**Procurement of equipment for Mother and Child Institute Dr Vukan Čupić, Belgrade**

**IOP/38-2019/UHI**

**Clarification No.5**

**Issued on 27th of May 2020**

1.In your Bidding Documents, for lot 4, ID 4.1, under item 1.1 you defined the following: Gentry aperture at least 78 cm

Considering that the said device is procured for a pediatric institution, as well as the fact that gentries of 78 cm or more are used exclusively in radiotherapy, as well as the fact that such a restrictive definition completely excludes the devices of the newer generation of reputable manufacturers, please redefine your request as follows and make the process competitive:

Gentry aperture at least 78 cm (tolerance +/- 8%)

In case you do not accept our request, please explain to us why the gentry size needs to be 78 cm for pediatric exams?

**Answer 1**: Not acceptable.

As high level specialized pediatric hospital, end user must accommodate all patients no matter their size and weight. Also, pediatric population includes children up to 18 years which could be larger than adults. In addition to this a larger gentry aperture allows significant reduction of claustrophobia, which is often present in pediatric patients. This gentry size is not rare, this size is characteristic of most manufacturers. Technical requirement remains unchanged.

2.In your Bidding Documents, for lot 4, ID 4.1, under item 1.2 you defined the following: Physical gentry tilt at least ±30°

Is it acceptable for the Contracting Authority to offer a CT system that has a gentry tilt of -24°/+ 30°? With such a modified requirement, the Contracting Authority will be able to continue to perform all procedures while allowing greater competitiveness in the procurement procedure.

**Answer 2**: Physical gantry tilt of at least -24⁰/30 is acceptable.

3.In your Bidding Documents, for lot 4, ID 4.1, under item 2.1 you defined the following: Vertical movement of patient couch in range of at least 50 cm with the lowest height maximum 50 cm

Is it acceptable for the Contracting Authority to modify the requirement to: Vertical movement of patient couch in range of at least 50 cm with the lowest height maximum 50 cm (+/-3cm). By allowing minimal deviation in this way, the Contracting Authority will certainly not lose out on the functionality or quality of the device itself.

**Answer 3**:

It is acceptable.

4.In your Bidding Documents, for lot 4, ID 4.1, under item 2.3 you defined the following: Scanning range in horizontal direction with extensions at least 200 cm

Is it acceptable for the Contracting Authority to modify the requirement to: Scanning range in horizontal direction with extensions at least 185 cm? Since the CT system will be used in an institution dealing with the treatment of pediatric patients, changing this requirement would still allow all necessary procedures to be performed, whereas the submission of the adequate bids would be made possible for reputable manufacturers.

**Answer 4** : It is acceptable.

5.Does your minimum requirement for maximum anode capacity refer to a nominal or effective (software-enhanced) value?

**Answer 5**: It refers to a nominal capacity value.

6.In your Bidding Documents, for lot 4, ID 4.1, under item 2.4 you defined the following: Patient couch maximum load capacity at least 300 kg

Is it acceptable for the Contracting Authority to modify the requirement to: Patient couch maximum load capacity at least 200 kg, given that it is a pediatric institution, it is possible to carry out examinations on all pediatric patients on a table with a capacity of up to 200 kg. If you do not accept our proposal, please explain to us how many pediatric patients weighing over 200 kg are examined annually via the computed tomography system at the Institute for Mother and Child Belgrade?"

**Answer 6**: It is accepted to offer patient couch maximum load capacity at least 200 kg.

7.In your Bidding Documents, for lot 4, ID 4.1, under item 7.6 you defined the following: Fastest image reconstruction time at least 55 images per second with all dose reduction options active

Is it acceptable for the Contracting Authority to modify the requirement to: Fastest image reconstruction time at least 18 images per second with all dose reduction options active?

**Answer 7**: It is not accepted.

Reconstruction time is one of the most important parameters of computer system of the CT scanner. CT scanner with higher reconstruction speed, produced by any of CT scanner producers is ranging as better quality system in relation to CT scanner of the same producer with lower image reconstruction speed.

Higher image reconstruction speed does not mean only higher number of examinations in time, but also it is very important feature which is needed for running of new advanced software applications.

8.Your Bidding Documents fail to define the number of detector rows, i.e. the number of acquisition slices that the offered model of computed tomography system needs to have. It is these parameters that also determine the class of device, and these values define and distinguish computed tomography systems, and it is important how much information the user receives, especially given the pediatric studies and the sensitivity of diagnostics of our youngest patients.

Please define your min requirements for detector rows as well as number of acquisition slices.

**Answer 8**: Total active detector length described in specification 5.2 determines the number of detector rows.

9.In your Bidding Documents, under item 5.1 you defined the following: Number of detector elements in one detector row excluding reference detector elements at least 800. With all other required elements this requirement is an eliminatory parameter especially for Philips systems. Our computed tomography systems have 672 detector elements in the detector array, but also more detector arrays compared to the same systems in the class. Also the composition of the detectors themselves as image receptors differ from manufacturer to manufacturer. The technology of our detectors enables better signal utilization and thus achieves the same or better image quality, even with fewer detector elements in the detector array. Please modify your requirement to:

5.1. Number of detector elements in one detector row at least 672.

**Answer 9**: It is not accepted. The higher number of detectors (detector elements) allows obtaining of more acquired data, which is important to create better slice and have better image resolution.

10. In your Bidding Documents, under item 5.2 you defined the following eliminatory parameter in favor of one manufacturer (in combination with all other requested points for CT) which reads as follows: Total active detector length (coverage and collimation), in submillimeter mode, in “Z” direction and in iso-center in axial mode without patient couch moving at least 160 mm

Please note that collimation and coverage is not only achieved in the Z direction, but that different manufacturers have different solutions that achieve coverage and collimation in other ways. Please remove this parameter from your Bidding Documents. If not, please define precisely what is your min requirement for detector coverage?

**Answer 10**: It is acceptable.

11. By your item 8.4 you defined the following tools of the specific manufacturer of advanced diagnostics software. In order to enable competition in the present procedure, please define the following as mandatory in addition to item 8.4:

Offering of advanced diagnostic software that is ""appropriate"", i.e. offers the same or similar functionality, is acceptable.

In case you do not accept the appropriate technologies and functionalities, please explain to us the reasons why you reject our request?"

**Answer 11**: It is not accepted.

Тhe term „or appropriate“ can be used in a case when specific trademark or registered brand is required. Taking into account that there is no any mentioned trademark or registered brand existed in the description of the specification 8.4., it is not possible to add "appropriate". Also, any expression such as “same or similar functionality” cannot be added, since each item in specification 8.4. is clearly defined and described and therefore expression: “same or similar functionality” could only bring unclearness and confusion for the bidders.

