscore "_" between
   "sealed" and "bids"). (Should the email become larger than your mail system allows, you can
   try sending the two archives in separate emails. Take care to include the right SHA1
   information with each file.)

2. Create a new email, Subject: example- "SOFTCOMP-2020-2010-EDWALD-Technical Offer" the contents of which must contain the Encryption Key for the Technical Offer (the password you used when creating the Technical Offer). (Again, note the underscore between 'bid' and 'keys'.)
   SEND THIS TO: bid_keys@ctbto.org

   IMPORTANT NOTE: As stated above, only send the Encryption Key for the Technical Offer to the bid_keys@ctbto.org mailbox when sending your Technical and Financial Offer to the sealed_bids@ctbto.org mailbox. You shall only send the Encryption Key for the Financial Offer to the Commission if and when informed by the Commission that your Technical Offer had been evaluated as "technically acceptable".

   The Financial Offer Encryption Key will need to be provided by you to the same e-mail (bid_keys@ctbto.org) within 48 hours of the Commission's request, clearly marked in Subject: Encryption Key for (example): "SOFTCOMP 2020-2010 EDWALD-Financial Offer". If your Offer is not considered "technically acceptable", the Commission will not request an Encryption Key for your Financial Offer, and it will remain unopened.

   As mentioned above, should you have questions or difficulties, please send an e-mail to procurement@ctbto.org.

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MODEL CONTRACT

(SAP No.   )

between

THE PREPARATORY COMMISSION

FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY

ORGANIZATION

and

THE NAME OF THE CONTRACTOR

for

the provision of services pertaining to

SOFTWARE DEVELOPMENT AND MAINTENANCE SERVICES TO
SUPPORT QUALITY MANAGEMENT, PERFORMANCE MONITORING,
AND EVALUATION ON A CALL-OFF BASIS

This Contract comprises this cover page, a table of contents, 9 (nine) pages of text, a signatories page, a List of Annexes and 3 (three) Annexes (A to C)

June 2025

TABLE OF CONTENTS

MODEL CONTRACT

This CONTRACT is entered into between the PREPARATORY COMMISSION FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION (hereinafter referred to as the "Commission"), having its office located at Wagramer Strasse 5, 1400 Vienna, Austria, and _____ (hereinafter referred to as the "Contractor"), having its registered office located at _____ [address] (both hereinafter individually referred to as the "Party" and collectively as the "Parties").

The Parties hereto mutually agree as follows:

1   DEFINITIONS

In this Contract, words and expressions shall have the same meanings as respectively assigned to them in the General Conditions of Contract and the Terms of Reference. In addition, the following words and expressions shall have the meanings hereby assigned to them:

"**Annex A**" means the Commission's General Conditions of Contract.

"**Annex B**" means the Commission's Terms of Reference.

"**Annex C**" means the Contractor's Proposal dated XXX.

"**Contract**" means this document, its Annexes and any further modifications or such further documents as may be expressly incorporated in this Contract by the Parties in accordance with Clause 21 below.

"**Contractor**" means the legal entity named in the preamble of this Contract or its successors. The Contractor shall be the only interface for all matters pertaining to execution of the Work under this Contract.

"**Goods**" means the equipment to be supplied and delivered by the Contractor under the Contract as requested by the Commission under the WO.

"**Services**" means the activities or tasks to be performed by the Contractor under the Contract as requested by the Commission under the WO.

"**Party(ies)**" means the Commission and/or the Contractor, as the context requires.

"**Rule(s)**" means any regulation(s), official directive(s), ordinance(s), guideline(s), customs and practices.

"Work" means all the Goods and Services to be provided by the Contractor, including its affiliates and/or subcontractors, in order to fulfil all its obligations under the Contract, and the remedying of any defects therein.

"Work Orders ('WO')" mean orders issued by the Commission which specify the (parts or portions of) Work to be performed by the Contractor upon request by the Commission in accordance with Annexes B and C.

2   AIM OF THE CONTRACT

The aim of this Contract is to provide services namely, "Software Development and Maintenance Services to Support Quality Management, Performance Monitoring, and Evaluation on a Call-off Basis" (hereinafter referred to as the "Services" or "Work") to the Commission.

3   ENTRY INTO FORCE AND DURATION OF THE CONTRACT

The Contract shall enter into force upon the date of the last signature by the authorized Representatives of the Parties (hereinafter referred to as the "**Effective Date**") and shall be valid until the Parties fulfill all their obligations hereunder.

4   COMMENCEMENT AND COMPLETION OF THE WORK

(i)   The Commission shall have the right, but not obligation, to call-off the Works in the form of WO within a period of three (3) years from the Effective Date or the performance of a maximum of 1,500 (one thousand five hundred) person-days by the Contractor, whichever occurs first (hereinafter referred to as the "**Call-off Period**"). The commencement and completion date for the performance of the Works (hereinafter referred to as "**Commencement Date**" and "**Completion Date**", respectively) will be set out in the respective WO.

(ii)   The Commission shall have the option to extend the Call-off Period twice (2) for a duration of one (1) year each or the performance of a maximum of 500 (five hundred) person-days per year subject to the availability of funds, under the same terms and conditions as those of this Contract. The Commission will inform the Contractor about its intention to extend the Work at least one (1) month prior to the expiry of the Contract. The optional extensions will be implemented through a written notification to the Contractor by the Commission.

