Terms of Reference: Open data for infrastructure projects

1. Introduction

CoST and the Open Contracting Partnership (OCP) are seeking consultant(s) to carry out a pilot data extraction and reporting against the CoST Infrastructure Data Standard using the Open Contracting Data Standard in Uganda, Ukraine and Honduras.

The assignment is the first phase of a joint work plan between CoST and OCP to develop a project-level open data schema for infrastructure projects. This will likely be expressed through the Open Contracting Data Standard to capture project level reporting to CoST's Infrastructure Data Standard and meet user needs. The full workplan will be made available to the successful consultant(s).

2. Overview

Public infrastructure project account for a large proportion of government procurement and are a major source of corruption and fraud risk. Decisions made during planning and implementation processes for public infrastructure can dramatically affect communities and the environment.

The Construction Sector Transparency Initiative (CoST) works with government, industry and civil society to get better value from public infrastructure investment by increasing transparency and accountability through disclosure; an assurance process; and multi-stakeholder working.

CoST works with government, industry and civil society to embed the disclosure of data and information from public infrastructure projects into the systems of public procuring entities. Typically, a CoST programme will initially focus on disclosing information on a small number of projects. A Multi-Stakeholder Group with representatives from each stakeholder group leads and oversees a CoST programme and supports this process. As a programme matures, CoST embeds disclosure by working with Government to introduce a Formal Disclosure Requirement (FDR) for disclosing information in the CoST Infrastructure Data Standard format. This is typically achieved through legislation, regulation or government policy. The FDR is supported by developing disclosure manuals and training government officials.

The MSG in each CoST programme uses the information in three ways. Firstly, it commissions an assurance process which is an independent review carried out by industry experts who validate and interpret the disclosed data, highlighting issues of concern to the public. Secondly, it trains the media and civil society organisations to understand and use the disclosed information and assurance findings empowering them to hold decision-makers to account. Thirdly, it uses the disclosed information and assurance findings to informally engage the Government to persuade them to introduce improvements to individual projects or broader sector wide reforms.

Whilst the assurance process is using the information to identify issues of concern, generate performance statistics and the levels of disclosure, better structured data would greatly improve the ability of CoST programmes to complete these tasks at scale.

The CoST disclosure requirements cover **project information** and **contract information**. A single project might have many associated contracts.

The Open Contracting Partnership is a silo-busting collaboration working to use the power of open data to save governments money and time, deliver better goods and services for citizens, prevent corruption, and to create a better business environment for all. The Open Contracting Data Standard provides a technical specification on how to publish interoperable data on public procurement, and provides a framework for identifying the data that could be published.

OCDS implementation generally involves mapping existing data systems to OCDS (identifying the information that can be published in structured form, and identifying additional data requirements), publication and validation of the data, and encouraging re-use by a range of stakeholders. Over time, an iterative process of OCDS implementation should lead to improved data collection, structure and disclosure.

Many of the systems that hold **contract information** on infrastructure projects will also be systems that could implement the Open Contracting Data Standard.

OCDS can act as a tool to support agencies to meet the CoST disclosure requirements. When OCDS is used for this, it also enables increased re-use of the data for a wide range of use-cases.

The user needs and mapping needed for **Guatemala** is also being explored through HIVOS open contracting challenge and the findings will be integrated here.

3. Terminology

The CoST documentation talks about tracking 'forty data points' throughout the project cycle. In the CoST Infrastructure Data Standard (IDS), these are defined at a conceptual level. For example, 'Project owner' or 'Project location'.

To record these items of information in a database *ready for analysis* will generally require that they are broken down into a number of detailed data elements. For example:

- **Project owner** might break down into 'Organisation name', 'Organisation jurisdiction' and 'Organisation identifier' when recorded in a database
- **Project location** might be recorded as 'latitude' and 'longitude', or as a gazetteer entry with a codelist and code value.

The Open Contracting Data Standard (OCDS) operates at this level of data elements, specifying 300+ individual fields that can be used to represent information on a contracting process (built from a number of common re-usable schema objects).

This can cause confusion between policy audiences, who see 40 'data points', and technical audiences, who see perhaps 200 - 300 individual data elements. More accurately, the IDS presents a number of 'disclosure requirements' and is a standard covering required information, rather than data. OCDS by contrast is focussed on providing a structure for granular data points.

A similar issue exists around the word 'standard', and OCDS has it's own issues with imprecise usage here. A standard should be something that can be measured against. Strictly, the main part of the Open Contracting Data Standard is a '*data specification'* - describing *how* to publish data, but remaining relatively agnostic as to exactly *what* should be published. OCDS addresses the question of *what* to publish through a 'Basic, Intermediate, Advanced' framework of requirements.

