



Invitation to Quote

Invitation to Quote (ITQ) on behalf of UK Research & Innovation

Subject: Environmental sensor network data and metadata review and development

Sourcing Reference Number: CR19030



UK Shared Business Services Ltd (UK SBS)
www.ukpbs.co.uk

Registered in England and Wales as a limited company. Company Number 6330639.
Registered Office Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1FF
VAT registration GB618 3673 25
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Version 3.6

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Section 1 – About UK Shared Business Services

Putting the business into shared services

UK Shared Business Services Ltd (UK SBS) brings a commercial attitude to the public sector; helping our Contracting Authorities improve efficiency, generate savings and modernise.

It is our vision to become the leading service provider for the Contracting Authorities of shared business services in the UK public sector, continuously reducing cost and improving quality of business services for Government and the public sector.

Our broad range of expert services is shared by our Contracting Authorities. This allows Contracting Authorities the freedom to focus resources on core activities; innovating and transforming their own organisations.

Core services include Procurement, Finance, Grants Admissions, Human Resources, Payroll, ISS, and Property Asset Management all underpinned by our Service Delivery and Contact Centre teams.

UK SBS is a people rather than task focused business. It's what makes us different to the traditional transactional shared services centre. What is more, being a not-for-profit organisation owned by the Department for Business, Energy & Industrial Strategy (BEIS), UK SBS' goals are aligned with the public sector and delivering best value for the UK taxpayer.

UK Shared Business Services Ltd changed its name from RCUK Shared Services Centre Ltd in March 2013.

Our Customers

Growing from a foundation of supporting the Research Councils, 2012/13 saw Business, Energy and Industrial Strategy (BEIS) transition their procurement to UK SBS and Crown Commercial Services (CCS – previously Government Procurement Service) agree a Memorandum of Understanding with UK SBS to deliver two major procurement categories (construction and research) across Government.

UK SBS currently manages £700m expenditure for its Contracting Authorities. Our Contracting Authorities who have access to our services and Contracts are detailed [here](#).

Privacy Statement

At UK Shared Business Services (UK SBS) we recognise and understand that your privacy is extremely important and we want you to know exactly what kind of information we collect about you and how we use it.

This privacy notice link below details what you can expect from UK SBS when we collect your personal information.

- We will keep your data safe and private.
- We will not sell your data to anyone.
- We will only share your data with those you give us permission to share with and only for legitimate service delivery reasons.

<https://www.uksbs.co.uk/use/pages/privacy.aspx>

For details on how the Contracting Authority protect and process your personal data please follow the link below:

<https://www.ukri.org/privacy-notice/>

Section 2 – About the Contracting Authority

UK Research and Innovation

Operating across the whole of the UK and with a combined budget of more than £6 billion, UK Research and Innovation represents the largest reform of the research and innovation funding landscape in the last 50 years.

As an independent non-departmental public body UK Research and Innovation brings together the seven Research Councils (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC, STFC) plus Innovate UK and a new organisation, Research England.

UK Research and Innovation ensures the UK maintains its world-leading position in research and innovation. This is done by creating the best environment for research and innovation to flourish.

For more information, please visit: www.ukri.org

Section 3 - Working with the Contracting Authority.

In this section you will find details of your Procurement contact point and the timescales relating to this opportunity.

Section 3 – Contact details		
3.1	Contracting Authority Name and address	UK Research & Innovation, Polaris House North Star Avenue Swindon SN2 1FL
3.2	Buyer name	Karl Oakley
3.3	Buyer contact details	research@uksbs.co.uk
3.4	Maximum value of the Opportunity	£78,000.00 (excluding VAT)
3.5	Process for the submission of clarifications and Bids	All correspondence shall be submitted within the Emptoris e-sourcing tool. Guidance Notes to support the use of Emptoris is available here. Please note submission of a Bid to any email address including the Buyer <u>will</u> result in the Bid <u>not</u> being considered.

