

Invitation to Quote

Invitation to Quote (ITQ) on behalf of UK Research & Innovation
Subject: UKRI – STFC Fibre-Based Seed Laser System
Sourcing Reference Number: UK SBS PR18164



UK Shared Business Services Ltd (UK SBS)
www.uksbs.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
Copyright (c) UK Shared Business Services Ltd. 2014

Version 3.3

Table of Contents

| Section | Content |
|---------|--|
| 1 | <u>About UK Shared Business Services Ltd.</u> |
| 2 | <u>About the Contracting Authority</u> |
| 3 | <u>Working with the Contracting Authority.</u> |
| 4 | <u>Specification</u> |
| 5 | <u>Evaluation model</u> |
| 6 | <u>Evaluation questionnaire</u> |
| 7 | <u>General Information</u> |

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](#).

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

Science and Technology Facilities Council (STFC)

STFC is a world-leading multi-disciplinary science organisation. Their research seeks to understand the Universe from the largest astronomical scales to the tiniest constituents of matter, yet creates impact on a very tangible, human scale.

<https://stfc.ukri.org/>

Privacy Notice

This notice sets out how the Contracting Authority / UK SBS will use your personal data, and your rights. It is made under Articles 13 and/or 14 of the General Data Protection Regulation (GDPR).

YOUR DATA

The Contracting Authority / UK SBS will process the following personal data:

Names and contact details of employees involved in preparing and submitting the bid; Names and contact details of employees proposed to be involved in delivery of the contract;

Names, contact details, age, qualifications and experience of employees who's CVs are submitted as part of the bid.

Purpose

The Contracting Authority are processing your personal data for the purposes of the tender exercise, or in the event of legal challenge to such tender exercise.

Legal basis of processing

The legal basis for processing your personal data is that processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the data controller, such as the exercise of a function of the Crown, a Minister of the Crown, or a government

department; the exercise of a function conferred on a person by an enactment; the exercise of a function of either House of Parliament; or the administration of justice.

Recipients

Your personal data will be shared by us with other Government Departments or public authorities where necessary as part of the tender exercise. The Contracting Authority / UK SBS may share your data if required to do so by law, for example by court order or to prevent fraud or other crime.

Retention

All submissions in connection with this tender exercise will be retained for a period of (7) years from the date of contract expiry, unless the contract is entered into as a deed in which case it will be kept for a period of (12) years from the date of contract expiry.

YOUR RIGHTS

You have the right to request information about how your personal data are processed, and to request a copy of that personal data.

You have the right to request that any inaccuracies in your personal data are rectified without delay.

You have the right to request that any incomplete personal data are completed, including by means of a supplementary statement.

You have the right to request that your personal data are erased if there is no longer a justification for them to be processed.

You have the right in certain circumstances (for example, where accuracy is contested) to request that the processing of your personal data is restricted.

You have the right to object to the processing of your personal data where it is processed for direct marketing purposes.

You have the right to object to the processing of your personal data.

INTERNATIONAL TRANSFERS

Your personal data will not be processed outside the European Union

COMPLAINTS

If you consider that your personal data has been misused or mishandled, you may make a complaint to the Information Commissioner, who is an independent regulator. The Information Commissioner can be contacted at:

Information Commissioner's Office

Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF

Tel. 0303 123 1113 email: casework@ico.org.uk

Any complaint to the Information Commissioner is without prejudice to your right to seek redress through the courts.

CONTACT DETAILS

The data controller for your personal data is: Prof. JL Collier, Central Laser Facility, Rutherford Appleton Laboratory, Chilton, Didcot, OX11 0QX.

You can contact the Data Protection Officer at:

UKRI Head of Information Governance, Polaris House, North Star Avenue. Swindon, Wiltshire, SN2 1FF, Email David.Hyett@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 and Innovation Polaris House North Star Avenue Swindon Wiltshire SN2 1FL United Kingdom |
| 3.2 | Buyer name | Jonathan Smith |
| 3.3 | Buyer contact details | Email: majorprojects@uksbs.co.uk |
| 3.4 | Estimated value of the Opportunity | £125,000.00 - £140,000.00 ex-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 | 13/11/2018 Location: Contracts Finder |
| 3.7 | Latest date/time ITQ clarification questions shall be received through Emptoris messaging system | 29/11/2018 14:00 |
| 3.8 | Latest date/time ITQ clarification answers should be sent to all Bidders by the Buyer through Emptoris | 30/11/2018 14:00 |
| 3.9 | Latest date/time ITQ Bid shall be submitted through Emptoris | 04/12/2018 14:00 |
| 3.10 | Date/time Bidders should be available if face to face clarifications are required | N/A |
| 3.11 | Anticipated notification date of successful and unsuccessful Bids | 10/12/2018 |
| 3.12 | Anticipated Award date | 21/12/2018 |
| 3.13 | Anticipated Contract Start date | 02/01/2019 |
| 3.14 | Anticipated Contract End date | 29/03/2019 |
| 3.15 | Bid Validity Period | 60 Days |