12. In your Bidding Documents, for lot 4, ID 4.1, under item 7.7 you defined the following: Advance reconstruction algorithm for reduction of artifacts caused by metal presence in patient’s body (not Dual Energy)

Advanced reconstruction algorithm for reduction of artifacts caused by metal implants has different commercial names with different manufacturers (O-MAR, SEMAR, iMAR, MAR etc.) For precision purposes, please define your requirement as follows:

-7.7. Advance reconstruction algorithm for reduction of artifacts caused by metal presence in patient’s body ( O-MAR, SEMAR, iMAR, MAR or ""appropriate"")

Also, kindly note that precise if Dual Energy is requested or not? Dual Energy is an advanced premium option primarily of cardiology computed tomography systems. With this acquisition technique, dual energy sequences that can assist with advanced diagnostic studies are obtained and reconstructed:

-weighted average images (simulating single energy spectra)

-virtual monoenergetic images (attenuation at a single photon energy rather than a spectrum)

-material decomposition images (mapping or removing substances of known attenuation characteristics, such as iodine, calcium, or uric acid)

-virtual non-contrast images (iodine removed)

-iodine concentration (iodine maps)

-calcium suppression (calcium removed)

-uric acid suppression (uric acid removed)

-electron density maps

-effective atomic number (Zeff) maps

We kindly ask you to specify whether or not a Dual Energy option needs to be offered in order to precise which class of device you require.

**Answer 12**: It is not accepted.

The specification is clearly described and defined and therefore there is no need to add commercial names of some manufacturers.

The requested application tool should not be based on Dual Energy scanning.

Dual Energy scanning is not required.

13. In your Bidding Documents, for lot 4, ID 4.1, under item 8.4 you defined the following: 4D CT Brain Perfusion with display of blood flow, blood volume and Mean Transit Time (MTT), to define presence of acute cerebral infarcts. System has automatic correction of artefacts from patient movement. Software package makes calculation in all three orthogonal planes of volume on any slice. Ability to display 4D DSA contrast flow through blood vessels

The requirement defined in this way is eliminatory and can only be met by one manufacturer (with all other defined items). Different manufacturers define their solutions differently even though they have the same purpose and functionality. All other manufacturers are not able to offer their solution for brain perfusion since the requirement contains the description of brain perfusion of only one manufacturer. In order to enable other world renowned manufacturers to participate in the subject procedure, please generalize your requirement so that it reads:

- Brain Perfusion with display of blood flow, blood volume and Mean Transit Time (MTT), to define presence of acute cerebral infarcts or ""appropriate"".

*4D CT Brain Perfusion with display of blood flow, blood volume and Mean Transit Time (MTT), to define presence of acute cerebral infarcts. System has automatic correction of artefacts from patient movement. Software package makes calculation in all three orthogonal planes of volume on any slice. Ability to display 4D DSA contrast flow through blood vessels*

**Answer 13**: It is not accepted.

The need of 4D CT Brain perfusion is requested due to the need of the hospital.

Тhe term „or appropriate“ cannot be added, because the description of this request is clear and because there is no mentioned any specific trademark or registered brand.

14. In your Bidding Documents, for lot 4, ID 4.1, under item 8.4 you defined the following: CT Perfusion 4D body. Package for calculation of perfusion of other organs in any axis. Special calculation method of perfusion of the organs that are fed with one blood vessel and different method for those organs that are fed with two blood vessels

The requirement defined in this way is eliminatory and can only be met by one manufacturer. Different manufacturers define their solutions differently even though they have the same purpose and functionality. All other manufacturers are not able to offer their solution for body perfusion since the requirement contains the description of body perfusion of only one manufacturer. In order to enable other world renowned manufacturers to participate in the subject procedure, please generalize your requirement so that it reads:

- CT Body Perfusion. Package for calculation of perfusion of other organs or ""appropriate"".

**Answer 14**: It is not accepted.

The most of major vendors offer Body perfusion on volume in all three orthogonal planes and can comply this request.

Тhe term „or appropriate“ cannot be added, because the description of this request is clear and there is no mentioned any specific trademark or registered brand.

15.In lot 4, segment 4.6, item 16, you state the following:

""at least 21"", LED, Maximum luminance at least 800cd/m2, DICOM calibrated luminance of at least 500cd/m2, contrast ratio of at least 1400:1, Response time: maximum 10ms""

Please clarify which response time you mean, ""black to white or black to white to black or gray to gray""?

If it is ""Response time black to white to black"" please modify the requirement to read as follows: ""at least 21"", LED, Maximum luminance at least 800cd/m2, DICOM calibrated luminance of at least 500cd/m2, contrast ratio of at least 1400:1, Response time: maximum 12ms""""

**Answer 15**:

Required response time is gray to gray or black to white.

16.In lot 4, segment 4.6, item 17, you state the following:

""Monitor, graphics card and calibration software from the same manufacturer; Built-in ambient light sensor on the front of the screen, for calibration of the monitor with calibration software; Displays monochrome images in accordance with DICOM, as well as color images in accordance with DICOM""

Taking into account that medical monitor manufacturers are almost never the manufacturer of graphics cards, and that they recommend graphics cards of well-known brands for use with their medical-grade monitors., e.g. Nvidia, please modify the requirement to read as follows

""Monitor and calibration software from the same manufacturer and graphics card must be recommended by medical monitor producer; Built-in ambient light sensor on the front of the screen, for calibration of the monitor with calibration software; Displays monochrome images in accordance with DICOM, as well as color images in accordance with DICOM""

**Answer 16:**

Item 17 is amended and now states: “Monitor and calibration software from the same manufacturer; Built-in ambient light sensor on the front of the screen, for calibration of the monitor with calibration software; Displays monochrome images in accordance with DICOM, as well as color images in accordance with DICOM.”

17.In lot 4, segment 4.6, item 18, you state the following: ""2 UNITS""

Please clarify if by this you mean that for each of the two ""WORKSTATION HARDWARE"" referred to in item 8, 2 diagnostic monitors described in items 15, 16 and 17 are required?

**Answer 17**:

Requirement refers to 2 units of Workstation hardware requested in items 8 to 17

18. In lot 4, segment 4.6, item 25, you state the following:

""The integration of all DICOM compliant modalities in the system (CT, MR, CR, US, Angio room, Mammography)""

Please modify and define a more precise requirement to read as follows:

""The support of all DICOM compliant modalities(CT, MR, CR, US, Angio, Mammography)"""

**Answer 18**: It is not accepted.

The Requirement is clearly defined.

19. In lot 4, segment 4.6, item 26, you state the following:

""Acceptance and archiving unlimited number generated procedures (studies) per year in accordance with archive size""

Please modify and define a more precise requirement to read as follows:

""The system is scalable in terms of studies per year and in accordance with hardware size and

software component choice.""

**Answer 19**: It is not accepted.

Requirement is clearly defined.

20. In lot 4, segment 4.6, item 28, you state the following:

""The choice of image compression for individual modalities (lossy or lossless)""

Please modify and define a more precise requirement to read as follows

""Support of image compression (lossy or lossless)""

**Answer 20**: It is not accepted, because of avoiding decreasing of the quality.

21. In lot 4, segment 4.6, item 32, you state the following:

""Desk-top and Web client""

Please modify and define a more precise requirement to read as follows

""Desk-top client or Web client""

**Answer 21**: It is not accepted.

Requirement is clearly defined.