Section 3 - Timescales		
3.6	Date of Issue of Contract Advert and location of original Advert	Tuesday 4 th June 2019 Contracts Finder
3.7	Latest date/time ITQ clarification questions shall be received through Emptoris messaging system	Thursday 13 th June 2019 11:00am
3.8	Latest date/time ITQ clarification answers should be sent to all Bidders by the Buyer through Emptoris	Friday 14 th June 2019
3.9	Latest date/time ITQ Bid shall be submitted through Emptoris	Tuesday 18 th June 2019 11:00am
3.10	Date Bidders should be available if clarifications are required	Friday 21 st June 2019
3.11	Anticipated notification date of successful and unsuccessful Bids	Thursday 27 th June 2019
3.12	Anticipated Award date	Monday 1 st of July 2019
3.13	Anticipated Contract Start date	Friday 5 th of July 2019
3.14	Anticipated Contract End date	Friday 28 th of February 2020
3.15	Bid Validity Period	60 Days

Section 4 – Specification

1. Introduction

This specification is for work to be procured by the Centre for Ecology and Hydrology (CEH) to provide expert knowledge to develop an environmental sensor metadata model appropriate for key CEH sensor networks, to review approaches to sensor data management (in particular data storage), and initiate a simple demonstration or prototype software development to store sensor data and deliver it over the web.

The overall aim of the work will be to improve CEH's ability to integrate sensor data across its own networks and with data from networks operated by others, to enable CEH sensor network operators to explicitly represent all required information within data exchange formats, and to move towards machine readable and actionable sensor data. The review of sensor data management and storage approaches will ensure that decisions by CEH on technologies used for sensor data infrastructures are based on a full understanding of the range of technologies available, and of best practice in other industries where intensive time series and sensor data management is well established.

The work to be procured will be undertaken within a wider project focussed on sensor network enhancements which includes development of new sensor measurements, automated quality control procedures and AI approaches to improving and analysing sensor network data. The work will be undertaken in close collaboration with CEH staff, who will be providing input to describe sensor network systems, to help steer decisions on metadata models, and who will be implementing the sensor metadata model within existing CEH systems.

2. Aims & Objectives

The aim of the tender exercise is to obtain expertise on sensor metadata standards and sensor data management to develop an improved sensor metadata model that can be used to deliver data from a number of CEH sensor networks in such a way that data is readily comparable across networks and can be produced using the existing set of technologies used to manage these networks. In addition the work will provide CEH with information and direction on future development of these systems, particularly in relation to data storage in the context of the need to store data at increasingly high temporal resolutions, and to analyse and deliver this data in near-real-time.

3. Objectives

The specific objectives (and outputs) are:

1. Undertake a review of sensor and monitoring metadata standards to describe environmental measurements from sensors from the level of sensor network down to individual measurement values and associated quality control and provenance information (report)
2. Review CEH's sensor metadata content in relation to sensor metadata standards (report)
3. Based on the outputs of 1 and 2, the development of a simple json-based metadata schema for CEH sensor network metadata which can be implemented by CEH using standard (e.g. python) tools (data model with examples)

4. Review sensor data storage approaches within environmental sciences and beyond (e.g. oil and gas, fintech, biotech) (report)
5. Based on the outputs of 4, the identification and description of appropriate approaches for CEH to enhance existing or implement new sensor data management technology (report)
6. Development of a prototype or demonstration software implementation of sensor metadata storage and web-based delivery (depending on conclusions of 3 and 5).

Reports 1 and 4 will be published as part of a wider report from the project to the project funders, and possibly publicly.

4. Background to the Requirement

The Centre for Ecology and Hydrology (CEH) has recently been awarded a grant from the national Environmental research Council (NERC) for a feasibility project (called ENTRAIN) within the NERC SPF Constructing a Digital Environment programme.

This procurement is for a specific item of work within the ENTRAIN project to review sensor data management approaches and metadata standards for sensor data management, and to co-develop (with CEH) a functional simple metadata schema for three of its sensor networks.

A summary of the programme can be seen here:

“The Constructing a Digital Environment Strategic Priorities Fund programme aims to develop the digitally enabled environment which benefits policymakers, businesses, communities and individuals. This will happen by creating an integrated network of sensors (in situ and remote sensing based), methodologies and tools for assessing, analysing, monitoring and forecasting the state of the natural environment. This will be done at higher spatial resolutions and at higher frequency than previously possible. This would support responses to acute events but also inform our understanding of long-term environmental change. Multi-disciplinary and inter-disciplinary research and innovation will aid in the successful construction of a 'digital environment'.”

A description of the ENTRAIN project can be seen here:

<https://www.ceh.ac.uk/our-science/projects/entrain>

CEH currently operates a number of environmental sensor networks. In the context of this specification we define environmental sensor networks as multiple automated measurements of environmental variables using automated, often high frequency., as well as complementary monitoring requiring more manual approaches.

