

PROCUREMENT NOTICE

FOR THE ENGAGEMENT OF AN INDIVIDUAL CONTRACTOR SERVICES

Date: February 21, 2020

Procurement Notice Title:	Individual Contractor (IC) – Consultant on Big Data Analytics
Starting Date:	Upon Contract Signature Date
Duration:	(40) working days over a period of five (05) calendar months
Location:	Home-based assignment
Project:	Digital Lighthouse Initiative (DLI) – Monitoring Hate Speech
Requisition Number:	IRQ10-0000026525
National or International individuals:	International Consultant
Is this a LTA (yes/no):	No

CONTEXT/BACKGROUND

This project aims to understand how Iraqis' envision the social contract and to give analysis and recommendations for policy changes to help bridge the gap between the social contract as it stands and the population's desires. The project also aims to understand the state of the social contract as well as key issues hampering its development. This project provides a unique opportunity to understand how the various segments that make up the population envision a reimagined social contract through dialogue with the population. Moreover, it provides the opportunity to bring these views together in a concrete manner and to create dialogue with the government on how to redefine the social contract, thus bridging the current divide in communication.

In this regard, big data analytics and AI will be used to complement the analytical work undertaken by UNDP. This will provide an understanding of how the social contract is discussed over time on social media platforms (mainly Twitter) as well as of the various issues that relate to the subject matter, such as, employment, service provision, security and so on. The analysis of Twitter use in Iraq will focus on the 2018-2021 period, and it will look into the perceptions of the users as well as the language used to word their opinions on selected topics that have been identified as relevant within the conceptual framework developed by UNDP, and in parallel, the analysis of the content and volume of tweets will offer a descriptive analysis over time and in reaction to specific events or incident.

SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED WORK

Under the supervision of the Chief Technical Advisor of the Digital Lighthouse Initiative, UNDP is recruiting a Big Data Analyst to contribute to the conceptual design and lead the implementation of a social media analytical model and listening tool that systematically conducts extensive querying on keywords and trending hashtags that relate to the pre-identified pillars and dimensions that fall under the concept of social contract. The listening tool will produce quantitative analysis (volume of tweets, outreach, engagement metrics, etc.) and qualitative analysis

to monitor the change in the perception of the Iraqi Twitter users over the period of 2018-2021. The analysis will run over specific periods, offering a comparative analysis of how perceptions and priorities are changing and will also look into specific timeframes with an attempt to offer differentiated analysis across groups (youth, women, specific cities, etc.) to the extent that the Twitter metadata allows.

The Big Data Analyst should have advanced skills in big data analytics and in preparing the data pipeline to generate data outputs that address the research questions identified by the research team. The Big Data Analyst should have the technical capacity to work with unstructured data, knowledge of AI and machine learning and big data programming languages (R, Python, Java, SQL. Etc). The consultant should have the capacity to offer solutions on how to develop new approaches to detecting reactions and perceptions towards events and trends within real-time data sources such as social media platforms.

Duties and Responsibilities

- Provide analytics on layering non-traditional and unstructured datasets in a visually comprehensible manner;
- Carry out large scale data processing, mining and interpretation by designing and installing efficient models to collect and retrieve information from large databases based on the statistical model developed by the research team;
- Conduct pattern analysis to detect trends within large volumes of data using statistical and mathematical models or algorithms;
- Write the necessary programming and coding and test that it is functional without any fallacies; and
- Supervise the development of a visualization dashboard to present aggregated findings (in a continuous manner); and
- Contribute to drafting monthly reports analyzing the main trends and changes in perceptions by producing charts, tables, graphs, etc.