22. In lot 4, segment 4.6, item 34, you state the following:

""Support for two language for user interface English and Serbian""

As most manufacturers use the English language in the development of their software, and given that it is very rare that the software is localized in the Serbian language in case of almost all world-renowned manufacturers, please modify the requirement to

""Support for at least English or Serbian language;"""

**Answer 22**: It is accepted.

Item 34 is amended and now states: “Support language for user interface is English or Serbian”

23. In lot 4, segment 4.6, item 37, you state the following:

""STANDARD TOOLS AVAILABLE ON ALL WORKPLACES – UNLIMITED USERS""

Please modify and define a more precise requirement to read as follows

""STANDARD TOOLS AVAILABLE ON ALL DIAGNOSTIC CLIENTS""

**Answer 23**: It is not accepted, because of avoiding decreasing of the quality.

24. In lot 4, segment 4.6, item 47, you state the following:

""CINE-mode, Image rotation (90 °, 180 °, -90 °), Image flip (vertical, horizontal)""

Please modify this requirement to read as follows:

""CINE-mode, Image rotation (90 °, 180 °, -90 °) or (90 °, 180 ° = 2 x 90 °, -90 °), Image flip (vertical, horizontal)""

**Answer 24**:

Item 47 is amended and now states: “CINE-mode, Image rotation (90 °, -90 °), Image flip (vertical, horizontal)”

25. In lot 4, segment 4.6, item 54, you state the following:

""(Ruler)""

Please modify this requirement to read as follows:

""(Ruler) or measurement tool""

**Answer 25**: It is acceptable to provide ruler or other measurement tool

26. In lot 4, segment 4.6, item 65, you state the following:

""Archiving on CD/DVD with Viewer program""

Please clarify this requirement, that is, whether by this requirement you mean recording of a patient CD / DVD.

If yes, please modify this requirement to read as follows:

""Creating patient CD's/DVD's with Viewer program""

**Answer 26**: Yes, this means archiving patients on CD/DVD. The specification will not be changed.

27. In lot 4, segment 4.6, item 66, you state the following:

""ADVANCED TOOLS AVAILABLE ON ALL WORKPLACES WITH CONCURRENT ACCESS""

Please modify and define a more precise requirement to read as follows

""TOOLS AVAILABLE ON ALL DIAGNOTIC CLIENTS WITH CONCURRENT ACCESS""

**Answer 27**: It is not accepted.

The Requirement is clearly defined.

28. In lot 4, segment 4.6, item 74, you state the following:

""MIP, MinIP, AvgIP,""

Please modify this requirement to read as follows:

""MIP, MinIP""

to allow more bidders to participate in this public procurement

**Answer 28**: It is acceptable to offer pacs solution without AvgIP

29. In lot 4, segment 4.6, item 82, you state the following:

""Stereoscopic processing""

Please clarify exactly what you mean by this requirement.

**Answer 29**:

Item 82 is removed form technical specification.

30. In lot 4, segment 4.6, item 87, you state the following:

""Distance measurement in 3 projections""

Please clarify exactly what you mean by this requirement.

**Answer 30**:

It means measurement in all three MPR planes (axial, sagittal and coronal)

31. In lot 4, segment 4.6, item 98, you state the following:

""Zero footprint viewer available on all workplaces (tablet, pc, mobile phone) – Unlimited users""

Please modify and define a more precise requirement to read as follows

""Zero footprint viewer available on all clinicians workplaces (tablet, pc, mobile phone)""

**Answer 31**: It is not accepted.

Requirement is clearly defined.

32.In lot 4, segment 4.6, item 102, you state the following:

""Zero footprint viewer (standard tools) for Unlimited users""

Please modify and define a more precise requirement to read as follows

""Zero footprint viewer (standard tools) on all clinicians workplaces ""

**Answer 32**: It is not accepted.

Requirement is clearly defined.

33. In lot 4, segment 4.6, item 109, you state the following:

""Ruler""

Please modify this requirement to read as follows:

""(Ruler) or measurement tool""

**Answer 33**: It is acceptable to provide ruler or other measurement tool

34. In lot 4, segment 4.6, item 112, you state the following:

""Tools for manipulating CT studies in zero footprint viewer – Unlimited users""

Please modify and define a more precise requirement to read as follows

""Tools for manipulating CT studies in zero footprint viewer on all clinicians workplaces""

**Answer 34**: It is not accepted.

Request for modification decreases the requested quality. Most respectable manufacturers offer this functionality.

35. In lot 4, segment 4.6, item 113, you state the following:

""MPR, MPI, MINIP, AVGIP""

Please modify this requirement to read as follows:

""MPR, MPI, MINIP or AVGIP""

to allow more bidders to participate in this public procurement

**Answer 35**: It is acceptable to provide MPR, MPI, MINIP or AVGIP

36. In lot 4, segment 4.6, item 114, you state the following:

""Making curved section""

Please exclude this requirement from the Bidding Documents, since there is no need for clinicians who are primary users of the zero footprint Viewer to use this complex tool and given that it is the task of the radiologist to describe the exam and provide all necessary information for the clinician through the radiological report and/or through annotations/notes in the image.

**Answer 36**: It is accepted.

Item 114 is removed from specification.

38. In lot 4, segment 4.6, item 124, you state the following:

""Segmentation""

Please exclude this requirement from the Bidding Documents, since there is no need for clinicians who are primary users of the zero footprint Viewer to use this complex tool and given that it is the task of the radiologist to describe the exam and provide all necessary information for the clinician through the radiological report and/or through annotations/notes in the image.

**Answer 38**: It is accepted.

Item 124 is removed from specification.

39. In lot 4, segment 4.6, item 125, you state the following:

""Automatic removal of the patient table""

Please exclude this requirement from the Bidding Documents, since there is no need for clinicians who are primary users of the zero footprint Viewer to use this complex tool and given that it is the task of the radiologist to describe the exam and provide all necessary information for the clinician through the radiological report and/or through annotations/notes in the image.

**Answer 39**: : It is accepted.

Item 125 is removed from specification.

40. In lot 4, segment 4.6, item 135, you state the following:

""The application supports the automatic creation of basic medical documentation based on the law of the Republic of Serbia;""

Please indicate all basic medical documents for which the application should support automatic creation so that we can make a proper and adequate bid

**Answer 40:**

Application must be able to create various types of reports, among them also documents that are based on the law of the Republic of Serbia.

Example:

Form ОZ-2 REFERRAL FOR AMBULANCE-SPECIALIST EXAMINATION

41. In lot 4, segment 4.6, item 140, you state the following:

""Records of consumable material and automatic connection with procedures""

Please exclude this requirement from the Bidding Documents since this functionality is, as a rule, an integral part of HIS, i.e. BIS, - not RIS

**Answer 41**: It is not accepted.

Financial part of registering material and procedures is done by HIS system, but since RIS is used on Radiology department it must register procedures and bind materials that are created during radiology procedure. This connection and communication is essential for proper work of two systems. Otherwise radiology staff will have to work in two systems all the time, which is not efficient.

