

## Section IV: Schedule of Requirements

### A. Summary of Requirements

UNOPS requirements are comprised of the following Lots:

- **LOT 1: Multi-slice Computed Tomography Scanner**
- **LOT 2: X-ray Stationary Digital system**

### B. Technical specifications for Goods and Comparative Data Table

#### Lot No 1: Multi-slice Computed Tomography equipment

Item No	UNOPS minimum technical requirements	Quantity	Is Bid compliant? Bidder to complete	Details of goods offered. Bidder to complete
1.	<p><b><u>Spiral multislice CT Scanner, with capability for comprehensive whole body imaging including cardiac, neuro, chest, abdomen, musculoskeletal and vascular imaging with the following minimum requirements:</u></b></p> <p><b><u>Scanning settings:</u></b>            -Computed tomography should be multislice scanning the entire human body that ensures the generation of at least 64 slices per rotation.            -Minimum time full (360 deg.) gantry rotation maximum 0.35 seconds            -The maximum scan field in X direction at least 500 mm            - Ability to choose different scan modes;            -The maximum time of one continuous scan at least 60 seconds.            -The maximum scan field in the longitudinal direction at a Y scann not less than 1750mm            -The speed of reconstruction, at least 25 images/sec.</p> <p><b><u>Generator and X-ray tube:</u></b>            -Generator of rated output at least 60 kW            -Regulation of X-ray tube voltage in the range of at least 80 kV to 135 kV            -Range of current X-ray tube current for at least 20- 500 mA;            -X-ray tube heat capacity not less than 7.5 MHU            -Maximum anode cooling rate not less than 1200 kHU/min            -At least two focal spots</p>	2	<input type="checkbox"/> Yes  <input type="checkbox"/> No	Insert details of goods offered, including specifications and brand/model offered if applicable

<p><b><u>Detector system:</u></b>                  -The detector should be solid type, multirows                  - the number of elements in one row not less than 670                  The number of rows of the detector no less than 64                  Cover detector for one rotation not less than 40 mm</p>			
<p><b><u>Gantry and patient table:</u></b>                  -Gantry aperture not less than 700mm in diameter                  -Gantry tilt angle of not less than <math>\pm 30^\circ</math>                  -Movement table should be motorized                  -The table max. allowable load at least 200 kg                  -The width of the table the patient not less than 410mm                  -Range table moving horizontally not less than 160 cm                  -The ability to control movement table and tilt gantry from operator console</p>			
<p><b><u>Operator Console:</u></b>                  Brand name computer                  the keyboard and mouse                  Medical                  Grade Color Monitor monitor size not less than 19 inches and with a resolution of 1280x1024 or better                  Uninterrupted power supply                  The Special software (in Russian/Ukrainian or English language interface) should provide the following functions by scanning and analysing the exam results:                  - Availability of standard protocols studies considering the anatomical areas examination                  - Changes the study plan                  - The possibility of drawing up personal exam protocols                  - Change of width and window level                  - Preset window                  - Cineview                  - Display the cut position                  - Zoom                  - Various shapes and sizes of areas of interest                  - Measurement of distances and angles                  - Scaling and overlay grid coordination                  - Calculation of volume                  - Text and graphics editor                  - Image rotation                  - Applying a filter to the image                  - Priority reconstruction and printing                  - Display of multiple frames                  - Reconstruction of the raw data</p>			

