



Consultancy contract

Request for written proposal

Reference: Update to GEM Report's data management pipeline

Request to submit a written proposal for a work assignment with UNESCO

UNESCO is inviting written proposals from Individuals for the work assignment described in attachment A.

To enable you to prepare a proposal for this assignment, please find attached the following documents:

- Terms of Reference (see attachment A);
- Background note (see attachment B)

Your written proposal should comprise:

a) A Technical Proposal consisting of:

- an up to date curriculum vitae (in UNESCO format, see: https://en.unesco.org/gem-report/sites/gem-report/files/UNESCO_CV_Form.doc)
- an approach and methodology for the assignment, including a work plan in line with the Terms of Reference.

b) The amount to be charged for the assignment, which should be quoted in US dollars or in euros only for the period 1 Oct 2019 to 31 March 2020, **as a monthly fee.**

Please include any costs for travel to Paris as a separate budget line.

Your proposal and supporting documents must be in English.

UNESCO places great emphasis on ensuring that the objectives of the work assignment, as described in the Terms of Reference, are met. Accordingly, in evaluating the proposals for the assignment, attention will focus first and foremost on the technical elements. From those proposals deemed suitable in relation to the criteria set forth in the Terms of Reference, UNESCO shall select the proposal that offers the Organization best value for money.

Your proposal should be submitted by e-mail no later than close of business (18:00) on 15 September 2019. E-mail proposals should not exceed 5MB.

The e-mail should be addressed to
Bilal Barakat: bf.barakat@unesco.org

It is the individual's responsibility to ensure that his/her proposal is received by the deadline.

Thank you for your interest in this UNESCO assignment; and we look forward to receiving your proposal.

Bilal Barakat
Senior Policy Analyst
Global Education Monitoring
Report

Attachment A

Terms of Reference – Update to GEM Report’s data management pipeline

DUTIES AND REQUIREMENTS

Under the supervision of the GEM Report’s Senior Policy Analyst, the consultant shall carry out a series of activities to improve and refactor the existing R and Stata codebase for the management of household survey data, remote access to various data provider APIs, and automatic production of tabular reports.

The aim is to make the GEM Report’s data management backend more streamlined, computationally efficient, robust to error, transparent, easier to maintain and debug, modular, extensible, and future-proof.

The consultant will:

- Comment on the current and proposed new backend architecture.
- Suggest and implement ways to separate logic from data.
- Suggest and implement refactoring to facilitate code-reuse and modularity.
- Suggest and implement automatic consistency checks and warnings.
- Improve computational performance and memory efficiency.
- Fully document existing and newly-produced code inline.
- Write a brief report to document the process.

All activities can be carried out remotely, using a combination of email, chat (e.g. Slack), live video/screen sharing calls, and shared code repositories.

The tasks will take an estimated 60 working days, to be performed during the period 1 Oct 2019 to 31 March 2020.

DELIVERABLES

The following deliverables are to be provided by March 31, 2020

1. Brief written commentary and recommendations for improvement, following initial discussion and review of existing code.
2. Updated R code for efficient data retrieval, data management, transformation, and reporting.
3. Inline documentation.
4. A brief report documenting the process.

REQUIRED PROFILE

Skills and competencies

Required:

- Advanced proficiency in R

Desirable:

- Experience working with large-scale household survey data and education indicators.
- Familiarity with Stata
- Familiarity with SQL

Work experience

- At least 5 years of progressively responsible and relevant professional experience in data management and/or statistical programming.

Education

- Higher education degree in a relevant discipline.

Languages

- Ability to communicate and document technical information in clear English.

Attachment B. Background note

Global Education Monitoring Report 2020

The Global Education Monitoring Report (or GEM Report), formerly known as the Education for All Global Monitoring Report (GMR), is an editorially independent, authoritative, and evidence-based annual report that monitors progress towards the global education goal and targets adopted at the UN General Assembly in September 2015. Each annual GEM Report series will identify effective education policies and analyse a major theme or topic. The Report is funded by a group of governments, multilateral agencies and private foundations and published annually by UNESCO to serve the international community. It is widely recognised as an indispensable advocacy and technical tool for ensuring the provision of quality basic education for all and other policy priorities in education and learning.

With its renewed mandate in 2015, and drawing on accumulated expertise, the GEM Report team will launch a new series of internationally focused education monitoring reports starting in 2016. These reports will analyze global education trends and advocate for effective education policies and practice in the next decade and beyond.

The 2020 GEM Report, the fourth in this new series, will focus on inclusion, which is a pillar of SDG 4. In addition to featuring in the goal formulation, the concept of inclusion appears in other targets, such as target 4.5, which aims to eliminate “gender disparities in education and ensure access to all levels of education and vocational training for the vulnerable” and target 4.a, which aims to provide “safe, non-violent, inclusive and effective learning environments for all”.