Section 4 – Specification

Specification for Fibre-Based Seed Laser System

1. Introduction

This document describes the technical specification required to produce a fibre based seed laser system (in the following called the System) that produces shaped ns-pulses to seed a diode pumped Yb:YAG laser amplifier chain. In this amplifier chain, the pulses will be amplified to an energy of 10 J at a repetition rate of 100 Hz.

The Yb:YAG laser system is being developed by the Science and Technology Facilities Council. It will be installed operated in a laser laboratory at the Rutherford Appleton Laboratory, UK.

2. Scope of contract

The proposals shall cover delivery of all components necessary, including:

- A tuneable, single frequency, continuous wave (cw) Master Oscillator. It shall also be possible to use an alternative Master Oscillator, supplied by the Customer, instead. For details see Section 3.1.
- An optical Pulse Shaping Unit including appropriate fibre amplifiers and modulators.
- An arbitrary waveform generator (AWG) to drive the pulse shaping modulator.
- All necessary ancillary equipment like power supplies and driver units for the individual components.
- Integration of all components into one or several rack-mountable units.
- Factory demonstration of System performance.
- Installation at site of STFC and demonstration of performance to specification.
- Operator training by a dedicated engineer.
- Documentation in English.

3. Overview of System

Figure 1 shows a schematic diagram of the System outlining the major sub-systems, and the interfaces with the Customer's equipment. The diagram is indicative only and does not prescribe how the internal components should be partitioned or housed.