42.In lot 4, segment 4.6, item 141, you state the following:

""Integration with existing BIS (Hospital Information System) system (communication - exchange of HL7 messages);""

Please exclude this requirement from the Bidding Documents given that much more information is required to create a proper and adequate bid than whether the existing BIS uses the HL7 protocol. The topics that matter are what degree of integration is preferred, what types of HL7 messages will be exchanged, e.g. ADT, ORM, ORU etc.

**Answer 42**: It is not aaccepted.

Integration with HIS system must be done with proper worldwide recognized language and that is HL7.

43. In lot 4, segment 4.6, item 143, you state the following:

""Management of additional medical data and questionnaires;""

Please specify exactly what additional medical information should the offered RIS support

**Answer 43:**

The RIS system must be adaptive, able to accept additional medical information generated at the user's request and to create various types of reports and questionnaires.

44.In lot 4, segment 4.6, item 144, you state the following:

""Functionality for entering laboratory findings of interest (urea, creatinine, etc );""

Please exclude this requirement from the Bidding Documents since this functionality is, as a rule, an integral part of HIS, i.e. BIS, not RIS

**Answer 44**: It is not accepted.

This request is needed. RIS System must be adaptive, able to accept additional medical information according to the request, and forward it to superior Information System – HIS.

45. In lot 4, segment 4.6, item 149, you state the following:

""Input of glomerular filtration rate or determination of eGFR based on the level of creatinine;""

Please exclude this requirement from the Bidding Documents since this functionality is, as a rule, an integral part of HIS, i.e. BIS, not RIS

**Answer 45**: It is not accepted.

This request is needed. RIS System must be adaptive, able to accept additional medical information according to our request, and forward it to superior Information System – HIS.

**"LOT 1 CARDIOVASCULAR ULTRASOUND MACHINE 1.3.1**

46. Item 1.2 , the following is requested: LCD monitor size min 23"" Full HD on articulating arm

Is a modification acceptable to the Contracting Authority to read as follows: LCD monitor size min 23"" (+/- 2’’) Full HD on articulating arm

A minimum 2'' modification of this item will not affect the clinical functioning of the device, nor will the size of the monitor itself be critical to the diagnostic image quality of the device. The minimum modification is intended to enable greater competitiveness in the public procurement procedure.

**Answer 46**: It is partly acceptable.

The most respectable manufacturers meet this request. Decrease in size of display diagonal of 2” is significant, but deviation of 1’’ would be accepted.

47. Item 1.10 , the following is requested: Maximum display depth in B mode minimum 44 cm

Is a modification acceptable to the Contracting Authority to read as follows: Maximum display depth in B mode minimum 44 (+/- 14 cm)

A depth of 44 cm is available on abdominal transducers, which are not subject matter to the public procurement, but exclusively cardiac transducers (sector transducers) and thus this requirement is of an eliminatory character. If, however, the Contracting Authority believes that the sector transducer should also have a depth of 44 cm, please specify which transducer, out of the transducers to be purchased with the device, needs to fulfill this requirement.

**Answer 47**: It is not accepted.

Display depth is one of parameters which is measurement of system quality and this particular request for modification decreases the quality for more than 30%.

48. Item 2.10 , the following is requested: Quantitative tool for systolic function assessment, based on speckle-tracking method, with display of segmented myocardial movement (left ventricle) as bull-eye graphic in 2D and 3D (automatic measurement in 2D)

Is a modification acceptable to the Contracting Authority to read as follows: Quantitative tool for systolic function assessment, based on speckle-tracking method, with display of segmented myocardial movement (left ventricle) as bull-eye graphic in 2D and/or 3D (automatic measurement in 2D)

In the way that a characteristic is defined - it aims to eliminate interested bidders for the public procurement subject, since only one manufacturer of the US devices fulfills the required characteristic. Please correct the item as proposed to allow more interested bidders to participate in the public procurement procedure.

**Answer 48**: It is not accepted.

Request for modification decreases a quality. Most respectable manufacturers offer this functionality.

49. Item 2.15 , the following is requested: Ultrasound system can be upgraded with fusion imaging which enables display of the same anatomical section on ultrasound live image as well as on last exam image performed on CT or MR systems. Image Fusion functionality should be available on 2D transthoracic matrix cardiac probe

Is a modification to this item acceptable to the Contracting Authority to read as follows: Ultrasound device is upgradeable with the real-time fusion (integration) of the ultrasound device offered and the angio room offered?

Because we believe that in the cardiac application of the ultrasound device, the integration of the offered ultrasound device and the angio room has far greater application than fusion with a CT device or MRi. In this lot, the subject matter of the procurement is angio room, actually, not the CT device (which is in the lot for the radiology department)."

**Answer 49**: It is not accepted.

Although unit is in same lot with Angio suite, it is not intended to be used only in Angio suite. As new CT is being procured this system must have required upgrade capacity.

51. Item 3.1 , the following is requested: Cine memory minimum 800 MB

Is cine memory of 2.000 frames or min. 450 sec acceptable to the Contracting Authority?

Different renowned manufacturers of ultrasound devices differently define the size of Cine memory, i.e. the ability to store a number of frames in real time while operating the ultrasound device. Most often, this is the total number of frames independent of the frame rate, in seconds only or in absolute device storage (MB). If the requested modification is accepted, you will allow more bidders to participate in the bidding procedure, which is the objective of this public procurement.

**Answer 51**: It is not accepted.

The specification is clearly described. Any manufacturer can express how much Cine memory is in MB.

52. Item 4.1 , the following is requested: 2D transthoracic matrix cardiology probe with field of view of minimum 120° and frequency range of 2,0 to 5,0 MHz or wider

Is a modification acceptable to the Contracting Authority to read as follows: 2D transthoracic matrix or single crystal technology, cardiology probe with field of view of 120° (+/-30 °) and frequency range of 2,0 to 5,0 MHz or wider

The proposed modification does not aim to diminish the clinical quality of the transducer, but aims to increase competition in the public procurement procedure. If the Contracting Authority considers that a minimum deviation of 30 ° may lead to the degradation of the transducer, we kindly ask you to indicate the reason.

**Answer 52**: It is not accepted, because of avoiding of quality decrease. Most respectable manufacturers offer this functionality.

53. Item 3.7 , the following is requested: System has following DICOM functionalities: Store, Print, Query/Retrieve, Verification, Modality Worklist Management, MPPS, Structured reporting,

Is a modification acceptable to the Contracting Authority to read as follows: DICOM Connectivity and DICOM Services

The characteristic defined in this way increases the competitiveness in the public procurement procedure, while the clinical functionality remains at the same level.

