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Tender

Provision of Resource Efficient Supply and Manufacturing Environment (RESuME) “Industrial Internet of Things” (IIoT)

University of Strathclyde

F02: Contract notice

Notice identifier: 2021/S 000-028123

Procurement identifier (OCID): ocds-h6vhtk-02f548

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Section I: Contracting authority

I.1) Name and addresses

University of Strathclyde

40 George Street, Procurement Department

Glasgow

G1 1QE

Contact

Kirstie Peffers

Email

kirstie.peffers@strath.ac.uk

Country

United Kingdom

NUTS code

UKM82 - Glasgow City

Internet address(es)

Main address

<http://www.strath.ac.uk/>

Buyer's address

https://www.publiccontractsscotland.gov.uk/search/Search_AuthProfile.aspx?ID=AA00113

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

<https://www.publictendersscotland.publiccontractsscotland.gov.uk/esop/pts-host/public/pts/web/login.html>

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

<https://www.publictendersscotland.publiccontractsscotland.gov.uk/esop/pts-host/public/pts/web/login.html>

Electronic communication requires the use of tools and devices that are not generally available. Unrestricted and full direct access to these tools and devices is possible, free of charge, at

<https://www.publictendersscotland.publiccontractsscotland.gov.uk/esop/pts-host/public/pts/web/login.html>

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Education

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Provision of Resource Efficient Supply and Manufacturing Environment (RESuME)
“Industrial Internet of Things” (IIoT)

Reference number

UOS-21328-2021

II.1.2) Main CPV code

- 72300000 - Data services

II.1.3) Type of contract

Services

II.1.4) Short description

The University seek bids from suppliers able to achieve seamless ISA-95 compliant digital connectivity

for seventy-three (73) machines located in the Advanced Forming Research Centre (AFRC).

The University require a single supplier to provide a solution which covers real-time data acquisition from machines and equipment (directly, via gateways and/or external sensors), data integration and synchronisation using a Message Bus system as well as data visualisation on live dashboards.

This IIoT tender consists of three overarching components as described below, namely:

- Component 1: Power consumption and status (on/off/idle) monitoring for all machines and equipment located in the AFRC (73 machines)
- Component 2: Real-time data acquisition from machinery and equipment with communication means located in the AFRC (48 machines)
- Component 3 : Data integration, synchronisation, visualisation, and storage using an IIoT Platform (i.e., Message Bus system).

Due to the nature of NMIS operation, machinery and equipment selected for digital connectivity within this tender, have different digital capabilities and can be divided into two groups, as follows:

1. Machinery and equipment without communication means, such as various band saws, cranes, welders, legacy equipment etc. These

machines might have legacy controllers or may only have a power supply cable (25 machines)

2. Machinery and equipment with communication means. These are controlled by a PLC or CNC, have HMI and can potentially communicate with external devices via various communication protocols, including but not limited to Modbus TCP/IP, Profibus, Ethernet, MTConnect, OPC UA etc. (48 machines)

For most of the machines, additional external data acquisition systems such as various gateways, IPCs, edge devices etc. will be required in order to achieve live data acquisition.

For machinery and equipment without any communication means, it is expected to use external systems (e.g., current clamps) to collect data on energy consumption as well as machines` on/off/idle status.

In order to sustain data collection and synchronisation from multiple machines and equipment as well as to provide access to this data for different (3rd party) applications, an open Message Bus system (unified namespace provider) needs to be in the centre of the digital transformation.

Thus, this tender covers real-time data acquisition from machines and equipment (directly, via gateways and/or external sensors), data integration and synchronisation using a Message Bus system as well as data visualisation on live dashboards.

II.1.5) Estimated total value

Value excluding VAT: £480,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 38551000 - Energy meters
- 48614000 - Data-acquisition system
- 72300000 - Data services
- 72318000 - Data transmission services

II.2.3) Place of performance

NUTS codes

- UKM82 - Glasgow City

II.2.4) Description of the procurement

This Procurement will be conducted through the use of the Competitive Procedure with Negotiation in line with Regulation 30 of The Public Contracts (Scotland) Regulations 2015.

The process applied will be as followed:

-Bidder's must pass the minimum standards (pass/fail) sections of the ESPD (Scotland). These can be found within the qualification envelope of PCS-T. Statements detailing the specific requirements can be found within Section III.1.2 and III.1.3. Bidders who do not meet the minimum standards may not have their bids considered further.

- Bidder's must complete and submit the technical and the commercial envelope envelope.

- Responses will be scored as per the scoring methodology detailed within the Invitation to Tender Document.

- The contracting authority may at this point opt to award the contract on the basis of the initial tenders without conducting negotiations.

- Should negotiations be required bidders will be notified via the PCS-T messaging portal of the process to be adopted.

Minimum requirements which must be met by all tenderers have been identified below. As a consequence of these requirements, where a Tenderer includes any amendments to the Minimum Requirements in their Tender Submissions, the Tender Submission may not be considered and may be refused on the grounds of such amendments or qualifications alone.

1. A Single supplier must be responsible for delivery of all specification requirements as

detailed within the invitation to tender.