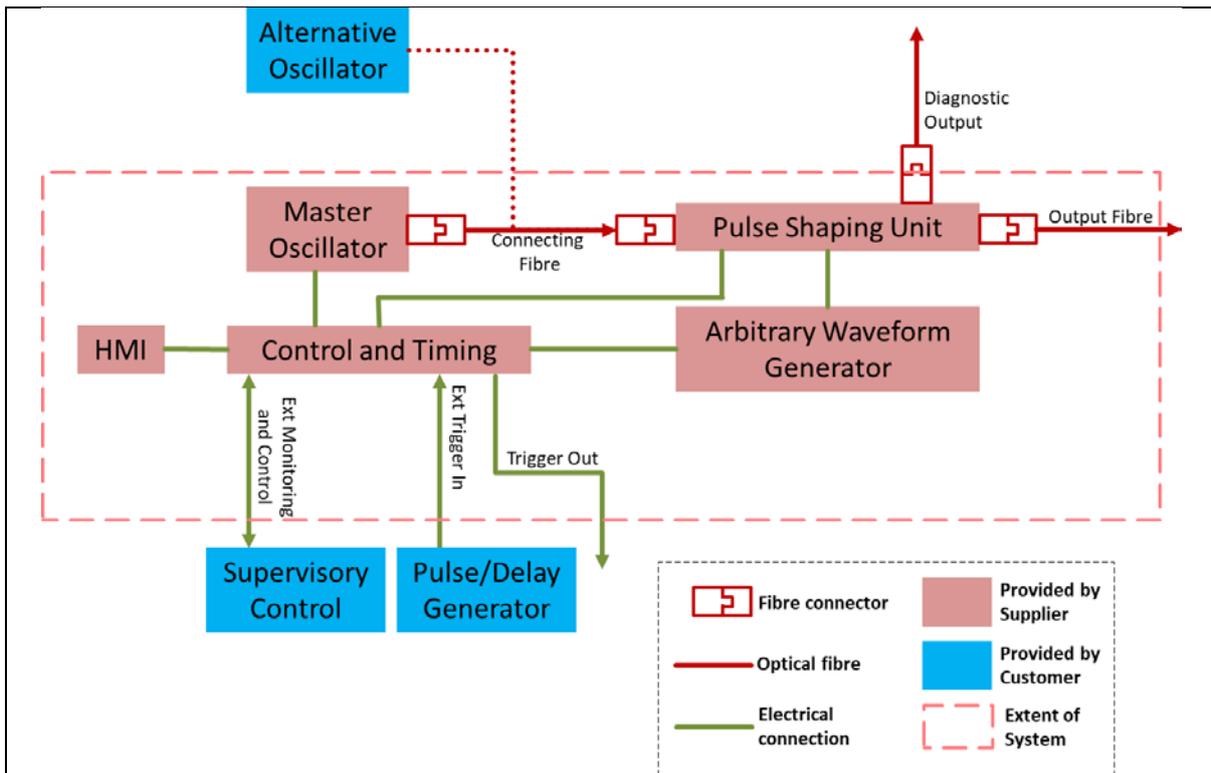


Figure 1: Block diagram of System. For details see text. HMI stands for human-machine interface

- For details concerning the alternative oscillator see Section 3.1.
- For detailed output requirements see Section 4.
- For details regarding the diagnostic output see Section 5.
- For details regarding local and external control, trigger in and outputs, and the HMI see Section 6.

3.1 Alternative Oscillator

As outlined in Figure 1, the supplied Master Oscillator shall be connected to the rest of the System through an externally accessible fibre. The system shall function with an alternative, Customer supplied oscillator; to facilitate this it shall be possible to disconnect the master oscillator fibre to connect the alternative, customer supplied oscillator. The alternative oscillator will have the following output properties:

- Temporal: cw
- Spectral: narrow-band or broadband, but always within ± 1 nm of λ_o (as defined in Section 4.1).
- Power: up to 20 mW, maximum power can be limited as directed by the Supplier.
- Delivery through single-mode PM980 fibre, with PER of around 20 dB, with polarisation axis as directed by the Supplier. For information on connectors see Section 8.

4. PERFORMANCE SPECIFICATION

The output of the System shall be delivered by optical fibre (for details see Section 4.5). Unless stated otherwise, performance of the System will be measured at the output of this

fibre and compared against the criteria detailed below. This means that specifications, unless stated otherwise, apply to the optical output pulses, and not to the electrical RF pulses produced by the AWG.

It is encouraged that data, including measurements undertaken in the past and how they were obtained, are provided by bidders to show capability to meet the specification.

The performance shall be demonstrated using the single frequency Master Oscillator delivered by the Supplier.

As mentioned in Section 3.1, the System will be capable to work with an alternative, customer-supplied oscillator, the “handover” between seed sources must be demonstrated. The Customer will make this alternative oscillator available to the Supplier for testing.

4.1 Spectral properties

The spectral properties, determined by the Master Oscillator, shall be as follows.

- The centre wavelength λ_0 shall be 1029.8 nm (measured in vacuum) equivalent to 1029.5 nm measured in air.
- The wavelength shall be tuneable by at least ± 0.5 nm around λ_0 .
- The wavelength shall be adjustable by the operator, in increments of 50pm, with a target of 10 pm.
- The information about the Master Oscillator that the supplier intends to use shall be provided as part of the bid, ideally backed up by evidence such as datasheets. This shall include information on:
 - Spectral width, which shall be no more than 20 MHz.
 - Side-mode suppression which shall be better than 30 dB.
 - Wavelength stability which shall be better than ± 10 pm over 6 hours.

4.2 Temporal properties

- The pulse repetition rate shall be 10 kHz.
- The temporal pulse duration shall be programmable between 1 to 20 ns.
- The temporal pulse shape shall be arbitrarily controllable with a temporal resolution (step size) of no more than 125 ps.
- The jitter between the externally supplied electrical trigger pulse and the optical output pulse shall be no more than 50 ps RMS. See also Section 6.3 regarding timing and triggering.
- The pulse rise/fall times (10-90%) shall be less than 200 ps, with a target of 150 ps.

4.3 Amplitude control

- The temporal extinction ratio shall be at least 30 dB, measured within a time window of ± 15 ns relative to the centre of the output pulse.
- The minimum temporal extinction ratio shall be met for Master Oscillator wavelengths in the range of $\lambda_0 \pm 1.0$ nm.
- The minimum temporal extinction ratio must be maintained without operator intervention for at least three months. At longer time intervals, when required,

suitably trained operators must be able to make adjustments, using commonly available instrumentation and without having to open the housing of the System.