Data retrieval mechanisms (e.g. telemetry) often vary between networks and projects undertaking measurements. Data storage approaches also vary, from simple text file based approaches to relatively large relational databases. Metadata is regularly collated as part of monitoring projects, and shared when data is published, but there is little standardisation of the metadata captured, or of the way this is stored or formatted when shared.

The ENTRAIN project aims both to enhance the 3 CEH networks by improving storage and metadata, but also to provide guidance to other projects, with the ultimate aim of delivering a “Digital Environment” wherein data from diverse sensor networks can be integrated with minimal effort, and made automatically accessible and usable for analysis by AI and machine learning tools.

There are many research sensor networks operated by other organisations across NERC, as well as other institutions in the UK and beyond. We aim to review approaches to management of data and metadata by these and use the information gained to improve the CEH network management.

The networks to be included are:

- 1) COSMOS-UK (<https://cosmos.ceh.ac.uk/>) is a flagship NERC terrestrial National Capability long-term monitoring network, delivering near real-time measurements of soil moisture, weather and some phenological information through automated cameras (Phenocams). The spatial scale is large with ~50 stations operating across the UK. Most data is collected at 30 minute intervals, with 1 minute precipitation recording. Data is stored within a central Oracle relational database. Full metadata is stored for sites, time series, units, etc., down to individual sensor makes and versions, and measurement value level QC flags. Data processing is fully automated and undertaken using python and R scripts. Data is currently delivered to the COSMOS-UK website in the form of graphs and non-standards based web services. A suite of java-based server software delivers data to a number of users.
- 2) The UK GHG Flux Network is a network of 12 Eddy Covariance (EC) flux towers. The most automated towers are mostly focused on observing land-atmosphere fluxes of carbon dioxide (CO₂) and water vapour (evapotranspiration), with some measuring other trace GHG gas fluxes such as methane. The EC technique measures wind turbulence and deploys fast response infrared gas analysers, usually collecting data at 20 samples per second. In most cases, data are already automatically streamed via the 2G/3G/4G mobile phone data networks to CEH Wallingford for automated post processing to produce 30 minute gas and energy fluxes. The EC stations also record 30 minute ancillary (meteorological) data and are equipped with Phenocams.
- 3) The CEH Thames Initiative Research Platform provides high-quality, weekly water quality data from 23 sites along the River Thames and its major tributaries, hourly nutrient and water quality data from a range of auto-analysers and sondes at two automated monitoring stations in the lower Thames, and novel biological data such as weekly cell abundances of diatoms, algae and cyanobacteria at all 23 sites, using flow cytometry. This network operates in partnership with the EA's National Water Quality Instrumentation Service (EA-NWQIS), sharing data and analysis between the organisations.

The main focus of the metadata model development will be the COSMOS-UK network, as this has richer metadata and a more well-defined set of users and use cases. It is likely that the feasibility of the metadata model will be trialled within COSMOS-UK systems to deliver data within the project timespan, and potentially extended to other networks to demonstrate how it enables interoperability.

There are many data standards and protocols in the area of sensor and measurement metadata, which have been developed and implemented to varying degrees. These include O&M, WaterML2, TimeSeriesML, INSPIRE EMF, SSNO, SOSA, and service protocols such as Sensor Things API, SOS, , etc. Initiatives such as the OGC's ELFIE have investigated linking datasets to spatial features, using linked data approaches.

Information from the review of sensor and measurement metadata standards will be used to assess the metadata content from the 3 CEH networks, and to co-develop (with CEH) and implement a simple json-based metadata schema for the CEH networks, compatible with delivery via REST-based APIs.

This will enable CEH to integrate data from these networks, and with data from other networks, develop code to navigate network metadata to identify and retrieve data streams, build web apps to map and plot data from sensor networks, and link to

vocabularies of terms to provide explicit and machine-readable descriptions of sensor network measurements.

CEH currently uses Oracle relational databases to store sensor data from networks but there are a number of other data storage approaches from domain-specific commercial software solutions (e.g. WISKI and Aquarius for river flow data), dedicated time series databases including those offered by cloud providers, various NoSQL based approaches, including graph databases.

New approaches to data sensor data storage have the potential to enable steps to higher resolution data (1 minute to multiple Hz) and increase data access speeds for new analyses and data delivery.

Information from the review on approaches to data storage will be used to document options for future enhancement of the CEH networks, in particular in relation to opportunities to increase performance for higher temporal resolution monitoring.