5   STANDARD OF WORK

The Contractor shall perform the Work in a workmanlike manner in conformity with standard professional practices, using qualified personnel and in strict accordance with the Contract. The Contractor shall furnish the highest skill and judgement and cooperate with the Commission, including all the Commission's consultants and agents, in best furthering the interests of the Commission and the aim of this Contract. The Contractor shall provide efficient business administration and supervision, and it shall perform the Work in the best way and in the most expeditious and economical manner consistent with the requirements of the Contract.

6 RESPONSIBILITIES OF THE CONTRACTOR

(a) The Contractor shall provide the Work described in Annexes B and C.

(b) The Contractor shall provide qualified English-speaking personnel as necessary to perform the Work under this Contract. The key persons shall be available for possible tasks related to the Work throughout the duration of the Contract period. Any replacement of the key personnel shall be made in accordance with Clause 7 of Annex A.

(c) The Contractor acknowledges that after the completion of the Work under this Contract, the Commission shall own the Software and source code described in Annexes B and C and the Contractor shall have no rights in that Software or source code unless granted by the Commission under Clause 24 of this Contract.

7 ORGANISATION OF CONTRACT IMPLEMENTATION

(a) During the term of the Contract, the Commission has the right, but not the obligation, to initiate performance of the Work through the issuance of individual WOs in accordance with sections 2 and 5 of Annex B based on the firm fixed unit prices set out in Annex C. The Contractor shall not perform any Work if not requested by the Commission through an WO. However, the Contractor may propose a WO for the Commission's evaluation.

(b) The WO issued by the Commission shall be the basis for acceptance, invoicing and payment of any Work performed by the Contractor.

(c) The performance of the Work shall be made in full in accordance with the respective WO. Partial service performance of a WO will not be accepted and reimbursed without prior written agreement by the Commission.

(d) The Work shall be performed at the place and within the approved Work Plan specified in the relevant WO.

(e) The Commission may revise a WO as and when it may deem necessary.

8 WARRANTY

(a) The provisions of Clause 28 of Annex A shall apply to the Work performed by the Contractor.

(b) The Contractor shall ensure that the Commission shall experience no loss of service or support level by sub-contractors or repair agents acting on behalf of the Contractor.

9 PERMITS, NOTICES, LAWS AND ORDINANCES

(a) The Contractor shall obtain and pay for all permits and inspections necessary for the proper execution and completion of the Work that are customarily obtained upon execution of this Contract and that are legally required at the time the Proposal is received by the Commission. This shall include, but not be limited to, work permits, visa, or similar.

(b)   The Contractor shall give all notices required by the nature of the Work.

(c)   If the Contractor notices that the Work or any part thereof required under this Contract is not in accordance with applicable laws and Rules, or with technical or safety standards, it shall promptly notify the Commission thereof in writing.

10   PROTECTION OF PERSONS AND PROPERTY

(a)   The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programmes in connection with the Work.

(b)   The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury and loss to:

   (i)   all employees on the Commission's premises and all other persons who may be affected thereby;

   (ii)   all the Work, equipment, its spare parts, materials and supplies to be incorporated therein, whether in storage on or off the Commission's premises, which are under the care, custody or control of the Contractor or any of its subcontractors; and

   (iii)   other property on the Commission's premises or adjacent thereto.

(c)   The Contractor shall give all notices and comply with all applicable laws and Rules bearing on the safety of persons and property and/or their protection from damage, injury and loss.

(d)   The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for the safety and protection of persons and property, including posting danger signs and other warnings against hazards and promulgating safety regulations.

(e)   When the use or storage of combustible, explosive or other hazardous materials is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

(f)   The Contractor shall be responsible for the prevention of accidents on the Commission's premises during the execution of the Work.

(g)   In any emergency affecting the safety of persons or property, the Contractor shall promptly act to prevent threatened damage, injury and loss.

(h)   The Contractor shall promptly remedy all damage and loss to any property, referred to in Sub-Clause (b) above, caused in whole or in part by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible under Sub-Clause (b) above, except damage and loss attributable to the acts or omissions of the Commission or anyone directly or indirectly employed by it, or of anyone for whose acts the Commission may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to its obligations under Clause 9 of Annex A.

11   RESPONSIBILITIES OF THE COMMISSION

The Commission shall designate members of its staff to act as points of contact for the Contractor to ensure that the Work is carried out in accordance with Annexes B and C and shall promptly notify the Contractor thereof. The Commission shall respond promptly to requests for information by the Contractor regarding the Work.

12   CONTRACT PRICE

(a)   The Commission shall pay to the Contractor, in consideration of the full and proper performance of its obligations under the Contract, as follows:

    (i)   For each WO issued during the firm Call-off Period specified in Clause 4(i) above, the firm fixed unit prices pursuant to Annex C and, if applicable, the variable costs (travel costs and other expenditure) specified in Annex C;

    (ii)   subject to sub-clause (b) below, for each WO issued during the first optional extension of the Call-off Period specified in Clause 4(ii) above, the firm fixed unit prices pursuant to Annex C and, if applicable, the variable costs (travel costs and other expenditure) mentioned in Annex C;

    (iii)   subject to sub-clause (b) below, for each WO issued during the second optional extension of the Call-off Period specified in Clause 4(ii) above, the firm fixed unit prices pursuant to Annex C and, if applicable, the variable costs (travel costs and other expenditure) mentioned in Annex C;

    (iv)   If applicable, per diem charges (DSA), which cover lodging, meals and incidental travel expenses, based on the United Nations Daily Subsistence Allowance (UN DSA) rates effective at the time of the respective travel (the WO will include the UN DSA rates applicable at the time of issuance of the WO), unless specified otherwise by the Commission;

    (v)   If applicable, the actual incurred Travel Costs, excluding DSA on the basis of simple economy return tickets for most direct route, not to exceed the estimated Travel Costs pursuant to the relevant WO, by more than 10% for each return travel under an issued WO, unless specified otherwise by the Commission;

hereinafter referred to as the "Contract Price".