- The resolution with which the amplitude of the pulse can be controlled shall be at least 10 bit.
- For a square output pulse, ripples in the plateau region of the pulse, shall not exceed $\pm 2\%$ peak-to-peak of the pulse amplitude.

4.4 Energy, power and stability

- The maximum peak power shall be at least 300 mW, meaning the pulse energy for a square pulse will be at least 0.3 nJ at 1 ns duration, and 3 nJ at 10ns duration.
- The system will be used to seed a laser system operating at 100 Hz, therefore pulse-to-pulse energy stability shall be measured at that rate, i.e. by an instrument that is triggered at one-hundredth of the System's internal repetition rate. The pulse-to-pulse energy stability for 100 % of pulses, measured in this way, over 1 minute (equal to 6000 pulses), will be better than $\pm 1\%$ peak-to-peak. The RMS stability (or standard deviation) within that time frame will be better than 1 %.
- The stability of average power will meet the criteria listed in the following. The method to measure the average power shall be agreed during the kick-off meeting.
 - The average power will be stable within $\pm 1\%$ peak-to-peak over a period of 15 min.
 - The average power will be stable within $\pm 2.5\%$ peak-to-peak over a period of 8 h, provided the ambient temperature does not vary by more than $\pm 1.0\text{ }^{\circ}\text{C}$.

4.5 Polarisation and output delivery

- The output shall be delivered through a single-mode PM980 panda fibre. For connectors, length and sheathing see Section 8.
- The output shall be linearly polarised along the slow axis direction of the output fibre.
- The polarisation extinction ratio (PER) shall be better than 20 dB.

5. Diagnostics

The seed source shall provide an additional optical output signal that is optically split (at the few-% level) from the main output and that is made available through a fibre port, such that an external, SM-fibre coupled photodiode can be connected.

6. Electronics & Control

6.1 Local and supervisory control

The System shall contain its own local control and data acquisition system, including an HMI (human-machine interface, also called user interface), so the System can be controlled locally and operated stand-alone.

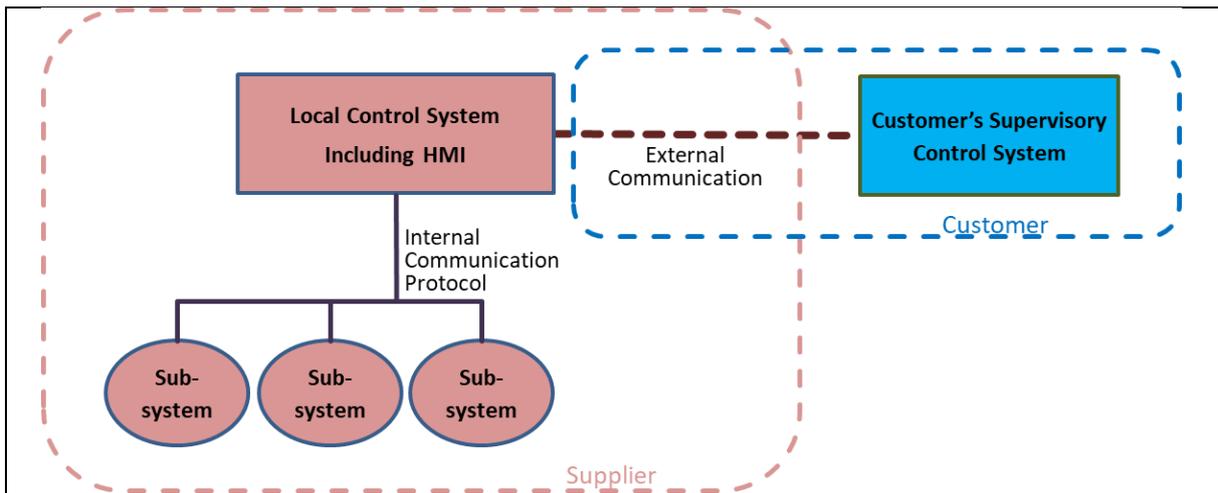


Figure 2: Illustration of control system architecture, indicating areas of responsibility of the Supplier, of the Customer, and where an interface needs to be agreed.

Once delivered, the System shall allow full integration into an overarching supervisory control system developed by STFC. The supervisory control system will be developed using EPICS (see <https://epics.anl.gov/>), an open-source distributed control system framework used in many large-scale science facilities, such as particle accelerators or synchrotron light sources.