The COSMOS-UK data system has an existing dev/ops approach within which new features can be developed and tested. Relational database models can be adapted to cater for new metadata or changes to data models. The CEH SKOS-based vocab server is available for storage and management of vocabulary terms if required.

The work being procured will be undertaken in close collaboration with CEH staff with expertise in the COSMOS-UK data systems. CEH staff will provide input on use cases, metadata, opinions on usability of existing data models and standards, appropriateness of solutions with respect to existing metadata content and ease of implementations. Office space will be available so that the personnel working on the procured work can be based at CEH offices in Wallingford for some or all of the contract. Alternatively it may be possible to undertake the work through regular meetings, which would be a mixture of face-to-face meetings at CEH offices in Wallingford, and virtual meetings.

5. Scope

The scope for the metadata review and data model development is clear. It will include existing COSMOS-UK metadata, from the level of the network itself through sites, instruments, measured parameters and associated descriptions (units, intervals, etc.), to individual values and their provenance (QC, etc.). It will also include equivalent information from the UK GHG and Thames initiative networks, with water quality sampling and lab analysis protocols as well as metadata about in-field sensors. The scope for the existing standards and data models to be reviewed will be agreed at the initiation of the project but will include SOS, O&M, WaterML2, TimeSeriesML, INSPIRE EMF, PROV, SSNO, SOSA, and SensorThings in relation to API delivery. Serialisation of the data model will be in json, making use of Linked Data approaches, and it is expected that example outputs will be produced using data from the 3 networks.

For the review of data management approaches, we expect this to be based on existing openly available case studies of use of technologies in different industries, or on expertise or working in companies in those industries. Industries within scope are fintech, biotech, oil and gas, but this is not limiting. In addition approaches to sensor data management used within other organisations managing environmental research sensor network will be important, and we expect to engage with these organisations

(e.g. Met Office, National Oceanography Centre, British Geological Survey, etc.) to understand the variety of approaches taken.

The balance of effort between these tasks will be confirmed at the initiation of the project but is expected to be weighted towards the metadata model development. Both tasks may be run simultaneously. The work will be undertaken in phases, with defined deliverables for each phase agreed at the start of the phase and accepted subject to review at the end of a phase, at which point the priorities for the subsequent phase will be defined. In this way the expectations for each piece of work can be balanced according to progress as well as to the expertise of the contractor.

6. Requirement

The requirement for this procurement is:

Task1. Development of sensor metadata model

- 1.1. Undertake a review of sensor and monitoring metadata standards to describe environmental measurements from sensors from the level of sensor network down to individual measurement values and associated quality control and provenance information.

Scope: Existing sensor data and service standards relevant to the effective deployment and integration of data from ENTRAIN networks according to use cases.

Output: Report on sensor metadata models.

Quality: The report will be required to be published publicly either as a standalone publication or as part of a wider report. The quality of the presentation must be appropriate for this purpose. The content will be required to cover the list of agreed data models and be sufficiently detailed to inform development of a data model for CEH networks. The report will be additionally reviewed by CEH Lancaster informatics staff.

- 1.2. Review CEH's sensor metadata content in relation to sensor metadata standards. Assess the suitability of the metadata models to the requirements of the ENTRAIN networks, and the current metadata available for those networks, identifying gaps.

Scope: Metadata models reviewed in 1.1, and all metadata held for the ENTRAIN networks.

Output: Short internal report

Quality: The report shall provide sufficient information on which to base the development of the metadata model within task 1.3.

- 1.3. Development of a simple metadata model and json-based serialisation for CEH sensor network metadata which can be implemented by CEH using standard (e.g. python) tools .

Scope: Metadata held for the ENTRAIN networks. The task shall consider the systems available within CEH for producing this metadata, e.g. where revisions to the database structure are required, python packages and other technologies available for use in development of services to deliver the data over the web.

Output: Data model with example serialisations, accompanying report.

Quality: The data model must be appropriate to deliver ENTRAIN network metadata and suitable for implementation within CEH systems (e.g. python based web services). The outputs will be additionally reviewed by CEH Lancaster informatics staff.

Task 2. Review of sensor data management approaches

- 2.1. Review of sensor database approaches used within environmental sciences and beyond (e.g. oil and gas, fintech, biotech).