2. Suppliers response must include full realisation of Component 1 for all equipment
3. Suppliers response must include full realisation of Component 3 for all equipment
4. Hardware/ sensor solutions installed externally on equipment to monitor power consumption, current statues etc must be non-invasive and must not impact machine warranty or performance
5. Measuring devices or their gateways must support standard open communication protocols.
6. All data acquired from equipment must be fully unlocked
7. NMIS must be the owner of all data acquired from equipment.
8. Suppliers will be required to confirm acceptance of University Terms and Conditions in their Submitted form of tender, All clauses (excluding those noted below) will form part of the minimum requirements.

UOS Standard Terms - Clause 16: Liability and Indemnity

UOS Standard terms - Clause 17: Insurance

ICT Provisions Clause 17.3 financial caps and liabilities

II.2.5) Award criteria

Quality criterion - Name: Quality / Weighting: 60

Cost criterion - Name: Cost / Weighting: 40

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Duration in months

24

This contract is subject to renewal

Yes

Description of renewals

2 x 12 months

II.2.9) Information about the limits on the number of candidates to be invited

Envisaged minimum number: 3

Objective criteria for choosing the limited number of candidates:

Please refer to the The Single Procurement (Scotland) Document [SPD] and Invitation to Tender.

The Contracting Authority shall undertake an evaluation of all Tender Submissions in line with the process outlined in Section 4 of this document. The Contracting Authority reserves the right to award a contract on the basis of the initial tender without negotiation in line with Regulation 30(16) of The Public Contracts (Scotland) Regulations 2015.

Should the Contracting Authority proceed to negotiations, the top three (3) scoring tenderers from the initial Tender Submission will be invited to participate in the negotiations, if they are deemed necessary.

Tenders (final) from all three (3) tenderers who were involved in the negotiation(s) will be invited to submit a final tender to be evaluated to ensure conformity with the minimum requirements, assess the final tenders on the basis of the award criteria.

II.2.10) Information about variants

Variants will be accepted: No

II.2.11) Information about options

Options: Yes

Description of options

The Contracting Authority reserves the right to request additional deliveries by the Successful Tenderer, either intended as partial

replacement of suppliers or installations or as extensions of existing supplies and installations.

The Contracting Authority may at its sole discretion exercise this option.

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

Section III. Legal, economic, financial and technical information

III.1) Conditions for participation

III.1.2) Economic and financial standing

List and brief description of selection criteria

List and brief description of selection criteria:

Bidders will be required to have an average yearly turnover of a minimum of 800,000GBP for the last 3 years

Statement for 4B 5.1-5.3

It is the requirement of this contract that bidders hold or can commit to obtain prior to the commencement of any subsequently awarded contract, the types of insurance indicated below.

The Contractor shall maintain in force with reputable insurers employer's liability insurance and public liability insurance in the sum of not less than 10,000,000GBP in respect of any one incident and unlimited as to numbers of claims, and adequate insurances covering all the Contractor's other liabilities in terms of the Contract.

The Contractor shall maintain in force with reputable insurers professional liability insurance in the sum of not less than 2,000,000GBP in respect of any one incident and unlimited as to numbers of claims.

III.1.3) Technical and professional ability

List and brief description of selection criteria

4C.1.2 Bidders will be required to provide 3 relevant examples of projects of a similar size, scale and complexity as that outlined within the tender documentation

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Competitive procedure with negotiation

IV.1.4) Information about reduction of the number of solutions or tenders during

negotiation or dialogue

Recourse to staged procedure to gradually reduce the number of solutions to be discussed or tenders to be negotiated

IV.1.5) Information about negotiation

The contracting authority reserves the right to award the contract on the basis of the initial tenders without conducting negotiations

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

IV.2) Administrative information

IV.2.2) Time limit for receipt of tenders or requests to participate

Date

10 December 2021

Local time

12:00pm

IV.2.3) Estimated date of dispatch of invitations to tender or to participate to selected candidates

7 January 2022

IV.2.4) Languages in which tenders or requests to participate may be submitted

English

IV.2.6) Minimum time frame during which the tenderer must maintain the tender

Duration in months: 4 (from the date stated for receipt of tender)

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.2) Information about electronic workflows

Electronic ordering will be used

Electronic invoicing will be accepted

Electronic payment will be used

VI.3) Additional information

Tenders are advised that section IV.2.2 of the contract notice details the closing date for requests to participate, this date is the date for receipt of requests to participate and initial Tender Submissions. The date provided within this notice in relation to the dispatch of invitations to tender is reference to the commencement of the negotiation process if required.

The buyer is using PCS-Tender to conduct this ITT exercise. The Project code is 20056. For more information see:

<http://www.publiccontractsscotland.gov.uk/info/InfoCentre.aspx?ID=2343>

(SC Ref:673052)

VI.4) Procedures for review

VI.4.1) Review body

Glasgow Sheriff Court

Glasgow

Country

United Kingdom

VI.4.3) Review procedure

Precise information on deadline(s) for review procedures

An economic operator that suffers, or risks suffering, loss or damage attributable to a breach of duty under the Public Contracts (Scotland) Regulations 2015(SSI2015/446) (as amended) may bring proceedings in the Sheriff Court or the Court of Session.