(b)   In the event that the Commission decides to extend the Call-off Period early, as foreseen in Clause 4(ii) of this Contract, the Contactor will be reimbursed for the person-days called off in this period as follows:

    (i)   until the expiry of the initial Call-off Period, the daily rate set out in subparagraph (a)(i) above;

    (ii)   after the expiry of the initial Call-off Period, the daily rate agreed for the respective extension (subparagraph (a)(ii) or (iii) above).

(c)   The unit prices set out in Annex C shall be held fixed for the entire duration of the Contract.

(d)   The Contract Price shall cover all costs and expenses incurred by the Contractor for the full and proper performance of all relevant obligations under the Contract (including travel, allowances, management and remuneration of the personnel, national income tax, medical insurance, and social security contributions).

(e)   The Contractor shall be reimbursed by the Commission for such taxes on the basis of actual amounts paid and duly documented by the Contractor as per Clause 13(e) below.

OR

No Taxes are applicable under this Contract.

13 PAYMENT

(a)   The Contract Price shall be paid upon satisfactory completion of each deliverable for the Work and satisfactory completion of each WO and submission of the following:

    i)   Invoice drawn up in accordance with this Clause 13;

    ii)   Documentation referred to in sub-Clause 13 (e) below supporting any Taxes paid;

    iii)   Supporting documentation of costs actually incurred, such as copies of air ticket, invoices, insurance policies and shipping documents, as appropriate; and

    iv)   Any other documentation that might be required under the applicable WO.

(b)   The Commission will make the payments to the Contractor on the basis of an invoice submitted by the Contractor as per Sub-Clause (d) below. All payments shall be made within 30 (thirty) days of the receipt and acceptance of the invoice, provided that the Work has been satisfactorily completed and has been accepted by the Commission.

(c)   The making of any payment hereunder by the Commission shall not be construed as an unconditional acceptance by the Commission of the Work accomplished by the Contractor up to the time of such payment.

(d)   The Contractor shall submit an invoice electronically, from the Contractor's official e-mail address in PDF format, duly signed and stamped by the Contractor and submitted to the Commission's email address specified in Clause 22 below. Each invoice shall contain the Contract number (CTBTO and SAP numbers), detailed banking instructions, including the name and address of the Contractor's bank, account number, account holder's name and SWIFT, IBAN and/or ABA codes for payment by electronic transfer.

(e)   Applicable Taxes payable by the Contractor and/or its subcontractor(s) in respect of the Work shall be invoiced separately or be separately identified on the invoice. Actual payment of the Taxes must primarily be supported by original documentation such as invoices, bank account statements, transfer orders, or receipts issued by the local tax or customs authorities. If submission of such original documentation is not possible for justifiable reasons, their copies could be accepted by the Commission provided that they are duly signed and certified by

local tax or customs authorities. In case the currency in which the Taxes are levied is not the currency of the Contract, bank statements (or equivalent) showing the exchange rate used for the conversion should be submitted to the Commission, in addition to any other supporting documentation.

14 TEMPORARY SUSPENSION OF WORK

The Commission may, at any time, temporarily suspend the Work, in whole or in part, being performed by the Contractor under this Contract by giving 30 (thirty) days' advance notice in writing to the Contractor. The Work so suspended shall be resumed by the Contractor on the basis of a revised time schedule and on terms and conditions to be mutually agreed upon between the Parties.

15 DELAYS AND EXTENSION OF TIME

(a)   If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Commission or by any of its employees, or by any other contractor employed by the Commission, or by changes in the Work ordered by the Commission, or by any causes beyond the Contractor's reasonable control, or by any other cause which the Commission determines may justify the delay, then the time for completion of the Work shall be extended by an amendment to this Contract in accordance with Clause 21 below for such reasonable time as the Commission may determine.

(b)   Any request for extension of the time for reasons referred to in Clause 15(a) above shall be submitted to the Commission not later than 20 (twenty) days after the commencement of the delay, otherwise said request shall be deemed to be waived. Such request shall state grounds for the delay and shall provide an estimate of the probable effect of such delay on the progress of the Work.

16 CONTRACTOR'S CLAIMS AND REMEDIES

In no event shall the Contractor make any claim against the Commission for or be entitled to additional costs or compensation resulting from any delays in the progress or completion of the Work or any portion thereof, whether caused by the acts or omissions of the Commission, including, but not limited to, damages related to overheads, loss of productivity, acceleration due to delay and inefficiency. The Contractor's sole remedy in such event shall be an extension of time for completion of the Work, provided the Contractor otherwise meets the requirements and conditions set forth in this Contract.

