REQUEST FOR EXPRESSIONS OF INTEREST

INDIVIDUAL CONSULTANT TO PROVIDE TECHNICAL ASSISTANCE TO THE KENYA REVENUE AUTHORITY IN DATA LITERACY, DATA GOVERNANCE AND DATA ANALYTICS

1. Introduction

In the area of tax policy and tax administration, the African Tax Administration Forum (ATAF) is the key partner of the GFG in Africa programme. Founded in 2009 as an association of currently 38 African tax administrations, ATAF strives to provide a platform to improve the performance of tax administration in Africa, driven by the firm conviction that better tax administrations will enhance economic growth, increase accountability of the states to their citizens and mobilise domestic resources more effectively.

Since its inception, ATAF has embarked on a series of comprehensive initiatives for its member states and beyond, with the aim to develop a sustainable skill base of tax administrators across the continent and to strengthen approaches, policies and work methods of administrators and tax practitioners on the continent—Consistent improvement in capacity will ensure that African revenue authorities become more efficient and effective in the mobilisation of domestic resources and hence contributing significantly to state building and promoting good, transparent, and accountable governance.

The organisation promotes cooperation, knowledge sharing and capacity building among African tax administrations. One of the ways in which capacity building is offered by ATAF is through technical assistance. The technical assistance is demand driven in areas viewed by the membership as pertinent to improved revenue collection. Its scope and delivery may vary and may be a short-term intervention or a long-term country programme. The technical assistance courses are tailor-made to address specific tax administration requests made by member countries. ATAF engages seasoned experts globally to deliver its courses, with a specific preference for continental experts for continuity, and to ensure that both the model and its delivery are fit for purpose.
2. General Scope of the assignment

The aim is to hire a short term data scientist/data analyst, with specific or a combination of thorough experiences on data literacy, data analytics, and data governance, collectively referred to as the Consultants, in order to provide technical assistance in data governance, data literacy and data analytics to KRA’s data governance team, data stewards, data analysts and business intelligence developers; including the following:

- Problem analysis and management
- Data collection and Integration
- Data exploration and preparation
- Machine learning

3. Specific deliverables of the Individual Consultant

The following outlines the key expected deliverables:

- Conducting a scoping workshop with relevant stakeholders from KRA for the purpose of refining and customizing the workplan the delivery of the requested technical assistance.
- Develop the workplan and agenda and concept note for the delivery of the technical assistance in data governance, data analytics and data literacy.
- Virtual classroom trainings in data governance, data analytics and data literacy
- Reports after every training
- Debriefing meetings with the Technical Assistance Manager

4. Profile of the Individual Consultant

The Individual Consultant is expected to have the following key competencies

- A minimum of a bachelor’s degree in computer science, data engineering or related qualification. A master’s in statistics and Economics, or business leadership would be an advantage.
- Excellent written and verbal English language skills for delivering the training materials and presentations.
- A minimum of 5-10 years of relevant progressive experience in data science, analytics and governance.
- Advanced and demonstrated data collection and analysis skills both in qualitative and quantitative data. In-depth experience in data structure and data manipulation, preferably in a tax related environment.
- Demonstrable experience in conceptualization and design of data science programmes and face-to-face or virtual workshop facilitation for multi-stakeholders’ audiences, ideally for international, regional or bilateral development organisations on related themes.
• Data science and technologies skills either such as SQL, Hadoop, Python and R, Spark, Machine Learning, with good report writing skills.

Interested Individual consultants may obtain clarification at the email address below during office hours Monday to Friday. The detailed Terms of Reference are in Annex I of this Request for Expression of Interest.

The Expression of Interests must be submitted to the email address provided below not later than the 22nd of March 2021 and the Email subject should be “Individual Consultant – Technical Assistance to KRA”

Attention:
African Tax Administration Forum
The Procurement Manager
Tel: +27 (0) 12 451 8837
E-mail: procurement@ataftax.org
Annex I

TERMS OF REFERENCE FOR THE PROCUREMENT OF INDIVIDUAL CONSULTANCY SERVICES TO PROVIDE TECHNICAL ASSISTANCE TO THE KENYA REVENUE AUTHORITY IN DATA LITERACY, DATA GOVERNANCE AND DATA ANALYTICS

1. Background

In the area of tax policy and tax administration, the African Tax Administration Forum (ATAF) is the key partner of the GFG in Africa programme. Founded in 2009 as an association of currently 38 African tax administrations, ATAF strives to provide a platform to improve the performance of tax administration in Africa, driven by the firm conviction that better tax administrations will enhance economic growth, increase accountability of the states to their citizens and mobilise domestic resources more effectively.