**Answer 53**: It is not accepted.

Request for modification makes this item unclear. Most respectable manufacturers offer all requested functionalities.

**"LOT 1 ULTRASOUND CARDIOVASCULAR PREMIUM 4D SYSTEM 1.3.2**

54. Item 5. , the following is requested: min 22"" wide screen High-Definition (HD) OLED display with monitor on an articulating arm. Resolution 1920x1080 px

Is a modification acceptable to the Contracting Authority to read as follows: OLED display min. 21"" (+/- 1 ’’) wide screen with monitor on an articulating arm. Resolution 1920x1080 px

This minimum modification of 1'' will not affect the clinical / diagnostic quality of the device, but aims to restrict other bidders from participating in the procurement of premium device.

**Answer 54**: It is accepted.

55. Item 9 , the following is requested: Maximum depth range in B-mode not less then 45 cm – probe specific

Is a modification acceptable to the Contracting Authority to read as follows: Maximum depth range in B-mode not less then 45 cm (+/- 15 cm) – probe specific

A depth of 45 cm is available on abdominal transducers, which are not subject matter to the public procurement, but exclusively cardiac transducers (sector transducers) and thus this requirement is of an eliminatory character. If, however, the Contracting Authority believes that the sector transducer should also have a depth of 45 cm, please specify which transducer, out of the transducers to be purchased with the device, needs to fulfill this requirement.

**Answer 55**: It is accepted.

56. Item 10 , the following is requested: Width range in 2D mode 10-120°

Is a modification acceptable to the Contracting Authority to read as follows: Width range in 2D mode 10-120° (+/- 20°)

We believe that a minimum modification in the field of view of the transducer will affect the clinical / diagnostic quality of the device, but is intended to restrict other bidders from participating in the procurement of premium device.

**Answer 56**: It is not accepted.

The subject of procurement is a premium ultrasound system, and this request is directly related to the diagnostic quality of the system and the request is related to the significant deviation.

57.Item 11.6 , the following is requested: Sector matrix phased array probes

Is a modification acceptable to the Contracting Authority to read as follows: Sector matrix or Single crystal phased array probes

We believe that this is only a transducer producing technology, and should allow other bidders to offer equally valuable transducer technology and quality.

**Answer 57**: It is not acceptable

Matrix technology is a proven technology that most of the leading manufacturers use on their premium systems. Some manufacturers use both matrix and single-crystal technologies together on sector matrix phased array probes, and these are not equal or alternate technologies.

58. Item 12.4 , the following is requested: Curved anatomical M-mode

Is it acceptable to the Contracting Authority to remove this item?

The reason for this is that the required mode is of eliminatory character of a particular manufacturer.

**Answer 58**: It accepted.

59. Item 12.9 , the following is requested: TVI, Tissue Tracking

Is the technology called Tissue Doppler Imaging (TDI) and TDI PW acceptable to the Contracting Authority?

If not please explain the required modes.

**Answer 59**: It is not accepted.

TVI-Tissue Velocity Imaging is color-coding of myocardial velocities. Some manufacturers label it TDI.

Tissue Tracking is color-coding of myocardial displacement during the heart cycle.

TDI and TDI PW are not equivalent to Tissue Tracking.

60. Item 13 , the following is requested: Digital imaging technique that provides real-time visualization of vascular hemodynamics by directly visualizing blood reflectors and presenting this information in a grayscale display as B-flow or similar

Is a modification acceptable to the Contracting Authority to read as follows: Advanced technique for better visualization of low flow: B-flow, Advanced Dynamic Flow, Clarify or equivalent. Power Doppler is not acceptable

In this way, the user clearly defines the characteristic / method they wish to possess, in such a way that there is no change in the clinical quality of the technology but aims to allow other bidders too to offer their advanced visualization methods.

**Answer 60**: It is not accepted.

The requested technique is not only for better visualization of low flow. In addition to a number of other benefits, it enables simultaneous visualization of both slow and fast flows and overcomes the limitations of Doppler techniques.

61. Item 18 , the following is requested: CW Doppler Triplex mode (simultaneous display of 2D, Color Flow and CW Doppler image in real time)

Is a modification acceptable to the Contracting Authority to read as follows: CW Doppler or PW Doppler Triplex mode (simultaneous display of 2D, Color Flow and CW Doppler image or 2D, Color Flow and PW Doppler image in real time )

The technical characteristic defined in this way is intended to enable more bidders to participate in the public procurement procedure. The way it is currently defined aims to limit competition to one manufacturer of ultrasound devices. Clinically, the technology required is of use, but other manufacturers also have certain solutions that achieve the same result, but are not allowed to participate in the public procurement procedure.

**Answer 61**: It is not accepted.

Requested technology has significant clinical benefits, and as far as we know it's not exclusive of one manufacturer.

62. Item 21 , the following is requested: Software which, depending on the given parameters, allows a volume rate of min. 1500 on 4D TEE probes in single beat acquisition, without reducing image quality Vmax or similar.

Is a modification acceptable to the Contracting Authority to read as follows: Software which, depending on the given parameters, allows a volume rate of min. 1500 on 4D TEE probes in single beat acquisition, without reducing image quality Vmax or similar. or volume FoV min. 105˚ x 105˚ on the offered 4D TEE transducer, with frame rate in 2D mode exceeding 2.000 fps.

In this way, the user will not lose out on the quality of the device - on the contrary, the user can only get a device of a higher class and better features ( Item 3, min. 1000 fps in 2D is requested, and the device we would like to offer has 2.500 fps)

**Answer 62**: It is not accepted.

What the interested bidder is proposing is not an alternative to the requested.

Framerate in 2D mode is specified in Item 3 is the minimum request. Interested bidder is free to offer more.

63. Item 22 , the following is requested: Simultaneous visualization of Bi-plane acquisition and Tri-plane acquisition. Bi- plane, Tri-plane or similar.

Is a modification acceptable to the Contracting Authority to read as follows: Simultaneous visualization of min two plane acquisition.

The characteristic defined this way leads to greater competitiveness in the public procurement procedure, without reducing the clinical characteristics of the device.

**Answer 63**: It is acceptable.

64. Item 25 , the following is requested: Simultaneous display of 5,7,9 or 12 combined of short-axis and long-axis standard slices extracted from the 4D volume data (tissue and/or color) available in live and replay as Multi-slice or similar.

Is a modification acceptable to the Contracting Authority to read as follows: Simultaneous display of 5,7,9 or 12 combined of short-axis and long-axis standard slices extracted from the 4D volume data (tissue and/or color) available in live or replay as Multi-slice or similar.

The characteristic defined in this way is not intended to diminish the clinical application of the required method but is intended to increase competition in the public procurement procedure.