<p><b>Doctor's workstation:</b> The workstation must have characteristics not less than:</p> <ul style="list-style-type: none"> <li>-Processor 3.5 GHz</li> <li>-32 GB DDR RAM</li> <li>-Four (4) x 1 TB hard drives in a RAID 10</li> <li>-4GB video card</li> <li>-Microsoft Windows 7 Professional 64-bit Edition with SP1, or Microsoft Windows 8.1 Professional or Enterprise 64-bit Edition</li> <li>3.7MP, MS Office, all in Ukrainian language interface</li> <li>24-inch medical monitor (Resolution: 1920x 1200)</li> <li>Data recording on CD-ROM, DVD-ROM, USB keyboard, mouse</li> <li>UPS 850 VA</li> </ul> <p>The Special software should provide the following functions:</p> <ul style="list-style-type: none"> <li>- Change of width and window level</li> <li>- Zoom</li> <li>- Various shapes and sizes of areas of interest</li> <li>- Measurement of distances and angles</li> <li>- Calculation of volume</li> <li>- Text and graphics editor</li> <li>- Image rotation</li> <li>- Applying a filter to the image</li> <li>- Display of multiple frames</li> <li>- Displaying and comparing several series of images of the patient one or various studies</li> <li>- Volume calculation</li> <li>- A full set of three-dimensional reconstructions of the possibility of segmentation subtraction, cutting and image overlays</li> <li>- Multiplanar reconstruction (MPR) including oblique and the curve</li> <li>- Create a maximum projection (MIP) and minimum (MinIP) intensity</li> <li>- Filming</li> <li>- Generating reports</li> <li>- Write to optical discs</li> </ul>			
<p><b><u>Clinical applications on the console and workstation doctor:</u></b></p> <ul style="list-style-type: none"> <li>-Volumetric perfusion of the brain with Software to create images with subtractions (creating iodine maps of lungs)</li> <li>Software for body perfusion</li> </ul>			
<p><b><u>Accessories:</u></b></p> <ul style="list-style-type: none"> <li>-The holder / straps for fixation of head</li> <li>-Straps for fixation of body</li> <li>-The holder of the hands of the patient</li> <li>-Double head injector or mounted bottle automatic injector for contrast bolus, availability</li> <li>-Printer "dry" printing with the possibility of film 14x17 inches and 8x10, availability</li> <li>UPS for digital system not less than 120 kVA</li> </ul>			

<p>Powerbox Leadglass at least 100 x 90 cm</p>			
<p><b><u>WARRANTY:</u></b></p> <p>All items supplied in this Lot shall include full manufacturer warranty granted for a minimum of two years.</p> <p><b><u>MAINTAINANCE DURING WARRANTY PERIOD:</u></b></p> <p>The tenderer must have a maintenance and technical support office or a company authorised by the Manufacturer to solve any problem on site in Ukraine. The response time must not be more than 24 hours. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid (please state or attach the list of available service network in Ukraine)</p>			
<p><b><u>TRAINING:</u></b></p> <p>The Bidder has to organize appropriate user training in Ukrainian language for effective and problem-free use of the equipment included in this LOT in each of the location mentioned in the distribution list.</p> <p>A training proposal for the operation of the equipment will be submitted by the Bidder in the tender. This proposal shall include at least:</p> <ul style="list-style-type: none"> <li>•Schedule and duration</li> <li>•Description of training materials</li> </ul>			
<p><b><u>STANDARDS:</u></b></p> <p>All equipment should be from a branded source with a certified quality assurance system and have the following certifications:</p> <ul style="list-style-type: none"> <li>• International Standard Organization (ISO);</li> <li>• CE marking</li> </ul> <p><b>Bidders shall ensure conformity of the equipment with all applicable Ukrainian regulations (customs, usage...).</b></p>			