To this end, the local control system shall provide an interface, for remote control and monitoring of the System, which is compatible with EPICS. Ideally, the local control system will provide an EPICS driver. Alternatively but, less desirable, the local control system shall then expose an interface (for example Telnet, raw TCP, RS232, Modbus, CAN-bus) to allow for a full integration of the device into the supervisory control system. Details of the Application Programming Interface (API) can be worked out collaboratively and iteratively with STFC.

'Remote Desktop' solutions such as VNC, or replicating the local HMI on a remote PC, are not acceptable as they do not provide the level of integration expected and required by STFC's supervising control system.

Providing remote access/control of the System directly (i.e. bypassing the local control system) and/or to low-level hardware communication software libraries is also not acceptable; the whole System must be seen as a black-box from the supervisory control system with at least the following functionality:

- The control functionality needs to include everything required for day-to-day operations of the System. Advanced functions that would only be used during set-up or maintenance of the System do not need to be made available to the supervisory control system.
- All data, including errors/faults/alarms that is acquired by the local control system should also be available for the supervisory control system.
- A "health signal" to indicate whether the System is OK or not.

- A command indicating what error was last produced.
- The ability to set the IP address for external communication

6.2 Functionality of local control system

The functionality of the local control system shall include at least the following:

6.2.1 Control and monitoring of basic functions

- Control of System operation (turning the System on and off).
- Control of the output power.
- Control of the wavelength.
- Displaying of basic set and, if available, actual values such as wavelength, Master Oscillator cw power, output peak power, alarms and faults (e.g. interlock fault, see also Section 7.1).
- Further requirements can be included and should be discussed with STFC.

6.2.2 Pulse shape control

- During operation, the System shall provide the capability to make adjustments to the active pulse shape, meaning that for individual samples of the AWG wave form (if possible also groups of samples) the signal level can be changed 'on the fly', such that this will not cause dropped pulses or significant fluctuations in the output energy, other than the energy change caused by the adjustment itself.
- The System shall further provide the capability to save pulse shapes to and load them back from non-volatile internal memory that can hold at least 100 different shapes. The shapes shall be stored in a human-readable ASCII format and it shall be possible to download files from and upload them to the local control system, e.g. using a USB flash drive.
- It is acceptable for optical output pulses to be dropped while a new pulse shape is loaded, however, no optical output shall be generated which consist of only part of the new pulse shape.
- It is desirable for the local control system to provide a tool to create simple pulse shapes such as squares and triangles.

6.3 Triggering

The System will be triggered at the rate of 10 kHz from the customer's external pulse/delay generator during normal operations. The trigger signal will be a TTL-type signal.

The System shall only require a single external trigger signal, required additional timing signals shall be generated internally.

An RF-clock signal (80 MHz sinusoidal signal) can also be provided by the customer if it is required to meet the jitter specification detailed in Section 4.2.

7. Safety & self-protection

7.1 Laser safety & interlock

The System shall comply with the European laser safety standard BS EN 60825 and shall be CE certified.

The System shall contain an interlock connector for personnel safety. Details will be specified during the design phase of the contract. The requirements will include the following:

- An interlock signals will be provided by STFC through a potential free contact which the System needs to constantly monitor using appropriate hardware qualified to the appropriate safety standards.
- The safety interlock system design must demonstrably (by means of fault tree or failure mode effects analysis) minimise the probability of failure to danger. This is achieved through the appropriate selection of certified components (such as self-monitoring safety relays, safety PLCs etc.). Details of the safety interlock system design with justification of component choices must be supplied to STFC to enable STFC to complete a full analysis of the safety system including STFC supplied components.

7.2 Self-protection

The System shall be tolerant to the following conditions and not suffer immediate damage or accelerated long-term degradation.

- The presence of optical feedback from external components, against which a reasonable degree of optical isolation shall be provided at the output.
- Sudden loss of Oscillator power and sudden (re)activation of Oscillator, in particular if an alternative oscillator is used that is not integrated into the local control system. It is acceptable if the Pulse Shaping Unit shuts itself down if insufficient Oscillator input is detected and that it can only be restarted when Oscillator input is restored.
- Changes in external trigger rate, dropped trigger pulses or total loss of external trigger. Again, it is acceptable for the Pulse Shaping Unit to shut down in such circumstances.