**Answer 64**: The change of specification will be made through Amendment.

65. Item 26.1 , the following is requested: 2D Sector pediatric cardiac probe. Bandwidth from 2.4 to 8.0 MHz (+/- 0,5 MHz).Depth of field: minimum 16 cm. Sector width: minimum 110 °

Is a modification acceptable to the Contracting Authority to read as follows: 2D Sector pediatric cardiac probe. Bandwidth from 3 to 8.0 MHz or wider. Sector width: 110 ° ( +/- 20°)

The proposed modification does not aim to diminish the clinical quality of the transducer, but aims to increase competition in public procurement procedure. If the Contracting Authority considers that a minimum modification of 0.6 MHz and a deviation of 20° may lead to degradation of the transducer, please specify the reason."

**Answer 65**: Partially accepted. It is acceptable to provide 2D Sector pediatric cardiac probe. Bandwidth from 3 to 8.0 MHz +/- 1 MHz or wider Depth of field: minimum 16 cm+/- 1 cm Sector width: minimum 110 °( +/- 20°)

66. Item 26.2 , the following is requested: 2D Sector pediatric cardiac probe. Bandwidth from 4.0 to 12.0 MHz (+/- 0,5 MHz).Depth of field: minimum 12 cm Sector width: minimum 100 °

Is a modification acceptable to the Contracting Authority to read as follows: 2D Sector pediatric cardiac probe. Bandwidth from 4.0 to 12.0 MHz or wider. Sector width: 100 ° ( +/- 20°)

The proposed modification does not aim to diminish the clinical quality of the transducer, but aims to increase competition in public procurement procedure. If the Contracting Authority considers that a minimum modification of 0.5 MHz and a deviation of 20° may lead to degradation of the transducer, please specify the reason.

**Answer 66**: Partially accepted. It is acceptable to provide 2D Sector pediatric cardiac probe. Bandwidth from 4.0 to 12.0 MHz +/- 1 MHz or wider. Depth of field: minimum 12 cm+/- 1 cm Sector width: 100 ° ( +/- 20°)

67. Item 26.5 , the following is requested: 2D endocavital probe. Bandwidth from 4 to 8.6 MHz (+/- 0,5 MHz).Depth of field: minimum 30 cm. Sector width: minimum 120 °

We believe that an error has occurred because the required transducer is used in OB/Gyn and/or urological applications. Is a 2 to 9 MHz abdominal transducer with FoV min. 100 ° acceptable to the user - Intended for fetal echo examinations?

**Answer 67**: It is error. The new specification will be added through Amendment.

68. Item 27.1 , the following is requested: Fusion of an ultrasound image with a image of CT. CT fusion or similar

Is a modification to this item acceptable to the Contracting Authority to read as follows: Real time fusion (integration) of the ultrasound device offered and the angio room offered?

Because we believe that in the cardiac application of the ultrasound device, the integration of the offered ultrasound device and the angio room has far greater application than fusion with a CT device. In this lot, the subject matter of the procurement is angio room, actually, not the CT device (which is in the lot for the radiology department).

**Answer 68**: Specification is amended through Amendment to TD.

69. Item 27.2 , the following is requested: 2D Sector matrix cardiac probe ( matrix technology provides probe elements in several rows in matrix order) Bandwidth from 1.5 to 4 MHz (+/- 0,5 MHz).Depth of field: minimum 30 cm. Sector width: minimum 120°

Is a modification to this item acceptable to the Contracting Authority to read as follows: 2D Sector cardiac probe ( matrix or single crystal technology) Bandwidth from 1.5 to 4 MHz or wider. Sector width: 120° (+/- 30°)

The proposed modification does not aim to diminish the clinical quality of the transducer, but aims to increase competition in the public procurement procedure. If the Contracting Authority considers that a minimum modification of 0.5 MHz and a deviation of 30° may lead to degradation of the transducer, please specify the reason.

**Answer 69:** Specification is amended through Amendment to TD.

70. Item 19 , the following is requested: Tri-plane Automated Function Imaging which allows assessment at a glance by combining three longitudinal views into one comprehensive bulls-eyeview

Is it acceptable to the Contracting Authority to remove Item 19, for the reason that the same is required and better explained in item 22."

**Answer 70**: Specification is amended through Amendment to TD.

**"Lot 4 Premium ultrasound machine for radiology department**

71. Item 2 , the following is requested: Hardware channels: The system shall provide minimum 192 hardware channels

Is a modification to this item acceptable to the Contracting Authority to read as follows: The system shall provide minimum 192 hardware channels or min. 4 million digitally process channels

The technical characteristic defined in this way is intended to enable greater competitiveness in the public procurement procedure, since there are several equally important technical details related to the quality of the device among different manufacturers of ultrasound.

**Answer 71:** It is not accepted.

Premium ultrasound machine shall provide min.192 hardware channels, 4 million million digitally process channels are not sufficient for premium us machine.

72. Item 4 , the following is requested: Dynamic range: The system shall provide a dynamic range of at least 350 dB.

Is a modification to this item acceptable to the Contracting Authority to read as follows: Dynamic range: The system shall provide a dynamic range of at least 350 dB (+/- 30db)

Minimum modification to this item increases the competitiveness in the public procurement procedure, the clinical quality of the image and device remains at the premium level of the device as it is understood that all the devices exceeding300 db belong to the premium segment.

**Answer 72**: It is acceptable.

The specification will be amended.

73. Item 6 , the following is requested: The system shall have Touch Screen with at least 13 inch touch panel and with digital TGC with predefined 4 curves

Is a modification to this item acceptable to the Contracting Authority to read as follows: The system shall have Touch Screen with at least 13 inch (+/- 1’’) touch panel and with digital TGC

Minimum modification to this item increases the competitiveness of the public procurement procedure, the clinical quality of the image and the device remain at a premium level - deviation of the touch screen of 1'' will not lead to a change in the clinical functioning of the device.

**Answer 73**: It is partially acceptable

The specification will be amended.

Requested min. Touch Screen Predefined with min. TGC 4 curves are improving user efficiency during examinations

74. Item 9 , the following is requested: Integrated Gel Warmer

Is it acceptable to the Contracting Authority an external gel heater to be supplied with the device? The modification will not lead to a change the clinical functioning of the device."

**Answer 74**: It is not accepted. Gel Warmer should be integrated in ultrasound. Gel warmer is significant feature in pediatric exams providing comfort, and due to the limitations of the space integrated and compact device must be supplied.

75. Item 18 , the following is requested: Convex Transducer: Frequency range: min. 1 – 7 MHz, number of elements min. 160, single crystal or matrix technology.

Is a modification to this item acceptable to the Contracting Authority to read as follows: Convex Transducer: Frequency range: 1 –5 MHz or wider, number of elements min. 160, single crystal or matrix technology.

Minimum modification will not affect the clinical quality of the device/transducer.

**Answer 75**: It is accepted.

The frequency modification range allowed is ±2MHz

76. Item 19 , the following is requested: Micro-convex Transducer: Frequency range: min. 4 – 8MHz, number of elements min. 128, FOV min.90°

Is a modification to this item acceptable to the Contracting Authority to read as follows: Micro-convex Transducer: Frequency range: 5 – 8MHz or wider, number of elements min. 128, FOV min.90°

Minimum modification will not affect the clinical quality of the device/transducer.

