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**REQUEST FOR EXPRESSION OF INTEREST**

**SELECTION OF AN INDIVIDUAL CONSULTANT**

**REFERENCE NUMBER:** ***CS/STATS/04/0099(04/04/24)TM/dm***

**REQUEST FOR SERVICES TITLE*****: Individual Data Scientist Consultant for the Development of Trade Data Reproducible Analytical Solutions***

1. ***The COMESA Secretariat*** is inviting Individual Consultants to submit their Expressions of Interest for the services defined under the Terms of references annexed.
2. **Only Individual Consultants are eligible to participate under this assignment if they fulfil the following eligibility criteria:**
3. *they are not bankrupt or wound up, are not having their affairs administered by the courts, have not entered into arrangements with creditors, have not suspended business activities, are not being subject of proceedings concerning those matters, or are not in any similar situations arising from similar procedures provided for in the national legislation or regulations of the COMESA member states;*
4. *they have not been convicted of offences concerning their professional conduct by a judgment which haves the force of res judicata; (i.e. against which no appeal is possible);*
5. *they have not been declared guilty of grave professional misconduct proven by any means which COMESA Secretariat can justify;*
6. *they have fulfilled obligations related to the payments of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those countries where the contract is to be performed;*
7. *they have not been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the COMESA Secretariat' financial interests; or*
8. *they are not being currently subject to an administrative penalty*.
9. The maximum budget for this contract is ***US$18,000.00 expert service/consultants’ fees only.*** Proposals exceeding this budget will not be accepted.

**4**. Your Expression of Interest must be presented as per Expression of Interest Forms attached as Annex 2 to this Request for Expression of Interest, in the English language and be accompanied by copies of all the indicated supporting documents. If the supporting documents are not in English, these shall be accompanied by a certified translation into English.

**5.** Your application documents clearly marked and email bearing the subject, **“*CS/STATS/04/0099(04/04/24)TM/dm Individual Data Scientist Consultant for the Development of Trade Data Reproducible Analytical Solutions*”*,***

should be e-mailed to the following address:

procurement@comesa.int

cc: *DMaimbo@comesa.int**;* *S.Mwesigwa@comesa.int* *and* *isimonga@comesa.int*

6. The deadline for submission of your application, to the address indicated in Paragraph 5 above, is:

***31 May 2024 AT 16:00 hours***

7. ***Physical submission of applications is NOT allowed.***

**8.** Your CV will be evaluated against the following criteria.

|  |  |  |
| --- | --- | --- |
|  | **Criteria**  | **Maximum points allocated**  |
| **1** | Academic qualifications: Bachelor’s degree university degree in statistics, computer science, data science, or related field. A master’s degree would be an added advantage. | 10 |
| **2** | 5 years experience in data analysis, building data pipelines, automated systems, database design and data visualization and dissemination | 30 |
| **3** | Demonstrated proficiency working with Python libraries such as Pandas, NumPy, Scikit-learn (Python) and, Dplyr, Ggplot2 | 20 |
| **4** | Demonstrated experience working with big data tools such as Hadoop, Spark, and related big data technologies | 10 |
| **5** |  Demonstrated experience designing data databases and warehouses (e.g., MySQL, PostgreSQL and NoSQL) | 10 |
| **6** |  Experience in machine learning, Natural Language Processing and advanced data modelling techniques | 15 |
| 7 | Experience in the region | 5 |
|  | **Total** | **100**  |

**9.** Your proposal should be submitted as per the following instructions:

(i) PRICES:

The financial proposal shall be inclusive of all expenses deemed necessary by the Individual Consultant for the performance of the contract.

(ii) EVALUATION AND AWARD OF THE CONTRACT:

Expressions of Interest determined to be formally compliant to the requirements will be further evaluated technically.

An Expression of Interest is considered compliant to the requirements if:

* it fulfils the formal requirements (see Paragraphs 2,3,4,5,6 and 7 above); and
* the financial proposal does not exceed the maximum available budget for the contract.

The award will be made to the applicant who obtains the highest technical score. Expressions of Interest not obtaining a minimum score of 70% will be rejected.

(iii) VALIDITY OF THE EXPRESSION OF INTEREST:

Your Expression of Interest should be valid for a period of 90 days from the date of deadline for submission indicated in Paragraph 6 above.