8. Mechanical

- All components shall come in 19" rack mountable units. Separate units or a single integrated solution are both acceptable.
- The type of fibre connectors used within the system shall be agreed during the kick-off meeting, except the connector at the end of the output fibre which shall be FC/APC.
- The output fibre will be in a protected sheath and > 10 m in length.

9. Electrical

- All modules requiring mains power shall have an IEC 60320, C14 inlet (commonly found on personal computers etc).
- The System shall be capable of withstanding a failure of the mains electrical supply without causing, or increasing the likelihood of, damage or deterioration of any electrical or optical component.

10. Quality Assurance and testing

The Supplier will provide the full contact details of its Quality Manager, or member of staff responsible for quality approval and processes no later than two weeks after the signing of the contract.

A quality plan will be generated by the Supplier and this documentation will be made available to the Customer. The Plan should be based around the 'Bill of Materials' for the complete deliverable which shows the detail concerning the inspection and testing criteria of each individual part. The plan must also indicate details concerning the documented processes and quality control records that will be used and made available to the Customer.

The Supplier will grant access to its work premises for the Customer to undertake periodic quality control inspections as required. These events will generally be associated with the completion of elements of the order where milestone payments are due and during testing and certification of product.

The Supplier shall notify the Customer of such events providing a minimum of 14 calendar days' notice.

11. Documentation and manuals

The Supplier shall provide:

- Installation manuals, in English in reproducible form – in advance of delivery/after design review.
- Operating and Maintenance manuals, in English in reproducible form.
- Full documentation of the control system including details of the API with a list of the protocols and examples of their usage
- Copies of technical construction files used for CE marking to ensure compliance with relevant directives.
- A certificate of conformity to this specification, with procedures for this testing to be agreed.
- Agendas and minutes of kick off, technical meetings and design reviews/approvals.
- Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) documents – templates at least 1 month ahead of testing.
- A list of suggested spare parts shall be provided including the lead time and cost of each part.

12. Warranty, lifetime and support

A one year warranty is required as a minimum, an extended warranty at no extra cost is desirable.

The Supplier shall quote a price for the extension of the warranty for a further year over and above the included base warranty.

13. Schedule, reviews

The maximum lead time is 4 months from award of contract. A full breakdown of the delivery schedule will be provided within 1 month of award of contract. The schedule shall at least contain the following milestones:

- A kick off meeting

- A factory acceptance test (FAT)
- A site acceptance test (SAT)

The quality plan and schedule must be provided and accepted at the kick off meeting, which shall take place within one month from award of contract.

A Factory Acceptance Test (FAT) demonstrating conformity with this specification shall be carried out at the Suppliers factory. A test schedule will be proposed for agreement within three months of the contract being awarded.

A Site Acceptance Test (SAT) of the system will be required following installation at STFC.

The acceptance of the documentation indicated in Section 11 will also form part of the final delivery.

The Supplier shall bring their own equipment to demonstrate the system performance during the SAT. This equipment includes:

- Tools
- Instrumentation and ancillary equipment for testing, for example power meter, spectrometer etc.

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 | SEL3.12 | Cyber Essentials |
| Commercial | SEL3.13 | General Data Protection Regulations (GDPR) |
| Commercial | AW4.1 | Contract Terms Part 1 |
| Commercial | AW4.2 | Contract Terms Part 2 |
| Price | AW5.5 | E Invoicing |
| Price | AW5.6 | Implementation of E-Invoicing |
| Quality | AW6.1 | Compliance to the Mandatory requirements of the Specification |
| Quality | AW6.11 | Variable Bids |
| - | - | Invitation to Quote – received on time within e-sourcing tool |

| 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 | 36.00% |
| Price | AW5.7 | Prompt payment | 4.00% |
| Quality | AW6.2 | Statement of Compliance/ Technical Documentation | 26.00% |
| Quality | AW6.3 | Control System Interface | 3.00% |
| Quality | AW6.4 | Remote Control Commands | 3.00% |
| Quality | AW6.5 | Rise/Fall Time | 5.00% |
| Quality | AW6.6 | Peak Power of the System | 5.00% |
| Quality | AW6.7 | Stability of the Average Power | 3.00% |
| Quality | AW6.8 | Quality Assurance | 5.00% |
| Quality | AW6.9 | Warranty | 5.00% |
| Quality | AW6.10 | Draft Project Schedule/ Programme of Work | 5.00% |

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. |

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.ukpbs.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 [modify duration if not 60 - 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](#)