17 ENTIRE AGREEMENT

This Contract represents the final agreement in respect of the Work and shall supersede all prior agreements and representations between the Parties in this respect. Annexes A to C shall constitute integral parts of this Contract and shall be of full force and effect.

18 DISCREPANCIES

If there are discrepancies or conflicts between any of the documents that are part of this Contract, the document to prevail shall be given precedence in the following order:

(i)   This document;

(ii) The Commission's General Conditions of Contract (Annex A);

(iii) The Commission's Terms of Reference (Annex B);

(iv) The Contractor's Proposal (Annex C);

(v) The relevant WO.

19 SEVERABILITY

If any term and/or provision of this Contract is or becomes invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions of this Contract shall not in any way be affected or impaired thereby.

20 NO WAIVER

Failure by a Party to enforce a right shall not be deemed to be a waiver of that right unless otherwise expressly provided in this Contract.

21 CONTRACT AMENDMENT

No modification of, or change in, this Contract, or waiver of any of its provisions, or additional contractual relationship with the Contractor shall be valid unless approved in the form of a written amendment to this Contract, signed by duly authorized Representatives of the Parties.

22 TRANSMISSION OF NOTICES AND OTHER DOCUMENTS

Notices, invoices, reports and other documentation under the Contract shall be delivered or sent to the relevant Party as follows (or to such person/title, address or email address as the Party may substitute by notice after the date of the Contract):

(a)   The Commission:

For Contractual Issues:

Chief, Procurement Section
Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)
Vienna International Centre
Wagramerstrasse 5, P.O. Box 1200
1400 Vienna, Austria
Tel: + (43 1) 26030 6350
E-mail: procurement@ctbto.org

For invoices:

Accounts Payable
CTBTO Financial Services Section
Vienna International Centre
Wagramerstrasse 5, P.O. Box 1200
1400 Vienna, Austria

Tel: + (43 1) 26030 6292
E-Mail: Payable_Invoices@ctbto.org

For related enquiries:
Payments@ctbto.org

(b)   The Contractor:

For Contractual Issues and Invoices and Related Enquiries:

Name: ……………
Title ………………
Address ………………
Tel: ……………………
Email: ………………

23   EFFECTIVENESS

(a)   Except as provided below, any communication in connection with the Contract will be deemed to be given as follows:

    (i)   if delivered in person, at the time of delivery;

    (ii)   if by registered mail or courier, when received;

    (iv)   if by electronic communication, when retrievable by the Commission in document form.

(b)   A communication given under Clause 23(a) above that is received or becomes retrievable on a non-working day or after business hours at the seat of the Commission will only be deemed to be given on the next working day of the Commission.

24   SOFTWARE LICENCE

The Commission hereby grants the Contractor a non-exclusive, non-transferable, irrevocable license to use the Software for the duration of the Contract and for the purpose of doing the Work under the Contract. The use of the source code is only for the duration of the Contract and for the Work required under the Contract. All title, ownership rights and intellectual property rights in and to the Software shall remain with the Commission. The Contractor acquires no title, right or interest in the Software, other than the license(s) specifically granted herein by the Commission.

IN WITNESS hereof, the duly authorized Representatives of the Parties have executed this Contract:

For and on behalf of **the PREPARATORY COMMISSION FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION:**

_____

Name, Position/Title

Date: _____   Place: Vienna, Austria

For and on behalf of **[REGISTERED NAME OF THE CONTRACTOR]:**

_____

Name, Position/Title

Date: _____   Place: _____

LIST OF ANNEXES

ANNEX A: THE COMMISSION'S GENERAL CONDITIONS OF CONTRACT

ANNEX B: THE COMMISSION'S TERMS OF REFERENCE

ANNEX C: THE CONTRACTOR'S PROPOSAL

Annex B

TERMS OF REFERENCE

Software Development and Maintenance Services to Support Quality Management, Performance Monitoring, and Evaluation on a Call-off Basis

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1. INTRODUCTION

The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (hereinafter referred to as the "Commission") is the international organization setting up the global verification system foreseen under the Comprehensive Nuclear-Test-Ban Treaty (hereinafter referred to as the "CTBT"), which is the Treaty banning any nuclear weapon test explosion or any other nuclear explosion. The Treaty provides for a global verification regime, including a network of more than 300 stations worldwide, a communication system, an International Data Centre and on-site inspections to monitor compliance. More information can be found on www.ctbto.org

The Commission develops, maintains and supports various web-based applications to support its business processes. These applications are built using numerous software stacks, including Python, Apache Superset, Apache Airflow, Elasticsearch, Oracle and Postgres.

To continue development and maintenance of these web-based applications, the Commission is requesting expert web development services that provide experience in the technologies used as well as domain specific expertise.

2. SCOPE OF WORK

The Commission seeks to establish 3 years Contract, subject to 2 extensions of one year each.

These Terms of Reference (hereinafter "ToR") establish the technical framework for the provision of on-site and off-site software engineering services. These services encompass the development and maintenance of business and administrative applications designed to support the Commission's Quality Management, Performance Monitoring, and Evaluation functions (hereinafter "Services"). The Commission is looking for the following software engineering services:

- Design and development of new Airflow DAGs
- Design and development of new Apache Superset Dashboards and Charts
- Design and development of new software for Quality Management, Performance Monitoring and Evaluation or enhancements to existing software
- Create documentation and training material
- Support and maintenance for existing software systems

These ToR define the technical requirements the Contractor and its services shall meet.