**Answer 76**: It is accepted.

The frequency modification range allowed is ±2MHz

77. Item 20 , the following is requested: Linear Transducer: Frequency range: min. 3 – 16 MHz, number of elements min.192, min., FOV max.40mm

Is a modification to this item acceptable to the Contracting Authority to read as follows: Linear Transducer: Frequency range 3 –12 MHz or wider, number of elements 192 ( +/- 32), min., FOV max.40mm

Minimum modification will not affect the clinical quality of the device/transducer.

**Answer 77**: Partially accepted.

The specification will be amended.

78. Item 21 , the following is requested: Linear Transducer: Frequency range: min. 4 – 18 MHz, number of elements min.280, min., FOV max.38mm

Is a modification to this item acceptable to the Contracting Authority to read as follows: Linear Transducer: Frequency range: 5 –18 MHz or wider, number of elements min.280, min., FOV max.39mm

Minimum modification will not affect the clinical quality of the device/transducer.

**Answer 78**: It is accepted.

The specification will be amended.

79. Item 22 , the following is requested: Linear Transducer Intraoperative (L-Shape): Frequency range: min. 3 – 16 MHz, number of elements min.128, min., FOV max.28mm

Is a modification to this item acceptable to the Contracting Authority to read as follows: Linear Transducer Intraoperative (L- Shape): Frequency range: 7 – 15 MHz or wider, number of elements min.128, min., FOV max.28mm

Minimum modification will not affect the clinical quality of the device/transducer.

**Answer 79**: It is acceptable.

80. Item 24 , the following is requested: CINE Function: The system shall perform CINE Function, 12.000 cine images minimum

Is a device with a cine storage of 2.000 frames acceptable to the Contracting Authority?

**Answer 80**: Not acceptable. Premium system characteristics are requested. It is acceptable to offer system with 12.000 cine images minimum or 1GB Cine memory minimum

81. Item 29. , the following is requested: USB Ports: The system shall have 8 user-accessible USB 2.0 ports.

Is a modification to this item acceptable to the Contracting Authority to read as follows: USB Ports:

The number of USB ports is a characteristic that does not affect the clinical functioning of the device and is therefore eliminatory. If the user wants to have more USB ports, there are external attachments that increase the number of USB ports.

**Answer 81:** It is partly acceptable, the specification will be amended and reads as follows: The system shall have min 3 user-accessible USB 2.0 ports.

All peripheries and DICOM devices (printers, DVD, external monitor, etc.) are connected to ultrasound device via digital (USB) ports.

**Lot 1 1.1Digital biplane angiography system for cardiology diagnostic and interventional pocedures**

82. System functionality enables simple access to the patient during catheter interventions (by using femoral, brachial or radial access) positioning C-arm to left and right patient side, as well postioning C-arm in patient head-end position

Please accept the amendment of this technical requirement as follows “System functionality enables simple access to the patient during catheter interventions (by using femoral, brachial or radial access)”, while maintaining the required performance level.

In terms of industry applicable standards, a biplane system supporting a frontal (head-end) floor mounted C-arm providing a motorized rotation of 120° LAO, 120° RAO, with a respective 45° cranial, 45° caudal angulation value, together with a lateral ceiling mounted C-arm which can be independently rotated and angulated to provide full caudal and cranialangulations for all LAO projections, provide sufficient positioning flexibility in order to perform all angiographic procedures, completely covering the therapeutic need of the Contracting Authority, namely all minimally invasive cardiology diagnostic and interventional procedures, in all its forms.

In order to achieve all necessary projections in cardiovascular interventional procedures, in conditions of safety and comfort for the patient and the medical staff, theangio system and its two C arms unit is built in such way that it can be subjected to rotational, angulation movements, either independently or simultaneous, in order to acquire any projection at any angulation to the patient. Thus, this system is able to perform the most demanding procedures from a positioning point of view.

With regard to the matter at hand, namely, simple access to the patient during catheter interventions, the system we would like to offer fully enables it. The C-arms’s and the table’s geometrical movements and pivoting, together with a wide C-arm depth, will grant easy and safe access to all desired arterial/venous access points, for all kinds of patients.

Consequently, in order to allow more operators to access this procurement procedure, please kindly accept the amendment of this technical requirement in „System functionality enables simple access to the patient during catheter interventions (by using femoral, brachial or radial access)” without altering the required performance level.

**Answer 82.:** It is not acceptable. System will be used as biplane for some interventions, but also as a monoplane for other kind of interventions. In case using system as monoplane, it is mandatory that frontal C-arm itself can be positioned around the table in left and right patiend side, as well positioning C-arm in patient head-end position providing optimal patient coverage, so exams can be performed without the need for additional acquisition runs or to reposition patients on the table. For example, with frontal plane in left-side position: This frees up the space around the head area and is beneficial when anesthetic support is required during an examination – especially in pediatric exams.

83. All movements of the system, including bi-plane C-arm, patient table and system for image acquisition, have control at the patient table side. Joysticks at command panel are above panel plane

Please accept the amendment of this technical requirement as follows “All movements of the system, including bi-plane C-arm, patient table and system for image acquisition, have control at the patient table side. Joysticks or equivalent solution at command panel”

Please note that this requirement completely restricts the access at the procedure for all Philips Medical Systems angiography systems, as one of the most established manufacturers of devices of this kind cannot meet this requirement with any of the systems in its portfolio.

The system we would like to offer introduces a new concept for workflow. It integrates advanced viewing solutions, new and optimized control modules for ease-of-use as a smartphone, parallel working technologies in the control room, as well as single-motion selectable digital cards, which contain predefined settings of the procedure. All of this was designed to help communication within the team of doctors, and to increase the efficiency of procedures and reduce complications. For objective testing of the platform, a study with 61 clinical users from Europe and the United States of America was conducted in 2015-2016 before its launch. The study was conducted in a simulated laboratory environment and was designed and supervised by Use-Lab GmbH, an independent and objective consulting company in engineering and assessment of user interface design and usage. Use-Lab analyzed the results of the study and documented the following conclusions on the new workflow approach implemented by Philips in this system’s platform:

•100% of users consider that the ability to access and control multiple applications from the patient’s table will remove the paths between the exam room and the control room, ensuring greater workplace sterility and faster procedures

•91% of users consider using digital cards with predefined settings to help standardize workflow

•87% of users believe that the ability to access and control multiple applications from the table side will reduce team communication failures during the procedure

•91% of users believe that the system will reduce the duration of the intervention procedures

•93% of users consider that the system can help them make better use of their time in the examination room.

Consequently, due to the fact that we do consider the workflow as being very important, and our workflow being one of the best in the industry, even without the joystick and in order to allow more operators to access this procurement procedure,please accept the amendment of this technical requirement as follows “All movements of the system, including bi-plane C-arm, patient table and system for image acquisition, have control at the patient table side. Joysticks or equivalent solution at command panel”"

**Answer 83:** It is acceptable to offer All movements of the system, including bi-plane C-arm, patient table and system for image acquisition, have control at the patient table side. Joysticks or equivalent solution at command panel.