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The organisation promotes cooperation, knowledge sharing and capacity building among African tax administrations. One of the ways in which capacity building is offered by ATAF is through technical assistance. The technical assistance is demand driven in areas viewed by the membership as pertinent to improved revenue collection. Its scope and delivery may vary and may be a short-term intervention or a long-term country programme. The technical assistance courses are tailor-made to address specific tax administration requests made by member countries. ATAF engages seasoned experts globally to deliver its courses, with a specific preference for continental experts for continuity, and to ensure that both the model and its delivery are fit for purpose.

2. Context and purpose of the data literacy, data governance and data analytics trainings

Data scientists have become the main characters that drive artificial intelligence projects forward in the enterprise. Data scientists play the key role in transforming vast amounts of structured and unstructured data into insight, predictive analytics and machine learning (ML) models for decision automation. Data science is a multidisciplinary field that combines computer science and statistics and makes it possible to draw useful insights which may be too large for traditional statistics to analyse. Data science finds patterns in all unstructured sets including text, images and audio files. At its inner core, the craft of data science is a solution engineering
discipline, which draws on quantitative areas such as statistics, applied mathematics, operations research, machine learning, signal processing, and various other areas such as economics and engineering.

The Kenya Revenue Authority’s (KRA) core business is collection of revenues and administration of taxation law. KRA has observed that by exploiting the available technology through data analytics, modelling and forecasting, tax base expansion to improve revenue collection can be achieved. Training in data governance, data analytics and data literacy will improve the management and use of data within the KRA. It is critical in ensuring key data and information is captured, stored, disseminated and improved upon to enhance the use of essential knowledge within and across the various departments within KRA and create a performance driven organization, therefore the KRA has requested technical assistance from the African Tax Administration Forum

While KRA’s long term goal is to build an effective and efficient tax administration, the immediate and pressing need is to equip KRA officials with data governance, data analytics and data literacy skills that will be instrumental in improving revenue collection, tax base expansion, and improve accuracy in revenue forecasting. By the end of the technical assistance program, it is hoped that the trainees will:

- Have and improved understanding of data governance processes including monitoring and evaluation, strategy development and project management.
- Will be able to develop data policies
- Will have the ability to analyse, predict trends and patterns in taxpayer behaviour and communicate insights identified through the use of data science and analytics
- Data literacy to improve the ability to quickly identify and improve data issues and make recommendations based on data.
- Have data visualization skills including design and creation of dashboards.

3. **Scope of work and deliverables**

The data science pipeline ranges from problem analysis and idea generation, through data collection and data prep to operationalization of machine learning (ML) outcomes.
This means that a lot of skills are required beyond the mere quantitative domains. Business intelligence and a scientific approach are key to making sense of data. Data scientists are the key role for applying data science principles to solving a range of business problems.

The aim is to hire a short term data scientist/data analyst, with specific or a combination of thorough experiences on data literacy, data analytics, and data governance, collectively referred to as the Consultants, in order to provide technical assistance in data governance, data literacy and data analytics to KRA’s data governance team, data stewards, data analysts and business intelligence developers; including the following:

**Problem analysis and management**
- Train officials to identify data driven /ML opportunities,
- Identify enterprise wide and beyond constraints and
- Develop and communicate data governance principles (data policy development and implementation and monitoring and evaluation)

**Data collection and Integration**
- Train officials on how to discover new data sources and catalogue them
- Train officials on how to create data pipelines and acquire access to new data sources

**Data exploration and preparation**
- Train officials on statistical analysis and visualization techniques, how to generate hypotheses and test the hypotheses
- Train officials to analyse data and predict trends and patterns in taxpayer behaviour
- Enable quick identification and improvement of data issues

**Machine learning**
- Train officials on how to integrate domain knowledge in the ML solution
- Train officials on how to apply various ML techniques , test ML models, storytelling of ML results and making recommendations
- Establish best practice around ML production and infrastructure

The consultants will develop a technical assistance workplan including relevant training materials required for the provision of the technical assistance and make recommendations for future editions of the programme.
Output deliverables include:

<table>
<thead>
<tr>
<th>Tasks/Activities/Deliverables</th>
<th>Estimated consulting days</th>
<th>Proposed (tentative) time period to start activities</th>
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<tbody>
<tr>
<td>1. Conducting a scoping workshop with relevant stakeholders from KRA for the purpose of refining and customizing the workplan the delivery of the requested technical assistance.</td>
<td>3 days</td>
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<tr>
<td>1. Develop the workplan and agenda and concept note for the delivery of the technical assistance in data governance, data analytics and data literacy.</td>
<td>5 days</td>
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<td>2. 3 x 4 days virtual classroom trainings in data governance.</td>
<td>12 days</td>
<td>4th week of April 2021</td>
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<tr>
<td>3. 3 x 4 days virtual classroom trainings in data analytics</td>
<td>12 days</td>
<td>4th week of May 2021</td>
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<tr>
<td>4. 3 x 4 days virtual classroom trainings in data literacy</td>
<td>12 days</td>
<td>4th week of June 2021</td>
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<td>5. 4 working days (1 trip) in Kenya (dependant on status of covid-19. Alternatively an additional virtual workshop will be held.</td>
<td>4 days</td>
<td>4th week of July 2021</td>
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<td>6. Debriefing meeting to discuss the training/technical assistance with ATAF’s TA Manager</td>
<td>1 day</td>
<td>1st week of August 2021</td>
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<td>7. A report maximum(5 pages) after each of the trainings, including recommendations for future editions of the programme.</td>
<td>5 days</td>
<td>2nd week of August 2021</td>
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<td>8. Final meeting with ATAF’s TA Manager.</td>
<td>1 day</td>
<td>3rd week of August 2021</td>
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The individual consultants will report to ATAF’s Technical Assistance (TA) Manager. He/she will deliver all duties and activities in close cooperation and agreement with the TA Manager with whom he/she is expected to regularly liaise with to ensure timely submission of deliverables, clarify roles and quality assure outputs. Working language will be English.

As there are no traveling or physical meetings currently involved due to the world COVID-19 pandemic, kindly note that this assignment is largely home-based and is foreseen to take up to fifty five (55) working days over a period of four (4) months from 1st of April 2021 to 30th of August 2021. Subject to further development of the COVID-19 pandemic and resuming of international flights in the course of 2021, the consultants could be expected to travel Kenya under this consultancy for a period of about 4 days.

Your contact person at ATAF:

- Ms. Sameera Khan, Manager – Technical Assistance (skhan@ataftax.org)
All deliverables documents will be submitted to ATAF and GIZ:

- Mrs. Mary Baine, Director Tax Programmes, ATAF (mbaine@ataftax.org)
- Mrs. Sameera Khan, Manager – Technical Assistance, ATAF (skhan@ataftax.org)

4. Personnel concept

It is expected that the assignment will be undertaken by a firm or an individual consultant, who should have a combination of the following competencies to successfully execute the assignment:

a) Education/training (2.2.1): A minimum of a bachelor’s degree in computer science, data engineering or related qualification. A master’s in statistics and Economics, or business leadership would be an advantage.

b) Language (2.2.2): Excellent written and verbal English language skills for delivering the training materials and presentations.

c) General professional experience (2.2.3): A minimum of 5-10 years of relevant progressive experience in data science, analytics and governance.

d) Specific professional experience (2.2.4): Advanced and demonstrated data collection and analysis skills both in qualitative and quantitative data. In-depth experience in data structure and data manipulation, preferably in a tax related environment.

e) Regional experience (2.2.6): Demonstrable experience in conceptualization and design of data science programmes and face-to-face or virtual workshop facilitation for multi-stakeholders’ audiences, ideally for international, regional or bilateral development organisations on related themes.

f) Other (2.2.8): Data science and technologies skills either such as SQL, Hadoop, Python and R, Spark, Machine Learning, with good report writing skills.

5. Resources Provided

The individual consultants will be providing training services to the Kenya Revenue Authority on behalf of the African Tax Administration Forum. It is expected that the individual consultants would be familiar providing trainings on virtual platforms such as Zoom, MS Teams, etc. No equipment is to be purchased on behalf of ATAF as part of this service contract. The individual consultants is expected to use his/her respective equipment (i.e.; laptops and telecommunication facilities) to complete the assignment with all the necessary software installed. The consultants is expected to have reliable internet connection and good quality headphones and microphone as well as a backup plan in case of electricity failures.
6. Costing requirements

**Assignment of personnel**
The assignment comprises a total of up to 55 working days (for breakdown of working days per deliverables, please look at the Chapter 3).

**Location and travel**
The consultants will mainly work from the country of residence. Subject to further developments of the COVID-19 pandemic and subsequent resuming of international flights in the course of 2021, the consultant could be expected to travel to Kenya under this consultancy:

- 51 working days in the country of residence
- 4 working days (1 trip) in Kenya

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<thead>
<tr>
<th>No</th>
<th>Description of evaluation criteria</th>
<th>Maximum points (weighting in %)</th>
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<tr>
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<td>A minimum of a bachelor’s degree in computer science, data engineering or related qualification. A master’s in business leadership would be an advantage.</td>
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<tr>
<td>2</td>
<td>Concept note outlining the consultants’ understanding of the objective of the TOR, critical examination of the tasks/deliverables, strategy to deliver the services, strategy to establishing cooperation with relevant actors, proposed methodology to conduct the assignment, techniques and tools to be used.</td>
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