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Tender

Tender for Supply and Installation of Haptic Simulators to the University of Birmingham

THE UNIVERSITY OF BIRMINGHAM

F02: Contract notice

Notice identifier: 2023/S 000-004046

Procurement identifier (OCID): ocds-h6vhtk-03a460

Published 9 February 2023, 2:42pm

Section I: Contracting authority

I.1) Name and addresses

THE UNIVERSITY OF BIRMINGHAM

EDGBASTON

BIRMINGHAM

B152TT

Contact

Kseniya Samsonik

Email

k.samsonik@bham.ac.uk

Country

United Kingdom

Region code

UKG31 - Birmingham

Companies House

RC000645

Internet address(es)

Main address

www.birmingham.ac.uk/index.aspx

I.3) Communication

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

www.in-tendhost.co.uk/universityofbirmingham.aspx/Home

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

www.in-tendhost.co.uk/universityofbirmingham.aspx/Home

Tenders or requests to participate must be submitted to the above-mentioned address

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

Tender for Supply and Installation of Haptic Simulators to the University of Birmingham

Reference number

SC11411/23

II.1.2) Main CPV code

- 34152000 - Training simulators

II.1.3) Type of contract

Supplies

II.1.4) Short description

Digital Dentistry is a catch-all term to describe the use of digital technology within both the clinical and educational settings. This strategy focuses on the use of digital technologies to enhance education for students, rather than the provision of clinical dentistry for their patients.

The school of Dentistry wishes to procure 6 standalone Haptic Simulators that provide an immersive, virtual reality experience to operators including simulated handpieces, probing and local anaesthetic delivery. The simulators will need to link to scanners so the user can set up bespoke tasks, or they can be pre-loaded with a stock of simulation exercises. Software development and updating of the bank of procedures must be included.

Haptics have not previously been used at the School of Dentistry. We are looking for a practical setup where the operator uses two "handpieces" which can be tailored to be a mirror and a handpiece, a mirror and a probe etc. appropriate to the clinical scenario.

The simulator must provide a good level of tactile feedback, particularly in relation to hard and soft tissues.

This project may be funded by the European Regional Development Fund (ERDF) or;

- European Structural and Investment Fund (ESIF) or;
- Research Councils UK (RCUK), the strategic partnership of the UK's seven Research

Councils.

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 33130000 - Dental and subspecialty instruments and devices

II.2.3) Place of performance

NUTS codes

- UKG31 - Birmingham

II.2.4) Description of the procurement

The University of Birmingham invites tenders to help the School of Dentistry enhance their Digital Dentistry teaching and learning experience. We are looking to purchase six haptic machines: These are standalone units that will provide an immersive, virtual reality experience to operators including simulated handpieces, probing and local anaesthetic delivery. Ideally these must be linked to scanners so the user can set up bespoke tasks, or they can be pre-loaded with a stock of simulation exercises. Software development and updating of the bank of procedures must be included.

The practical setup is that the operator uses two "handpieces" which can be tailored to be a mirror and a handpiece, a mirror, and a probe etc. appropriate to the clinical scenario.

The simulator must provide a good level of tactile feedback, particularly in relation to hard and soft tissues.

The simulators will be used to enhance the quality of speciality teaching and learning at the School of Dentistry; haptics have not previously been used at the School of Dentistry. Haptic simulators will be used in a variety of specialty teaching modules. Areas where we could apply this technology to augment our current offering would be widespread such as manual dexterity training, practice for class II competencies, practice for crown prep competency, practice of IDB delivery are obvious examples of the additional improvements in current teaching which could be offered.

With this in mind, we expect the instruments to provide advanced solutions for a high quality learning experience:

The instruments must have the following competencies:

- Manual dexterity
- Operative Dentistry
- Prosthodontics
- Endodontics
- Implantology
- Patient specific - problem based
- Dental anaesthesia learning cases
- Able to read and combine multiple single teeth in PLY or STL format with easy voxelization within the simulator with automatic segmentation
- Support of image guided simulation by merging intraoral scans and CT scans in one model, which allows the display of real-time cross-sectional views
- Re-locatable on wheels and can be used above a desk to save space
- Includes phantom head with upper and lower jaws for hand and finger support
- Combines Virtual Reality with Reality elements in a co-located Mixed Reality auto stereo display
- Willing to develop new cases and work with the University on this

II.2.5) Award criteria

Quality criterion - Name: Compliance to the Specifications / Weighting: 50

Quality criterion - Name: After Sales and Technical back up / Weighting: 10

Quality criterion - Name: Delivery and Training / Weighting: 10

Quality criterion - Name: Sustainability and Environmental / Weighting: 5

Quality criterion - Name: Standard Supplier Questionnaire (SQ) / Weighting: 10

Price - Weighting: 15

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

Start date

20 March 2023

End date

31 May 2023

This contract is subject to renewal

No

II.2.10) Information about variants

Variants will be accepted: No

II.2.11) Information about options

Options: No

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Open procedure

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

13 March 2023

Local time

11:59am

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

English

IV.2.7) Conditions for opening of tenders

Date

13 March 2023

Local time

12:00pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.4) Procedures for review

VI.4.1) Review body

University of Birmingham

Birmingham

B15 2TT

Country

United Kingdom