## Lot No 2: X-ray Stationary Digital system

Item No	UNOPS minimum technical requirements	Quantity	Is Bid compliant? Bidder to complete	Details of goods offered. Bidder to complete
1.	<b><u>X-RAY STATIONARY DIGITAL SYSTEM - High powered X-Ray Unit for general radiography with digital flat panel technology</u></b>	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	Insert details of goods offered, including specifications and brand/model offered if applicable
	<b>Generator</b> -Max. output power: 80kW or more -Min. Kv: 40kV or less -Max. kV:150kV or more -Min. mA :10mA or less -Max. mA: 630mA or more -mAs range: 0.5mAs to 800mAs -Exposure time:minimum 0.001 sec to 9 sec or more -Automatic exposure control (AEC) -Number of focal spots : at least 2			
	<b><u>Ceiling-Mounted Tube Support</u></b> - Longitudinal movement of the X-ray Tube : min. 2950 mm - Transversal movement of the X-ray Tube: min. 1400 mm - Vertical movement of the X-ray Tube: min. 1400 mm - Rotation of the tube around vertical axis: min. 150 <sup>o</sup> /180 <sup>o</sup> -Rotation of the X- Ray tube around horizontal axis: min. +/- 120 <sup>o</sup> -Auto positioning Function: <ul style="list-style-type: none"> <li>• Synchronization movement of the X-ray tube support unit and Bucky stand</li> <li>• Synchronization movement of the X-ray tube support unit and Bucky table</li> </ul>			
	<b><u>X-ray Tube</u></b> - Focal spot: 0.6/1.2mm or less - Max. anode heat capacity: 140kHU or more - Max. X-ray tube voltage: 125kV or more - Multifunction touch-screen on the X-ray tube support for procedure control			
	<b><u>FPD Bucky Table</u></b> -Floating table top : 4 way floating table -Patient table top size: min.225cm x75 cm -Longitudinal movement: 700 mm or more -Lateral movement: ±120 mm or more - Electromagnetic lock of the table top: -Vertical moving range: in 315 mm -Maximum allowable load: 220 kg or more -Footswitch for table top control -X-ray tube tracking with FPD:			

Auto tracking according to upper, middle and lower base position			
<p><b><u>FPD Vertical Bucky Stand</u></b>          -Vertical movement: minimum 1200mm, motorized          -Removable grid          -X-ray tube tracking with FPD: Auto tracking according to upper, middle and lower base position</p>			
<p><b><u>Wireless FPD for Bucky table</u></b>          -FPD size: at least (35×43)±1 cm          -Pixel size: at least 139×139 μm          -Matrix size: at least 3052 x 2540          -Scintillator: CsI          -Battery type: Lithium-ion</p>			
<p><b><u>FPD for Bucky stand</u></b>          FPD size: at least (43×43)±1 cm          Pixel size : at least 139×139 μm          Matrix size: at least 3000 x 3000          Scintillator: CsI</p>			
<p><b><u>Digital Radiography System for radiographer</u></b>          -Display: at least 19 inch          -medical-grade Display          -User Interface Touch Panel/Mouse          -Operating console should have a facility for patient identity entry, viewing and processing images, documentation          -Image post-processing          • brightness control          • image rotation          • image rotation and inversion          • measurements: angle, distance          • zoom          -DICOM performance          -DICOM Print and Store functions</p>			
<p><b><u>Doctor's workstation</u></b>          -The workstation must have follow specifications (or better):          -Processor 3,3 GHz,          -1 TB Hard Drive (mirroring),          -2GB graphics card,          -Microsoft Windows not less than 7 Professional 64-bit Edition with SP1, MS Office, all in Ukrainian language interface,          -minimum 1MP, minimum 21-inch widescreen Medical Display Monitor,          -Data recording on CD-ROM, DVD-ROM, USB          -keyboard, mouse          -UPS 850 VA          -The Special software for image review and work in DICOM (printing, saving, sending and receiving)</p>			

<p><b><u>Additional equipment and accessories</u></b>  Voltage stabilizer  Lead glass: at least 100x80 cm  UPS for digital system  DAP meter  Laser Camera should have minimum 320 DPI or more and should print at least 3 sizes of films on line out of 10x12, 10x14, 11x14, 8x10 and 14x17 inches</p>			
<p><b><u>DOCUMENTS:</u></b></p> <p>The following documents shall be delivered for all equipment:</p> <ul style="list-style-type: none"> <li>•Service and operation manuals in Ukrainian or Russian language.</li> <li>•Execution guidance / installation drawings.</li> <li>•Certificates of compliance to safety norms and standards and/or trial test results at the manufacturer's facility.</li> </ul>			
<p><b><u>WARRANTY:</u></b></p> <p>All items supplied in this Lot shall include full manufacturer warranty granted for a minimum of two years.</p> <p><b><u>MAINTAINANCE DURING WARRANTY PERIOD:</u></b></p> <p>The tenderer must have a maintenance and technical support office or a company authorised by the Manufacturer to solve any problem on site in Ukraine. The response time must not be more than 24 hours. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid  (please state or attach the list of available service network in Ukraine)</p>			
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