Scope: The review shall include existing openly available case studies of use of technologies in different industries, or on current expertise or working with companies in those industries. The specific area of interest is in fairly highly structured time series data and metadata about the meaning and derivation of time series, as well as quality information about time series values. CEH will provide information on existing environmental networks or organise opportunities to discuss these with network operators from environmental research organisations. Specific areas of interest are volumes of data, storage software (e.g. databases), storage structure (e.g. relational tables, documents, key-value pairs, etc.), approximate indicators of performance (e.g. volumes of data processed and the approximate time taken for key processes), approaches to metadata structure and storage, approaches to QC of data, approaches to versioning, approaches to search and discovery of database contents, approaches to delivery of time series data. A short report for each example, comparing these aspects of each system and how this is enabled (or hindered) by technology choices would be sufficient. In addition any potentially important and appropriate technologies that are not represented within the examples should be described, based on available information and expertise, summarising the benefits and limitations they would bring in each of these areas.

Output: Report on sensor data management approaches.

Quality: Elements of the report will be required to be published publicly either as a standalone publication or as part of a wider report, (though any commercially sensitive information can be removed prior to external publication). The quality of the presentation must be appropriate for this purpose.

2.2. Identification and description of appropriate approaches for CEH to enhance existing or implement new sensor data management technology (report).

Scope: The aim of this task is to make use of the output of task 2.1 to help to provide understanding as to potential future uses of technology within CEH for sensor data management. It should consider the technologies assessed in task 2.1 against the use cases and resources (financial but also skills and infrastructure) to identify where CEH sensor management technology could be updated in future.

Output: Short internal report.

Quality: The information should be sufficiently detailed to enable further scoping / prototyping work with new technologies.

Task 3. Demonstration or prototype software implementation of sensor data storage of web-based delivery

3.1. Demonstration or prototype software implementation of sensor data storage of web-based delivery.

Scope: The aim of this task is to demonstrate the applicability of the solutions set out in tasks 1 and 2. The expectation is for a prototype software framework for storage and delivery of sensor metadata and time series data. The level of complexity of this prototype will depend on decisions regarding resource usage within tasks 1 and 2, the solutions identified within this task, and the relative priorities of complexity of metadata model vs software prototype. Any solution described should acknowledge this and describe how a lightweight prototype could be delivered, estimating the expected proportion of the total resource for this task based on the expected resource needed for tasks 1 and 2 and the total budget available. This prototype software development will not require ongoing support.

This approach is intended to give the supplier the opportunity to describe, and justify, the level of resource required for tasks 1 and 2, to estimate the resource expected to be available to task 3, and to describe the level of prototype software development that would be possible within this task 3 resource. It is acknowledged that there may be a degree of uncertainty around the resource required for tasks 1 and 2, and that

distribution of resources across tasks will be finalised at the project initiation phase, and that subsequently the task 3 resource may change, depending on priorities and progress,

7. Timetable

The work would be expected to start mid July 2019, and be completed before Feb 2020. The bulk of the work should be completed before December 2019, with the large part of the metadata model development in task 1.3 expected to be undertaken from September 2019.

An anticipated timetable should be provided in response to this specification, setting out dates for the start and end of the tasks described, and indicating the anticipated resource effort required for each.

The work will be undertaken in stages, with tasks 1 and 2 undertaking independently, and subtasks within each task requiring completion and sign-off by CEH prior to proceeding to the next sub-task. Task 3 will start after tasks 1 and 2 have completed, though, as described above, the complexity of task 3 and the amount of resources available will depend on the approach to tasks 1 and 2.

A meeting will be held at the start of each sub-task to refine and clarify the scope and requirements. Further meetings will be held as appropriate during each sub-task (e.g. weekly or daily stand-ups as required), in person or remotely. Overall decisions regarding prioritisation will be made, in particular in relation to task 3, early in the project once the approach to tasks 1 and 2 has been agreed.

Terms and Conditions

Bidders are to note that any requested modifications to the Contracting Authority Terms and Conditions on the grounds of statutory and legal matters only, shall be raised as a formal clarification during the permitted clarification period.

Section 5 – Evaluation model

The evaluation model below shall be used for this ITQ, which will be determined to two decimal places.

Where a question is 'for information only' it will not be scored.