10. The assignment is expected to commence within two (2) weeks from the signature of the contract.

11. Additional requests for information and clarifications can be made **until three (3) working days** prior to deadline indicated in the paragraph 6 above, from:

The Procuring entity: ***COMESA Secretariat***

 Contact person: ***Daniel Maimbo***

E-mail: DMaimbo@comesa.int; ***S***.Mwesigwa@comesa.int;

The answers on the questions received will be sent to the Consultant and all questions received as well as the answers to them will be posted on the COMESA Secretariat’s website at the latest two working day before the deadline for submission of applications.

12. COMESA reserves the right to cancel/terminate this process at any point before entering into contract without incurring in claims from participants.

**ANNEXES:**

ANNEX 1: Terms of Reference

ANNEX 2**:** Expression of Interest Forms

**Sincerely,**

**Name:** Silver Mwesigwa

**Title:** Head of Procurement

Date: 7 May 2024

**ANNEX 1: TERMS OF REFERENCE**

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TERMS OF REFERENCE FOR REPRODUCIBLE ANALYTICS SOLUTIONS FOR COMESA’S TRADE DATA MANAGEMENT CONSULTANCY

**Data Scientist**

1. **Background**

Data science encompasses improving data and statistics production using innovative tools and employing new data sources. Data science is a discipline that uses scientific methods, processes, algorithms, systems and tools to extract information and insights from structured and unstructured data. Data science in the national statistical system should be looked into in two aspects: first, to improve the efficiency of statistical processes by reducing the lengthy and cumbersome process and reproducing repetitive tasks. Secondly, it uses new and non-traditional sources to complement statistical outputs and improve data gaps in reporting national, regional, and global development agendas.

Reproducible Analytical Pipelines (RAP) is a systematic approach to data analysis that emphasizes reproducibility and transparency in data processing and analysis. RAPs streamline the entire data handling process from collection to reporting. By automating these steps, RAP significantly reduces the time and effort required to process large volumes of trade data. This automation allows data analysts and policymakers to focus on higher-value tasks such as strategic analysis and decision-making.

One of RAP's most significant advantages is the improvement in data accuracy. Automated cleaning and validation checks help eliminate human errors during data entry, processing, or analysis. Using predefined scripts tested and validated, RAP ensures data consistency and reliability across different reports and studies. This level of accuracy is crucial for economic data, where decisions based on faulty data could lead to suboptimal trade policies and financial planning.

As COMESA continues to expand its activities and data sources, the scalability offered by RAP becomes invaluable. RAP frameworks are designed to be flexible, allowing for easy integration of new data sources or expansion of data types without significant overhauls. As COMESA's trade dynamics evolve or new data collection technologies are adopted, the pipelines can be updated or extended relatively easily. This scalability supports the sustainability of data initiatives in a growing economic community like COMESA.

RAP promotes data processing and reporting transparency and also helps in maintaining compliance with data governance standards and regulations, which are vital for building trust among member states and stakeholders.

The implementation of Reproducible Analytical Pipelines (RAP) is instrumental in transforming the management of trade data within COMESA. It offers a robust solution to the challenges of data volume, complexity, and the need for timely and accurate economic analysis. By adopting RAP, COMESA can ensure that its data-driven initiatives are effective, sustainable, and forward-looking, supporting its member states' economic integration and growth. The initiative, therefore, seeks to empower the COMESA Statistics Unit to effectively leverage data science for policy formulation, research, and strategic planning, ultimately contributing to organizational objectives as outlined in the Mid-term Strategic Plan (MTSP). This is funded by the European Union under the Institutional Capacity Building Program support to statistics at COMESA.

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# 2.0 Objective

The consultancy's main objectives are to automate COMESA's trade data management system and develop robust Reproducible Analytical Pipelines.

Specific objectives include:

* automating the collection, cleaning, processing, and analysis of trade data;
* developing robust databases to organize trade data;
* developing and deploying statistical products, reports, visualizations, and dashboards; and
* building the capacity of COMESA staff to utilize data science tools effectively.