4. Objective

The objective of this work is to understand, from the perspective of a data user, how the Open Contracting Data Standard (OCDS) can be used to record, structure, and report on the key information required by the CoST Infrastructure Data Standard (IDS) in CoST partner countries.

This forms part of a wider project that will develop **schema extensions** and **implementation guidance** for using OCDS as a tool to support transparency and accountability in infrastructure projects, in line with the requirements and processes of CoST.

5. Output and timeline

For the first phase of this workplan, the consultant(S) is asked to prove a **proof of concept** using contracting data published using OCDS and other open data standards to fill in a CoST IDS template, and to disclose CoST IDS data in an open data format.

The aim is to complete this phase of the workplan by 8th December 2017.

6. Consultant(s) tasks

The consultant will:

a. Collate structured data on about 20 infrastructure projects using the Open Contracting Data Standard;

This should draw upon existing structured data as far as possible principally from Honduras, Uganda and Ukraine, either exporting or scraping data from existing contract and project portals, and mapping this to the Open Contracting Data Standard.

Where data is available from these source portals, but no equivalent fields available in OCDS, the consultant should check for existing OCDS extensions, and/or include additional fields in the OCDS data, keep a log of all such extended fields and document missing data, and/or add missing fields to the data manually.

Discuss with CoST country teams (2-3) and document the use cases for the data for infrastructure monitoring/CoST assurance process.

b. Use this data to generate a report for each project satisfying the requirements of the CoST Infrastructure Data Standard (IDS) and the user needs expressed by CoST country teams.

The CoST IDS provides **categories** of information that should be provided at project and contract level.

These categories should be possible to populate using OCDS data, or extended fields identified at stage (1).

The consultant should document the queries used to extract data from OCDS to fulfil CoST disclosure requirements, and should note any limitations of OCDS data for this.

Consultant should consult with country teams on how useful the generated report is for their assurance/project monitoring purposes. User needs for the information should also be documented (to understand what granularity of data is required from OCDS for the different CoST elements).

The user needs and mapping needed for Guatemala is also being explored through HIVOS open contracting challenge and the findings will be integrated here.

c. Document suggested changes to OCDS to support project level information

The CoST IDS asks for **project** and **contract** level information. OCDS is focused on contracting processes. It may be possible to use OCDS to model a major 'project' contracting process, and then sub-contracting processes. However, the consultant's work should explore whether this approach works for infrastructure projects based on the structure of the examples from Honduras, Uganda and Ukraine.

d. Participate in a feedback workshop and document learning

Either through a face-to-face workshop, or extended web-meeting. Location and timing tbc. The Consultant will also be asked to assist in documenting learning from the exercise.

7. Required skills and experience

- Scraping data and converting to JSON data following a JSON schema
- Ability to write advanced queries against structured data
- Understanding of contracting and/or the infrastructure project cycle
- Ability to write clear and concise technical documentation
- Spanish, Ukrainian and/or Russian language skills

8. Clients responsibilities

CoST will contract the consultant(s) and provide:

- An introduction to the Infrastructure Data Standard and advise them on the meaning of the terms, multi-stakeholder working and the CoST assurance process;
- Provide access to CoST country managers in Uganda, Ukraine and Honduras;
- Feedback on the reports generated.

The Open Contracting Partnership will provide the consultant with:

- An in-depth induction to the Open Contracting Data Standard, either via face-to-face workshop or Webinar, covering the basic data structures, and the concept of releases and records.
- Guidance resources to use in carrying out the mapping process.
- Access to the OCDS helpdesk to answer any questions throughout the research process.

9. Reporting

The consultants will be required to:

a. Meet with the CoST and OCP to discuss the assignment before work commences and at specified milestones during implementation.
b. Raise any questions on the original brief, or issues arising during the course of the work, on which further clarification is required.
c. Provide further detail on progress, or submit drafts of the outputs, upon request by CoST and OCP.
d. Submit a draft report for review by CoST and OCP, and a final report within two weeks of receiving comments on the draft.

All communication should be copied to CoST (John Hawkins) and OCP (Lindsey Marchessault).

10. Budget

A budget of between £10,000 to £12,000 including fees, VAT (if applicable) and expenses is available for this assignment.

11. Selecting the Consultants

Applications are invited from individual consultant(s), who have experience of carrying out similar assignments. Prospective consultants should submit the following information by 5pm BST (12 noon EST) on Friday 15th September 2017:

- CVs for the proposed consultant(s)

- A one page methodology for the assignment
- A budget for completing the assignment including fees, VAT (if applicable) and expenses,
- A statement of availability to do the work in the time available.

Applications should be sent by email to John Hawkins, CoST International Secretariat Head of Programmes at j.hawkins@constructiontransparency.org and Lindsey Marchessault (lmarchessault@open-contracting.org). Please contact John (T: +44 (0)20 3206 0489) or Lindsey (+1-202-664-6166) for any clarifications or further information.