The evaluation team may comprise staff from UK SBS and the Contracting Authority and any specific external stakeholders the Contracting Authority deems required. After evaluation the scores will be finalised by performing a calculation to identify (at question level) the mean average of all evaluators (Example – a question is scored by three evaluators and judged as scoring 5, 5 and 6. These scores will be added together and divided by the number of evaluators to produce the final score of 5.33 ($5+5+6=16 \div 3 = 5.33$))

Pass / fail criteria		
Questionnaire	Q No.	Question subject
Commercial	SEL1.2	Employment breaches/ Equality
Commercial	FOI1.1	Freedom of Information Exemptions
Commercial	AW1.1	Form of Bid
Commercial	AW1.3	Certificate of Bona Fide Bid
Commercial	AW3.1	Validation check
Commercial	SEL3.11	Compliance to Section 54 of the Modern Slavery Act
Commercial	AW4.1	Contract Terms Part 1
Commercial	AW4.2	Contract Terms Part 2
Price	AW5.1	Maximum Budget
Price	AW5.5	E Invoicing
Price	AW5.6	Implementation of E-Invoicing
Quality	AW6.1	Compliance to the Specification
Quality	AW6.2	Variable Bids
Quality	PROJ1.6	Capacity
-	-	Invitation to Quote – received on time within e-sourcing tool
Quality	PROJ1.7	Capability of Staff (For Information Only)
Quality	PROJ1.8	Case Studies (For Information Only)

Scoring criteria			
Evaluation Justification Statement In consideration of this particular requirement the Contracting Authority has decided to evaluate Potential Providers by adopting the weightings/scoring mechanism detailed within this ITQ. The Contracting Authority considers these weightings to be in line with existing best practice for a requirement of this type.			
Questionnaire	Q No.	Question subject	Maximum Marks
Price	AW5.2	Price	20%
Quality	PROJ1.1	Approach/ Methodology	35%
Quality	PROJ1.2	Staff to Deliver	10%
Quality	PROJ1.3	Understanding the Project Environment	15%
Quality	PROJ1.4	Project Plan and Timescales	10%

Quality	PROJ1.5	Risk Management	10%
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Evaluation of criteria

Non-Price elements

Each question will be judged on a score from 0 to 100, which shall be subjected to a multiplier to reflect the percentage of the evaluation criteria allocated to that question.

Where an evaluation criterion is worth 20% then the 0-100 score achieved will be multiplied by 20%.

Example if a Bidder scores 60 from the available 100 points this will equate to 12% by using the following calculation:

$$\text{Score} = \{\text{weighting percentage}\} \times \{\text{bidder's score}\} = 20\% \times 60 = 12$$

The same logic will be applied to groups of questions which equate to a single evaluation criterion.

The 0-100 score shall be based on (unless otherwise stated within the question):

0	The Question is not answered, or the response is completely unacceptable.
10	Extremely poor response – they have completely missed the point of the question.
20	Very poor response and not wholly acceptable. Requires major revision to the response to make it acceptable. Only partially answers the requirement, with major deficiencies and little relevant detail proposed.
40	Poor response only partially satisfying the selection question requirements with deficiencies apparent. Some useful evidence provided but response falls well short of expectations. Low probability of being a capable supplier.
60	Response is acceptable but remains basic and could have been expanded upon. Response is sufficient but does not inspire.
80	Good response which describes their capabilities in detail which provides high levels of assurance consistent with a quality provider. The response includes a full description of techniques and measurements currently employed.
100	Response is exceptional and clearly demonstrates they are capable of meeting the requirement. No significant weaknesses noted. The response is compelling in its description of techniques and measurements currently employed, providing full assurance consistent with a quality provider.

All questions will be scored based on the above mechanism. Please be aware that the final score returned may be different as there may be multiple evaluators and their individual scores will be averaged (mean) to determine your final score.

Example

Evaluator 1 scored your bid as 60

Evaluator 2 scored your bid as 60

Evaluator 3 scored your bid as 40

Evaluator 4 scored your bid as 40

Your final score will $(60+60+40+40) \div 4 = 50$

Price elements will be judged on the following criteria.

The lowest price for a response which meets the pass criteria shall score 100.

All other bids shall be scored on a pro rata basis in relation to the lowest price. The score is then subject to a multiplier to reflect the percentage value of the price criterion.

For example - Bid 1 £100,000 scores 100.

Bid 2 £120,000 differential of £20,000 or 20% remove 20% from price scores 80

Bid 3 £150,000 differential £50,000 remove 50% from price scores 50.

Bid 4 £175,000 differential £75,000 remove 75% from price scores 25.

Bid 5 £200,000 differential £100,000 remove 100% from price scores 0.

Bid 6 £300,000 differential £200,000 remove 100% from price scores 0.

Where the scoring criterion is worth 50% then the 0-100 score achieved will be multiplied by 50.