The maximum volume of work per year will be 500 person-days. This volume is just an indication, and the Commission reserves the right, at its sole discretion, to call off fewer or no person-days at all.

The Commission will take into consideration the on-boarding time needed to get familiar with the systems.

2.1   Existing system Landscape

The Contractor shall provide development, implementation, configuration, maintenance, and support services for the Commission's planned software projects and existing systems to Support the Quality Management, Performance Monitoring, and Evaluation functions.

The existing systems currently consist of a performance reporting tool (PRTool), a performance monitoring tool (PMTool), and an Evaluation Information Management System (EIMS).

PRTool/PMTool Architecture

Both systems, PRTool and PMTool are based on Apache Superset and are built from the same codebase using Gitlab CI. Both systems are built as docker images and running as containers. Also, they have some common dashboards, which are selected for PRTool or PMTool based on specific tags.
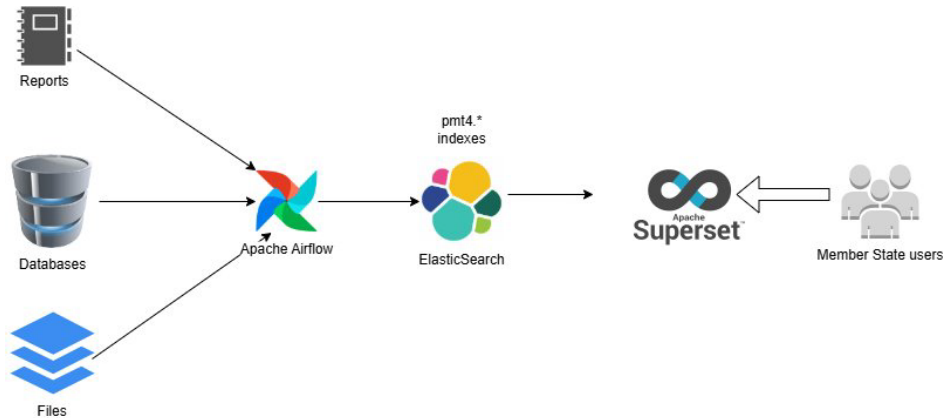

Apache Airflow and Elasticsearch

As shown in the architectural diagram above, Apache Airflow is used to extract data from various sources. DAGs written in python are employed to extract, clean and normalize the data, which is then kept in Elasticsearch indexes, so the data is available at any time, even if the data source is down.

Performance Reporting Tool (PRTool)

The PRTool is a custom web application that integrates with Apache Superset. It is a reporting software that computes, stores, and displays various metrics and Key Performance Indicators (KPIs). PRTool is the externally accessible instance for Member States. This system is the basis for the objective evaluation of the performance of the IMS verification system, as well as the PTS processes supporting verification, providing the States Signatories with the necessary confidence in the verification regime. Presented below is a screenshot of the PRTool system as viewed by the users:
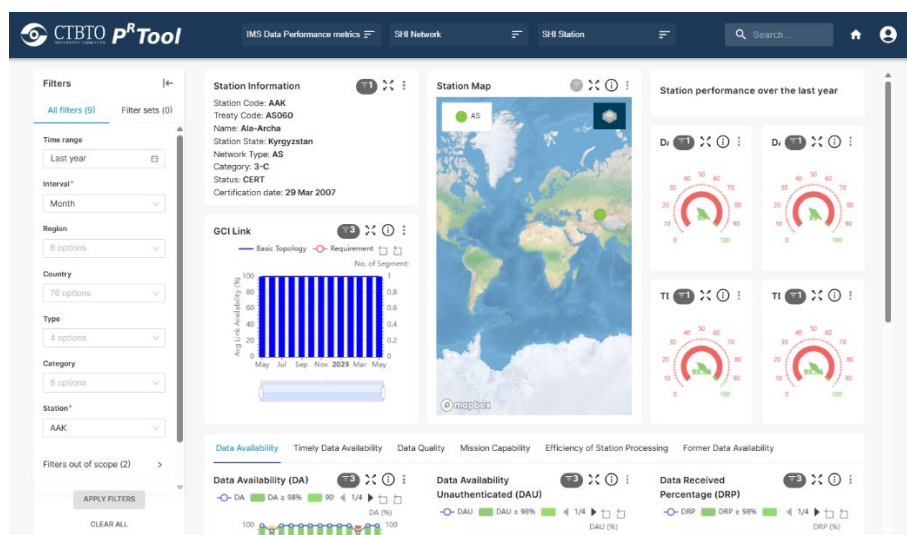
Performance Monitoring Tool (PMTool)

The PMTool is a performance monitoring software that computes, stores and displays various metrics and Key Performance Indicators for internal activities carried out at the Provisional Technical Secretariat(PTS). The application is implemented in Apache Superset, and it is running in a container.

The PMTool software is for internal PTS staff.