EXPECTED OUTPUTS AND DELIVERABLES

Expected Outputs and Deliverables	Expected No. of working days for each deliverable	Targeted Due Dates	Review and Approvals Required
<u>Deliverable 1:</u> Production of a short note of four (04) pages on the Twitter landscape in Iraq;	Up to (03) working days from contract signature date	Within (02) calendar weeks from contract signature date	Digital Lighthouse Initiative (DLI) Chief Technical Advisor – Farah CHOUCAIR (Ms.)
<u>Deliverable 2:</u> Development of the big data pipeline along with a methodology note of how data is gathered and processed;	Up to (05) working days following satisfactory completion of deliverable (1)	Within (02) calendar weeks from satisfactory completion of Deliverable (1)	
<u>Deliverable 3:</u> Contribute to the design of the listening tool and how it will operate;	Up to (05) working days following satisfactory completion of deliverable (2)	Within (02) calendar weeks from satisfactory completion of deliverable (2)	

Deliverable 4: Design data visualization and listening tool and link it to the database;	Up to (07) working days following satisfactory completion of deliverable (3)	Within (04) calendar weeks from satisfactory completion of deliverable (3)	
Deliverable 5: Contribute to the production of four (04) monthly reports analyzing perceptions and change in perceptions, including three (03) aggregated reports 2018, 2019 and 2020.	Up to (20) working days following satisfactory completion of deliverable (4)	Within (10) calendar weeks from satisfactory completion of deliverable (4)	

INSTITUTIONAL ARRANGEMENT

- The individual is required to exhibit his or her full-time commitment with UNDP Regional Bureau for Arab States (RBAS);
- S/He shall perform tasks under the general guidance and the direct supervision of the Digital Lighthouse Initiative (DLI) Chief Technical Advisor;
- The supervision will include approvals/acceptance of the outputs and deliverables as identified in the previous section;
- The individual is expected to liaise and collaborate in the course of performing the work with other consultants, suppliers and UN colleagues;
- The individual is required to provide periodical progress reports on regular and needed basis throughout the assignment to monitor progress;
- The individual is required to maintain close communication with UNDP-RBAS on regular and needed basis at any period throughout the assignment in order to monitor progress. In the event of any delay, S/he will inform UNDP promptly so that decisions and remedial action may be taken accordingly;
- Should UNDP deem it necessary, it reserves the right to commission additional inputs, reviews or revisions, as needed to ensure the quality and relevance of the work.

DURATION OF THE WORK

The expected duration of the assignment is expected to be up to forty (40) working days over a period of five (05) calendar months from the contract signature date.

DUTY STATION

This is a home-based assignment.

TRAVEL PLAN (OPTIONAL)

If any unforeseen travel outside the individual home-based city is requested by UNDP and not required by the Terms of References (ToR), such travel shall be covered by UNDP in line with applicable rules and regulations and upon prior written agreement. In such cases, the individual shall receive living allowances not exceeding the United Nations (UN) Daily Subsistence Allowance (DSA) rate for such other location(s).

QUALIFICATIONS OF THE SUCCESSFUL INDIVIDUAL CONTRACTOR

- I. Education:
 - MSc in Computer Science with emphasis on Data Science .
- II. Work experience:

- At least (07) years of experience in conducting quantitative research on big data analytics and knowledge of big data programming languages and libraries (R, Python, TensorFlow, Spark or Scala, Storm, etc.);
 - *Ability to visualize data using various tools and software*
 - Experience in modeling unstructured data (extracted from social media platforms, among others) and SQL/No-SQL database management with five (05) different projects;
 - Proven experience in leading complex computer science programming tasks;
 - Demonstrated knowledge in big data programming languages (R, Python, Spark or Scala, etc.);
 - Familiarity with big data analytics, deep learning and AI; and the limitations of databases;
 - Previous working experience with the United Nations is an advantage.
- III. Language Requirements:
- Language proficiency in both written and oral English and Arabic is required. Knowledge of any other UN language is an asset.
- IV. Key Competencies:
- a) *Corporate*
- Demonstrates integrity and fairness, by modeling the UN/UNDP's values and ethical standards;
 - Promotes the vision, mission and strategic goals of UNDP;
 - Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.
- b) *Functional*
- Demonstrated ability to meet deadlines and work under pressure;
 - Ability to communicate insights, expertise and trends in a way that non-specialists can comprehend;
 - Ability to visualize data using various tools and software;
 - Solid quantitative and analytical skills;
 - Strong interpersonal skills and able to coordinate with diverse team members;
 - Good presentation skills in a workshop setting.
- c) *Knowledge Management and Learning*
- Ability to strongly promote and build knowledge products;
 - Seeks and applies knowledge, information and best practices from within and outside of UNDP;
- d) *Judgment/Decision-Making*
- Mature judgment and initiative.