In the example if a supplier scores 80 from the available 100 points this will equate to 40% by using the following calculation: Score/Total Points multiplied by 50 ($80/100 \times 50 = 40$)

The lowest score possible is 0 even if the price submitted is more than 100% greater than the lowest price.

Section 6 – Evaluation questionnaire

Bidders should note that the evaluation questionnaire is located within the **e-sourcing questionnaire**.

Guidance on completion of the questionnaire is available at
<http://www.uksbs.co.uk/services/procure/Pages/supplier.aspx>

PLEASE NOTE THE QUESTIONS ARE NOT NUMBERED SEQUENTIALLY

Section 7 – General Information

What makes a good bid – some simple do's 😊

DO:

- 7.1 Do comply with Procurement document instructions. Failure to do so may lead to disqualification.
- 7.2 Do provide the Bid on time, and in the required format. Remember that the date/time given for a response is the last date that it can be accepted; we are legally bound to disqualify late submissions. Responses received after the date indicated in the ITQ shall not be considered by the Contracting Authority, unless the Bidder can justify that the reason for the delay, is solely attributable to the Contracting Authority
- 7.3 Do ensure you have read all the training materials to utilise e-sourcing tool prior to responding to this Bid. If you send your Bid by email or post it will be rejected.
- 7.4 Do use Microsoft Word, PowerPoint Excel 97-03 or compatible formats, or PDF unless agreed in writing by the Buyer. If you use another file format without our written permission, we may reject your Bid.
- 7.5 Do ensure you utilise the Emptoris messaging system to raise any clarifications to our ITQ. You should note that we will release the answer to the question to all Bidders and where we suspect the question contains confidential information we may modify the content of the question to protect the anonymity of the Bidder or their proposed solution
- 7.6 Do answer the question, it is not enough simply to cross-reference to a 'policy', web page or another part of your Bid, the evaluation team have limited time to assess bids and if they can't find the answer, they can't score it.
- 7.7 Do consider who the Contracting Authority is and what they want – a generic answer does not necessarily meet every Contracting Authority's needs.
- 7.8 Do reference your documents correctly, specifically where supporting documentation is requested e.g. referencing the question/s they apply to.
- 7.9 Do provide clear, concise and ideally generic contact details; telephone numbers, e-mails and fax details.
- 7.10 Do complete all questions in the questionnaire or we may reject your Bid.
- 7.11 Do ensure that the Response and any documents accompanying it are in the English Language, the Contracting Authority reserve the right to disqualify any full or part responses that are not in English.
- 7.12 Do check and recheck your Bid before dispatch.

What makes a good bid – some simple do not's Ⓜ

DO NOT

- 7.13 Do not cut and paste from a previous document and forget to change the previous details such as the previous buyer's name.
- 7.14 Do not attach 'glossy' brochures that have not been requested, they will not be read unless we have asked for them. Only send what has been requested and only send supplementary information if we have offered the opportunity so to do.
- 7.15 Do not share the Procurement documents, they are confidential and should not be shared with anyone without the Buyers written permission.
- 7.16 Do not seek to influence the procurement process by requesting meetings or contacting UK SBS or the Contracting Authority to discuss your Bid. If your Bid requires clarification the Buyer will contact you. All information secured outside of formal Buyer communications shall have no Legal standing or worth and should not be relied upon.
- 7.17 Do not contact any UK SBS staff or the Contracting Authority staff without the Buyers written permission or we may reject your Bid.
- 7.18 Do not collude to fix or adjust the price or withdraw your Bid with another Party as we will reject your Bid.
- 7.19 Do not offer UK SBS or the Contracting Authority staff any inducement or we will reject your Bid.
- 7.20 Do not seek changes to the Bid after responses have been submitted and the deadline for Bids to be submitted has passed.
- 7.21 Do not cross reference answers to external websites or other parts of your Bid, the cross references and website links will not be considered.
- 7.22 Do not exceed word counts, the additional words will not be considered.
- 7.23 Do not make your Bid conditional on acceptance of your own Terms of Contract, as your Bid will be rejected.
- 7.24 Do not unless explicitly requested by the Contracting Authority either in the procurement documents or via a formal clarification from the Contracting Authority send your response by any way other than via e-sourcing tool. Responses received by any other method than requested will not be considered for the opportunity.