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# 3.0 Duties and responsibilities

Under the direct technical supervision of the Head of Statistics Unit, the consultant is expected to perform the following tasks:

* collaborate with staff to understand data sources, outputs, and processes;
* design a workflow outlining data extraction, transformation, loading (ETL) steps, and analytical procedures;
* develop procedure to clean, pre-process, analyse data;
* document the workflow with clear diagrams and descriptions for each stage;
* select appropriate programming languages for data manipulation and analysis;
* establish a version control system to track code changes and ensure reproducibility;
* develop scripts tools to automate all data management steps;
* implement unit tests;
* package the pipeline codes, dependencies, and configuration files for easy deployment;
* conduct test runs with sample data to identify and troubleshoot potential errors;
* develop clear documentation for the pipeline, environment requirements, design, user guides;
* train internal staff for the development and deployment tools; and
* any activities assigned by the supervisor.

# 4.0 Duration and Timeline

The duration of the consultancy is six months.

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# 5.0 Consultancy Fees

The consultant will be paid a monthly fee of $3,000.00 for the assignment based on the quality and timeliness of deliverables.

1. **Consultant qualifications**

**Education**:

Bachelor’s degree university degree in statistics, computer science, data science, or related field. A master’s degree would be an added advantage.

**Work experience**: A minimum of 5 years of experience in data analysis, building data pipelines, automated systems, database design and data visualization and dissemination.

**7.0 Other skills**:

* demonstrated strong understanding of statistical models and data analysis techniques;
* demonstrated expertise in Python and R for data manipulation and analysis;
* demonstrated proficiency in libraries like Pandas, NumPy, Scikit-learn (Python) and, Dplyr, Ggplot2 (R);
* demonstrated proficiency in using tools and platforms for building and managing data pipelines (e.g., Apache Airflow, Luigi);
* demonstrated familiarity with Hadoop, Spark, and related big data technologies;
* demonstrated strong understanding of SQL and relational databases;
* demonstrated proficiency in data visualization tools and libraries;
* demonstrated experience designing data databases and warehouses (e.g., MySQL, PostgreSQL and NoSQL);
* demonstrated experience in machine learning, Natural Language Processing and advanced data modelling techniques; and
* demonstrated familiarity with NoSQL databases

# 8.0 Duty Station

Home based but with limited travel.

**ANNEX 2: Expression of Interest Forms**

[A. COVER LETTER FOR THE EXPESSION OF INTEREST FOR THE PROJECT 6](#_Toc267927845)

[B. CURRICULUM VITAE 7](#_Toc267927846)

[C. FINANCIAL PROPOSAL 10](#_Toc267927847)

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# A. COVER LETTER FOR THE EXPRESSION OF INTEREST FOR THE PROJECT

REFERENCE NUMBER: *CS/STATS/04/0099(04/04/24)TM/dm*:

REQUEST FOR SERVICES TITLE:***Individual Data Scientist Consultant for the Development of Trade Data Reproducible Analytical Solutions***

[*Location, Date*]

To: COMESA Secretariat

Dear Sirs:

I, the undersigned, offer to provide the consulting services for the ***Individual Data Scientist Consultant for the Development of Trade Data Reproducible Analytical Solutions*** in accordance with your Request for Expression of Interests number *CS/STATS/04/0099(04/04/24)TM/dm,* dated [*insert date*] for the sum of [*Insert amount(s) in words and figures*]. This amount is inclusive of all expenses deemed necessary for the performance of the contract in accordance with the Terms of Reference requirements.

I hereby declare that all the information and statements made in my CV are true and accept that any misinterpretation contained in it may lead to my disqualification.

My proposal is binding upon me for the period indicated in Paragraph 9(iii) of this Request for Expression of Interest.

I undertake, if my Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in Paragraph 10 of the Request for Expression of Interest, and to be available for the entire duration of the contract as specified in the Terms of Reference.

I understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Signature [*In full and initials*]:

Name and Title of Signatory:

B. CURRICULUM VITAE

***[insert full name]***

|  |  |
| --- | --- |
| 1. **Family name:**
 | *[insert the name]* |
| 1. **First names:**
 | *[insert the names in full]* |
| 1. **Date of birth:**
 | *[insert the date]* |
| 1. **Nationality:**
 | *[insert the country or countries of citizenship]* |
|  |  |
| 1. **Physical address:**
2. **Postal address**
3. **Phone:**
4. **E-mail:**
 | *[insert the physical address]**[Insert Postal Address]**[insert the phone and mobile no.]**[Insert E-mail address(es)* |
| 1. **Education:**
 |  |
|  |  |
| **Institution:****[Date from – Date to]** | **Degree(s) or Diploma(s) obtained:** |
| *[indicate the month and the year]* | *[insert the name of the diploma and the specialty/major]* |
| *[indicate the month and the year]* | *[insert the name of the diploma and the specialty/major]* |

**10. Language skills:** (Indicate competence on a scale of 1 to 5) (1 – excellent; 5 – basic)

|  |  |  |  |
| --- | --- | --- | --- |
| **Language** | **Reading** | **Speaking** | **Writing** |
| *[insert the language]* | *[insert the no.]* | *[insert the no.]* | *[insert the no.]* |
| *[insert the no.]* | *[insert the no.]* | *[insert the no.]* | *[insert the no.]* |

|  |  |
| --- | --- |
| **11. Membership of professional bodies:**  | *[indicate the name of the professional body]* |
| **12. Other skills:** | *[insert the skills]* |
| **13. Present position:** | *[insert the name]* |
| **14. Years of experience:** | *[insert the no]* |
| **15. Key qualifications:** (Relevant to the assignment)*[insert the key qualifications]* |

**16. Specific experience in the region:**

|  |  |
| --- | --- |
| **Country** | **Date from - Date to** |
| *[insert the country]* | *[indicate the month and the year]* |
| *................* | *......................* |
| *[insert the country]* | *[indicate the month and the year]* |

**17. Professional experience:**

| **Date from – Date to** | **Location of the assignment** | **Company& reference person (name & contact details)** | **Position** | **Description** |
| --- | --- | --- | --- | --- |
| *[indicate the month and the year]* | *[indicate the country and the city]* | ***Name of the Company:******Address of the company:******Phone:******Fax:******Email:*** ***Name and title of the reference person from the company:*** | *[indicate the exact name and title and if it was a short term or a long term position]* | ***Name of the Assignment:*** ***Beneficiary of the Assignment:******Brief description of the Assignment:*** ***Responsibilities:*** |
| ................ | …………….. | ……………………. | …………… | ………………………………………………………………………….. |
| *[indicate the month and the year]* | *[indicate the country and the city]* | ***Name of the Company:******Address of the company:******Phone:******Fax:******Email:*** ***Name and title of the reference person from the company:*** | *[indicate the exact name and title and if it was a short term or a long term position]* | ***Name of the Assignment:*** ***Beneficiary of the Assignment:******Brief description of the Assignment:*** ***Responsibilities:*** |

1. **Other relevant information:** (e.g. Publications)

***[insert the details]***

***19. Statement:***

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

I hereby declare that at any point in time, at the COMESA Secretariat’s request, I will provide certified copies of all documents to prove that I have the qualifications and the professional experience as indicated in points 8 and 14 above**[[1]](#footnote-1),** documents which are attached to this CV as photocopies.

By signing this statement, I also authorize the COMESA Secretariat to contact my previous or current employers indicated at point 14 above, to obtain directly reference about my professional conduct and achievements.

|  |  |  |
| --- | --- | --- |
|  | Date: |  |

**ATTACHMENTS:** ***1) Proof of qualifications indicated at point 9***
 ***2) Proof of working experience indicated at point 15***

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# C. FINANCIAL PROPOSAL

**REFERENCE NUMBER:** *CS/STATS/04/0099(04/04/24)TM/dm*

**REQUEST FOR SERVICES TITLE: *Individual Data Scientist Consultant for the Development of Trade Data Reproducible Analytical Solutions***

Please sign off to confirm your acceptance of the Total Financial Offer.

|  |  |
| --- | --- |
| **TOTAL FINANCIAL OFFER**  | **US$18,000.00** |

Signature [*In full and initials*]:

Name and Title of Signatory:

1. ***The proof of stated qualifications shall be in the form of the copies of the degrees and diploma obtained, while for the professional experience the proof shall be either acknowledgement letters from the previous employers or copies of the Purchase Order/ Contract signed with them.***  [↑](#footnote-ref-1)