SCOPE OF PRICE PROPOSAL AND SCHEDULE OF PAYMENTS

Interested candidates should provide lump sum fees for requested services with detailed breakdown. This amount must be "all-inclusive". Please note that the terms "all-inclusive" implies that all costs (professional fees, travel costs, living allowances, communications, consumables, etc.) that could possibly be incurred are already factored into the final amounts submitted in the proposal. Also, please note that the contract price will be Deliverables/Outputs based - not fixed - subject to change in the cost components.

The contractor will be paid an all-inclusive Deliverables/Outputs based lump sum amounts over the assignment period, subject to the submission of Certification of Payment (CoP) duly certified or an invoice and confirmation of satisfactory performance of achieved work (deliverables/outputs) in line with the schedule of payments table hereunder:

Expected Outputs and Deliverables	Expected No. of working days for each deliverable	Targeted Due Dates	Payment Terms/Schedule
<u>Deliverable 1:</u> Production of a short note of four (04) pages on the Twitter landscape in Iraq;	Up to (03) working days from contract signature date	Within (02) calendar weeks from contract signature date	After satisfactory completion of deliverable(s) (01) and submission of duly certified Certification of Payment (CoP) up to 10% of total contract
<u>Deliverable 2:</u> Development of the big data pipeline along with a methodology note of how data is gathered and processed;	Up to (05) working days following satisfactory completion of deliverable (1)	Within (02) calendar weeks from satisfactory completion of Deliverable (1)	After satisfactory completion of deliverable(s) (02) and submission of duly certified Certification of Payment (CoP) up to 15% of total contract
<u>Deliverable 3:</u> Contribute to the design of the listening tool and how it will operate;	Up to (05) working days following satisfactory completion of deliverable (2)	Within (02) calendar weeks from satisfactory completion of deliverable (2)	After satisfactory completion of deliverable(s) (03) and submission of duly certified Certification of Payment (CoP) up to 15% of total contract
<u>Deliverable 4:</u> Design data visualization and listening tool and link it to the database;	Up to (07) working days following satisfactory completion of deliverable (3)	Within (04) calendar weeks from satisfactory completion of deliverable (3)	After satisfactory completion of deliverable(s) (03) and submission of duly certified Certification of Payment (CoP) up to 20% of total contract
<u>Deliverable 5:</u> Contribute to the production of four (04) monthly reports analyzing perceptions and change in perceptions, including three (03) aggregated reports 2018, 2019 and 2020.	Up to (20) working days following satisfactory completion of deliverable (3)	Within (10) calendar weeks from satisfactory completion of deliverable (3)	After satisfactory completion of deliverable(s) (03) and submission of duly certified Certification of Payment (CoP) up to 40% of total contract

RECOMMENDED PRESENTATION OF OFFER

Interested individual consultants must submit documents under point 1&2 to demonstrate their qualifications. Candidates that fail to submit these documents, the application will not be considered.