Some additional guidance notes

- 7.25 All enquiries with respect to access to the e-sourcing tool and problems with functionality within the tool must be submitted to Crown Commercial Service (previously Government Procurement Service), Telephone 0345 010 3503.
- 7.26 Bidders will be specifically advised where attachments are permissible to support a question response within the e-sourcing tool. Where they are not permissible any attachments submitted will not be considered as part of the evaluation process.
- 7.27 Question numbering is not sequential and all questions which require submission are included in the Section 6 Evaluation Questionnaire.
- 7.28 Any Contract offered may not guarantee any volume of work or any exclusivity of supply.
- 7.29 We do not guarantee to award any Contract as a result of this procurement
- 7.30 All documents issued or received in relation to this procurement shall be the property of the Contracting Authority. / UKSBS.
- 7.31 We can amend any part of the procurement documents at any time prior to the latest date / time Bids shall be submitted through Emptoris.
- 7.32 If you are a Consortium you must provide details of the Consortiums structure.
- 7.33 Bidders will be expected to comply with the Freedom of Information Act 2000 or your Bid will be rejected.
- 7.34 Bidders should note the Government's transparency agenda requires your Bid and any Contract entered into to be published on a designated, publicly searchable web site. By submitting a response to this ITQ Bidders are agreeing that their Bid and Contract may be made public
- 7.35 Your bid will be valid for 60 days or your Bid will be rejected.
- 7.36 Bidders may only amend the contract terms during the clarification period only, only if you can demonstrate there is a legal or statutory reason why you cannot accept them. If you request changes to the Contract terms without such grounds and the Contracting Authority fail to accept your legal or statutory reason is reasonably justified, we may reject your Bid.
- 7.37 We will let you know the outcome of your Bid evaluation and where requested will provide a written debrief of the relative strengths and weaknesses of your Bid.
- 7.38 If you fail mandatory pass / fail criteria we will reject your Bid.
- 7.39 Bidders are required to use IE8, IE9, Chrome or Firefox in order to access the functionality of the Emptoris e-sourcing tool.
- 7.40 Bidders should note that if they are successful with their proposal the Contracting Authority reserves the right to ask additional compliancy checks prior to the award of any Contract. In the event of a Bidder failing to meet one of the compliancy checks

the Contracting Authority may decline to proceed with the award of the Contract to the successful Bidder.

- 7.41 All timescales are set using a 24-hour clock and are based on British Summer Time or Greenwich Mean Time, depending on which applies at the point when Date and Time Bids shall be submitted through Emptoris.
- 7.42 All Central Government Departments and their Executive Agencies and Non-Departmental Public Bodies are subject to control and reporting within Government. In particular, they report to the Cabinet Office and HM Treasury for all expenditure. Further, the Cabinet Office has a cross-Government role delivering overall Government policy on public procurement - including ensuring value for money and related aspects of good procurement practice.

For these purposes, the Contracting Authority may disclose within Government any of the Bidders documentation/information (including any that the Bidder considers to be confidential and/or commercially sensitive such as specific bid information) submitted by the Bidder to the Contracting Authority during this Procurement. The information will not be disclosed outside Government. Bidders taking part in this ITQ consent to these terms as part of the competition process.

- 7.43 The Government introduced its new Government Security Classifications (GSC) classification scheme on the 2nd April 2014 to replace the current Government Protective Marking System (GPMS). A key aspect of this is the reduction in the number of security classifications used. All Bidders are encouraged to make themselves aware of the changes and identify any potential impacts in their Bid, as the protective marking and applicable protection of any material passed to, or generated by, you during the procurement process or pursuant to any Contract awarded to you as a result of this tender process will be subject to the new GSC. The link below to the Gov.uk website provides information on the new GSC:

<https://www.gov.uk/government/publications/government-security-classifications>

The Contracting Authority reserves the right to amend any security related term or condition of the draft contract accompanying this ITQ to reflect any changes introduced by the GSC. In particular where this ITQ is accompanied by any instructions on safeguarding classified information (e.g. a Security Aspects Letter) as a result of any changes stemming from the new GSC, whether in respect of the applicable protective marking scheme, specific protective markings given, the aspects to which any protective marking applies or otherwise. This may relate to the instructions on safeguarding classified information (e.g. a Security Aspects Letter) as they apply to the procurement as they apply to the procurement process and/or any contracts awarded to you as a result of the procurement process.

USEFUL INFORMATION LINKS

- [Emptoris Training Guide](#)
- [Emptoris e-sourcing tool](#)
- [Contracts Finder](#)
- [Equalities Act introduction](#)
- [Bribery Act introduction](#)
- [Freedom of information Act](#)