Presented below is a screenshot of the PMTool as seen by the administrators:
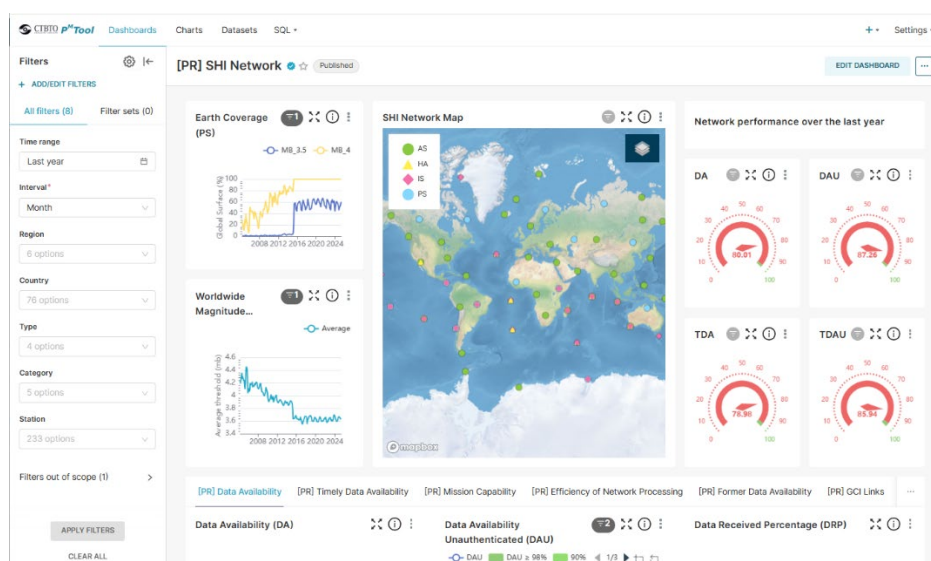

### Evaluation Information Management System (EIMS)

The EIMS is a web-based, database-driven system designed to support and streamline the recording and processing of evaluation findings and recommendations during On Site Inspection (OSI) exercises. This application is implemented in Python (with Flask) and a Postgres database to keep the data:
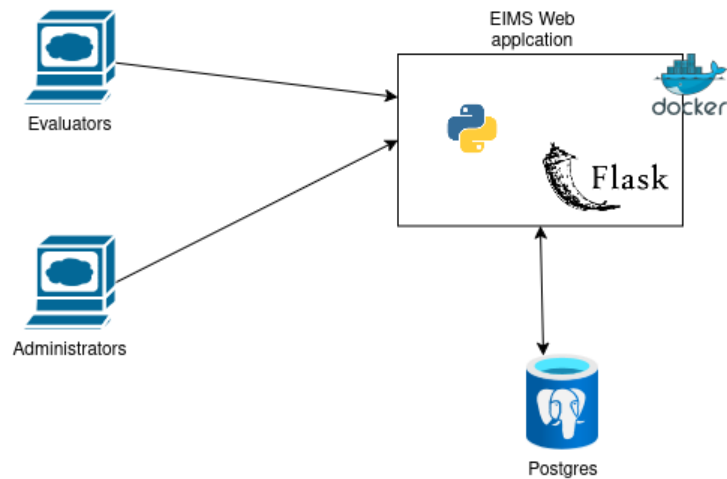
Administrators can set up all the necessary data for a new exercise. They can also generate reports related to a particular completed exercise. Presented below is a screenshot of the EIMS as seen by administrators:
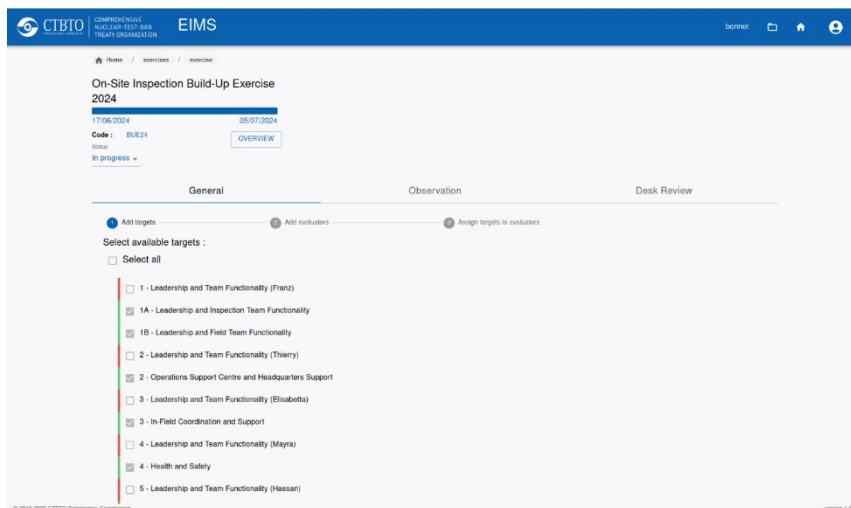
Evaluators can enter their initial findings (observations, desk reviews and interviews), and, once the exercise is completed, can group initial findings into key findings and issue recommendations linked to key findings. Below is a screenshot of EIMS as seen by evaluators:
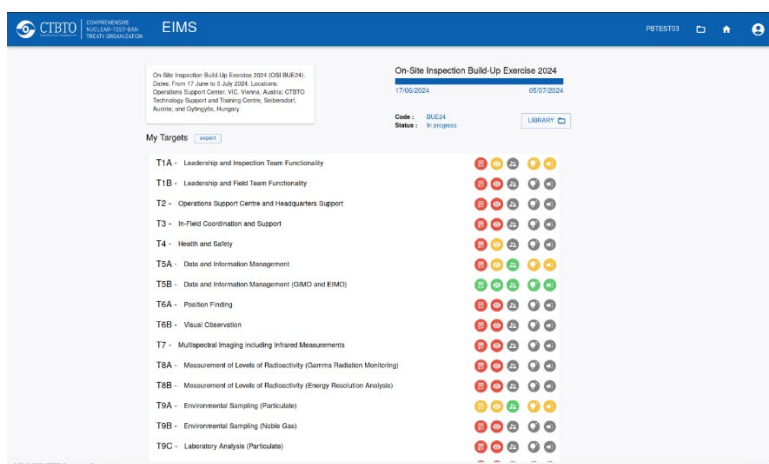
2.2   Design and development of new Airflow DAGs