- 1) Duly accomplished **Letter of Confirmation of Interest and Availability** using the template provided by UNDP;
- 2) **Personal CV or P11**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references.
- 3) **Financial Proposal: Please do not submit financial proposal in this stage. Financial proposal shall be requested from Candidates who are considered technically responsive**

When the financial proposal is requested it should indicate the all-inclusive Deliverables/Outputs based total contract price, supported by a breakdown of costs, as per template provided. The terms “all-inclusive” implies that all costs (professional fees, travel costs, living allowances, communications, consumables, etc.) that could possibly be incurred are already factored into the final amounts submitted in the proposal. If an Offeror is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the Offeror must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

Interested candidates shall submit required documents to Job Advertisement Website (https://jobs.undp.org/cj_view_jobs.cfm) as one document not later than 02nd March, 2021

Interested candidates can find Procurement Notice, Letter of Confirmation of Interest and Availability and P11 templates on the following link: <http://procurement-notice.undp.org/>

CRITERIA FOR SELECTION OF THE BEST OFFERS

This selection criteria will follow the Combined Scoring method – where the qualifications and methodology will be weighted a max. of 70%, and combined with the price offer which will be weighted a max of 30%; using the following evaluation criteria.

Criteria	Weight	Max. Point
<u>Technical Competence</u>	70%	100
Criteria A: MSc in Computer Science or any relevant field;		20
Criteria B: At least (07) years of experience in conducting quantitative research on big data analytics and knowledge of big data programming languages and libraries (R, Python, TensorFlow, Spark or Scala, Storm, etc.);		40
Criteria C: Ability to visualize data using various tools and software;		10
Criteria D: Experience in modeling unstructured data (extracted from social media platforms, among others) and SQL/No-SQL database management with five (05) different projects;		20
Criteria E: Previous working experience with the United Nations;		10
<u>Financial (Lower Offer/Offer*100)</u>	30%	100
Total Score	Technical Score * 0.7 + Financial Score * 0.3	

Individual consultants will be evaluated based on the following methodologies:

Step I: Screening and desk review:

Individual consultants will be evaluated based on the following methodology.

Applications will be first screened and only candidates meeting the following minimum requirements will progress to the pool for shortlisting:

- **Criteria A:** *MSc in Computer Science or any relevant field;*
- **Criteria B:** *At least (07) years of experience in conducting quantitative research on big data analytics and knowledge of big data programming languages and libraries (R, Python, TensorFlow, Spark or Scala, Storm, etc.); and*
- **Criteria F:** *Language proficiency in both written and oral English and Arabic is required.*

Step II : Technical Review

Shortlisted candidates will undergo a technical evaluation and a submission of a proposal to tackle the assignment.

Technical evaluation Criteria max 100 points (Weighted 70):

- **Criteria A:** *MSc in Computer Science or any relevant field; (20 points)*
- **Criteria B:** *At least (07) years of experience in conducting quantitative research on big data analytics and knowledge of big data programming languages and libraries (R, Python, TensorFlow, Spark or Scala, Storm, etc.); (40 points)*
- **Criteria C:** *Ability to visualize data using various tools and software; (10 points)*
- **Criteria D:** *Experience in modeling unstructured data (extracted from social media platforms, among others) and SQL/No-SQL database management with five (05) different projects; (20 points)*
- **Criteria E:** *Previous working experience with the United Nations; (10 points)*
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Financial Criteria - 30% of total evaluation

For those offers considered in the financial evaluation, the lowest price offer will receive 30 points. The other offers will receive points in relation to the lowest offer, based on the following formula: $(PI / P_n) * 30$ where P_n is the financial offer being evaluated and PI is the lowest financial offer received.

Step II: Final evaluation

The final evaluation will combine the scores of the desk review and the financial proposal with the following weights assigned to each:

Individual consultants will be evaluated based on the cumulative analysis methodology (weighted scoring method), where the award of the contract will be made to the individual consultant whose offer has been evaluated and determined as:

- Responsive/compliant/acceptable; and
- Having received the highest score out of a pre-determined set of technical and financial criteria specific to the solicitation.

Technical Criteria weight: [70%]

Financial Criteria weight: [30%]

Only Individual Consultants obtaining a minimum of 49 points (70%) on the Technical evaluation would be considered for the Financial Evaluation.