The contractor will need to extract the data from various sources such as databases (Oracle and Postgres), filesystem, SharePoint documents, etc. This data needs to be processed (extract, cleanup, deduplicate, cross-reference, etc) and inserted into Elasticsearch on specific indexes.

2.3   Design and development of new Apache Superset Dashboards and Charts

The contractor will need to develop new dashboards and charts according to requirements. They should propose appropriate dashboard layouts and chart types that best suit business needs. The data would come from Elasticsearch indexes and possibly other sources. Appropriate filters will need to be set up with scoping that fits the requirements.

2.4   Design and development of new software for Quality Management, Performance Monitoring and Evaluation or enhancements to existing software

The contractor may need to implement new systems to support the Commission's Quality Management, Performance Monitoring, and Evaluation functions.

Development of new software and enhancements to existing software generally involves the execution of the software design and implementation phases, through the established change management and release processes of the Commission. The Contractor will also be heavily involved in requirements definition for these systems.

The contractor will need to improve and extend the existing EIMS application. Requirements will be provided, and the contractor will need to propose innovative solutions to improve the user experience. Unit test and integration tests are expected to improve the reliability of the new functionality. The contractor will need to extend the existing Gitlab CI set up, develop new pipelines, improve automation and delivery of software.

The work involves the following main activities:

- Defining requirements in accordance with the Commission's requirements, engineering practices or reviewing and refining existing requirements specifications. The outcome of this step would be a requirements document, forming the basis for further planning;
- Scheduling of the deliverables and estimating the effort to execute the work;
- Analysis, design, coding and testing;

- Development of acceptance test plans;
- Delivery, acceptance support and implementation support of each deliverable;

The above activities will be executed in an iterative and continuous workflow, following an Agile software development methodology.

2.5 Create documentation and training material

The contractor will need to write extensive documentation including Software Design Descriptions, Software User Manuals, Software Installation Manuals, and Software Administration Manuals. The contractor will need to deliver Software training material including video guidelines.

2.6 Support and maintenance for existing software systems

Provision of support and maintenance for existing systems generally involves the review and execution of the software transition and operation phases through the provision of support and maintenance services, mainly for custom software systems.

The work may involve the following steps:
- Perform troubleshooting;
- Provide proactive as well as reactive support services;
- Analysis of the current functionality of a software system;
- Implement software patches and updates;
- Migrations for major releases of software;
- Implement deployment and release policies;
- Provide installation and usability assistance;
- Provide training or other services associated with operating the software.

The contractor will need to:
- maintain the existing Apache Airflow DAGs in test and operations environments.
- support and maintain the "dev", "test" and "operation" instances of PRTool, PMTool and EIMS.
- support the deployment of new releases to production.
- provide 2nd Tier Support for user requests (like bugs, missing data, data source clarification, etc.).

2.7 Deliverables

The Commission will define deliverables, tasks and responsibilities when requesting the work on a call-off basis.

2.8 Methodology approach

The project shall start by means of a kick-off meeting no later than 2 weeks after the Contract's signature. The onboarding period shall start no later than 2 weeks after the kick-off meeting and the remaining services shall start immediately after the onboarding period.

The Commission may request Services as described in Section 2 through the issuance of Work Orders (WOs). The work will be organized based on an agile methodology, with each WO corresponding to a defined iteration with a specified scope, duration, and deliverables, following a prioritized

evolutionary workflow.

The Commission will adopt a time-boxed agile approach based on deliverables (user stories) and priorities. The work will be organized in iterations of an agreed period (e.g., one month).

The Commission will act as the Product Owner and will coordinate and collaborate with the selected development team, setting the priorities and maintaining the list of activities and tasks to be done in the Commission's JIRA system.

In case a WO is issued outside the framework provided by the agile methodology, the Commission will provide the description of the Work to be performed in writing to the Contractor. The Contractor shall respond with an estimate of the number of person-days required to complete the Work and a delivery date. After acceptance of the estimate and delivery date, the Commission will issue the WO to the Contractor. The Product Owner will review and accept deliverables during the iteration review meetings, according to the Definition of Done (DoD) that will be discussed and agreed upon at the project kick-off meeting.

2.9   Location of Performance

The Contractor is expected to perform most of the work off-site. On-site presence will be strictly limited to the needs of the project and will be agreed jointly. It is envisaged that Contractor's key personnel may be required to be present at the headquarters of the Commission in Vienna for up to one week at the beginning of the contract for the kick-off meeting.

3. REQUIREMENTS FOR THE CONTRACTOR

The Contractor shall:

- Be established for at least 4 years.

- Have a minimum of 5 years of experience using a formal project management methodology.

- Have a minimum of 5 years of experience in providing software development services using an Agile methodology.

- Have a minimum of 3 years of experience working with modern issue tracking and ticket management systems (e.g., Jira).

- Propose at least 4 staff members who meet the requirements outlined in the Team Roster, as described in Section 4.

- demonstrate, in the form of a plan, the ability to adjust the working hours of relevant staff (e.g., project manager and lead developers) assigned to a Software Team, to overlap by at least two hours with the Commission's working hours (9 a.m. to 5 p.m. CET), upon the Commission's request.

The Contractor shall have experience in using the technologies below:

- Apache Superset: at least 3 years (can be with multiple projects with a total of 3 years).

- Apache Airflow: at least 3 years (can be with multiple projects with a total of 3 years).

- Python development: at least 2 projects for a total of 5 years including DAGs scripts and a FLASK application.

- Elasticsearch: at least 3 years (can be with multiple projects with a total of 3 years).

- Gitlab: at least 2 projects for a total of 5 years including the development of CI/CD pipelines.

In addition, the contractor shall:

- provide any required software or hardware required at no cost to the Commission.
- propose suitable project management and quality assurance methodologies.
- use the English language for all written and oral communication with the Commission.

4. REQUIREMENTS FOR THE CONTRACTOR'S PERSONNEL

The Contractor's key personnel overall considered shall comply with the following requirements throughout the duration of the Contract:

- A university degree in a scientific or technical subject with computing emphasis.
- A minimum of 3 years of professional experience with Apache Superset.
- A minimum of 3 years of professional experience with Apache Airflow.
- A minimum of 5 years of professional experience with Python development DAGs scripts and FLASK.
- A minimum of 3 years of professional experience with Elasticsearch.
- A minimum of 3 years of experience developing software in UNIX/Linux environments.
- A minimum of 3 years of professional experience with Oracle.
- A minimum of 3 years of professional experience with Postgres.
- A minimum of 5 years of professional experience with Agile methodologies.
- A minimum of 3 years of DevOps experience, deploying micro-services using containers (e.g. Docker). Experience with orchestrating micro-services (e.g. Kubernetes) is an advantage.
- A minimum of 3 years of professional experience building and updating CI/CD pipelines with Gitlab.
- A minimum of 3 years of professional experience with Jira.
- Ability to communicate fluently in English. Certification in English is an advantage.

5. ORGANIZATION OF WORK

The Work and deliverables, after being evaluated and accepted as satisfactory by the Commission, will form the basis for invoicing and payment.

The Contractor shall deliver software through incremental releases according to an Agile software development methodology. In particular, the Contractor shall follow the "Release Early, Release Often" (RERO) software development philosophy which emphasizes the importance of early and frequent releases in creating a tight feedback loop between developers, testers and users. Each new delivery shall include a description of the changes made relatively to the previous release, along with a list of files modified by each change.

All software developed under this contract shall

- follow standard coding style, and require implementation of unit tests as well as the use of open-source libraries where possible;
- be compiled with and run under the Linux operating system family (RHEL/CentOS 9.x, or compatible).

The Contractor will maintain the software in a Git/Gitlab version control system and deliver its releases via this version control system.

The Commission has a change management process in place that covers reporting and tracking software problems.

The Commission is using an Integrated Ticketing System based on the Jira software to support this change management process. The Contractor's personnel shall familiarize themselves with this process and follow it when releasing software upgrades. All Work Orders related to this contract will be registered directly into the Commission's Jira system.

The Contractor shall update the respective documentation to reflect changes caused by any upgrade to the software. All documentation shall adhere to the Commission's Documentation Standards. Both standards mentioned above are available to the Contractor, upon request, after the entry into force of the Contract.

5.1. Work environment

If needed, the Commission will provide the Contractor the remote access to the relevant infrastructure in the PTS network. «Infrastructure» comprises, but is not limited to, software, servers, VLANs and databases. Contractor's work will be executed at Contractor's own premises with Contractor's equipment, except where work requires different conditions, previously agreed with the Commission.

For on-site Services provided at the PTS headquarters in Vienna, Austria, the working language is English and the normal weekly working hours are 40, Monday to Friday. The working period in a given day is based on actual needs even though the usual working hours Mondays to Fridays are between 08:00am and 06:00pm.

5.2. Reports

The Contractor shall submit Monthly Reports to the Commission, electronically via email and within the first 5 working days of each calendar month, describing all the activities performed during the preceding month, including, as appropriate:

- Summary of technical support activities done;
- Status of active technical support issues;
- Status of tickets, bug reports and possible fixes;
- Status and updated plan for all active development tasks.

5.3. Risk Management

The Contractor shall provide a thorough risk assessment plan at the commencement of the contract to identify potential risks that could impact the successful execution of the implementation activities outlined in this Terms of Reference (ToR). Risks may include, but are not limited to, technical challenges, changes in project requirements/scope, resource constraints, schedule delays, integration difficulties, and third-party software dependencies. The risk assessment plan should be consistently updated, aligning with the delivery of project milestones or significant accomplishments.

Upon the project's satisfactory completion, the Contractor is obligated to conduct a final review of the initially identified risks. Risks that have been effectively mitigated or did not materialize should be officially closed, accompanied by appropriate documentation. The insights gained from the risk management process should be methodically documented and shared with the Commission, thereby contributing to the knowledge repository for forthcoming software development endeavors.