84. Automatic stand positioning depending on the reference image selected

Please accept the amendment of this technical requirement by accepting an equivalent solution, as follows “Automatic C-arm/stand positioning depending on the reference image selected”,while maintaining the required performance level and the desired outcome.

**Answer 84:** It is acceptable to offer Automatic C-arm/stand positioning depending on the reference image selected.

85. Software collision protection to prevent collision between C-arm and patient

Please confirm, for good practice, common reference and similar understanding for all manufacturers, in order to avoid confusion, that by “software collision protection” you expect collision protection governed by physical sensors, whose response is indeed integrated into a software which provides the user warnings and protection.

**Answer 85:** It is accepted.We confirm.

86. Maximum table load min. 350 kg

Please accept the amendment of this technical requirementas follows “Maximum table load min. 325 kg”, while maintaining the required performance level and the desired outcome.

We appreciate that the requested value for the maximum table load is excessive, given the clinical destination of the system that the hospital would like to acquire, namely, pediatric, whereas this requested weight is overestimated.

Moreover, the use of this minimum value for this technical parameter is restricting the participation at the procedure for all Philips Medical Systems angiography systems, as one of the most established manufacturers of devices of this kind cannot meet this requirement with any of the systems in its portfolio; whereas, such a big value for weight bearing of the table has no clinical relevance, not being a defining one in the development and diagnosis process that the Contracting Authority will carry out with the support of the system that is the subject of the present procedure."

**Answer 86:** It is acceptable.

87. Control panel, at the patient table side comprises:

a) Motorized vertical table movement

b) Blockage and release of the tabletop

c) Motorized movement of the biplane C-arm for reaching of the desired position.

Please accept the amendment of this technical requirementas follows:

“Control panel OR Touch screen control panel, at the patient table side comprises:

a) Motorized vertical table movement

b) Blockage and release of the tabletop

c) Motorized movement of the biplane C-arm for reaching of the desired position”,

while maintaining the required performance level and the desired outcome.

We would like to mention that, indeed, the table panning handle is on the control panel; The pan handle controls the table (blocking/unblocking for floating). With regard to the possibility to completely block the table’s movements, or block just its transversal or longitudinal, the system we would like to offer can do this from the touch screen module.

Each manufacturer has its own way of configuring and optimizing the system, and according to studies conducted by Philips Medical Systems, for an optimal workflow, patient table breaks have been positioned at table-side, as the contracting authority requests, only controlled from the touch screen module, not from the control panel.

Consequently, in order to allow more operators to access this procurement procedure,please also accept a solution in which patient table breaks are controlled from the table-side, from the touch screen module, respectively the amendment of this technical requirement as follows

“Control panel OR Touch screen control panel, at the patient table side comprises:

a) Motorized vertical table movement

b) Blockage and release of the tabletop

c) Motorized movement of the biplane C-arm for reaching of the desired position”,

**Answer 87**: It is acceptable to offer touch screen control panel as control panel.

88. Generators enables continuous display of actual anode heat (HU status), with display of free capacity left to reach maximum anode heat content

Please accept the amendment of the this technical requirement in „Generators enables continuous display of actual anode heat (HU status), with display of free capacity left to reach maximum anode heat content OR an equivalent solution, only when there is a warning involved”, without altering the required performance level.

Please accept as equivalent the possibility to display the generator load, only not continuously, but only when there is a warning involved. For example, depending on the level of generator load, the operator will be instructed on whether only fluoroscopy will be possibile, or neither exposure/fluoroscopy will be possible.

We believe this solution is more effective, taking into consideration the fact that the operators should not be overloaded with unnecessary information on the screen, leaving space for more important parameters, such as dose display.

Moreover, Philips Medical systems has always been known for building reliable systems and x-ray tubes alike. The system we would like to offer has the biggest heat storing capacity in the industry, as well as the fastest cooling rate. Such a situation in which the user should be aware of the remaining free tube capacity and modulate and adjust the remaining of the procedure according to it, is a burden and a huge inconvenience which the Philips engineers didn’t even project.

Hence, each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as:

“Generators enables continuous display of actual anode heat (HU status), with display of free capacity left to reach maximum anode heat content OR an equivalent solution, only when there is a warning involved”"

**Answer 88:** It is acceptable to offer Generators enables continuous display of actual anode heat (HU status), with display of free capacity left to reach maximum anode heat content OR an equivalent solution, only when there is a warning involved.

89. Size of smallest focal spot must be equal or smaller than 0,4 mm for each X-ray tube

Please accept the amendment of the this technical requirement in „Size of smallest focal spot must be equal or smaller than 0,5 mm for each X-ray tube”, without altering the required performance level.

Since the focal point is directly related to the power applied by the X-ray tube, the small one will be used, as all manufacturers do, for fluoroscopy. We appreciate that a very small focal point will not be able to sustain enough power for good image quality in fluoroscopy.

In general, the design of the X-ray tube and the generator is different for each manufacturer, and it pursues a common goal of ensuring that all types of angiography examinations and procedures are safely performed without imposing technical limitations (ex: overheating of the tube during prolonged procedures). Thus, each manufacturer establishes the most efficient X-ray tube design of its angiography systems, providing a balance between the heat storage capacities of the anode, of the assembly and the heat dissipation (cooling) of the stored heat.

Taking all of these into consideration, we want to point out the diversity of constructive solutions addressed by established manufacturers of high-performance angiography systems that ensure the successful and safe execution of all types of angiographic procedures without restrictions or limitations.

Consequently, in order to allow more operators to access this procurement procedure and taking into consideration the fact that each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as: „Size of smallest focal spot must be equal or smaller than 0,5 mm for each X-ray tube”

**Answer 89**: It is not acceptable. Smaller size of small focal spot enables higher resolution during pulsed fluorscopy which is one of the most important factors for good image quality.

90. System must be equipped with min. five-level adaptive Cu pre-filtration for each X-ray tube for X-ray beam quality improvement and dose reduction, automatic selection control based on the real-time patient dose absorption according to C-arm angulation, without interruption acquisition or changing existing organ program

Please accept an equivalent, even superior solution to this request,and proceed with the amendment of this technical requirement as follows “System must be equipped with min. four-level pre-filtration for each X-ray tube for X-ray beam quality improvement and dose reduction, automatic selection control based on the real-time patient dose absorption according to C-arm angulation, without interruption acquisition or changing existing organ programOR automatic selection based on protocol selection”

Please note that this requirement completely restricts the access at the procedure for all Philips Medical Systems angiography systems, as one of the most established manufacturers of devices of this kind cannot meet this requirement with any of the systems in its portfolio.

We, as one of the leaders in innovating technologies that work on reducing the radiation dose for the patient and for the medical staff, have reached the conclusion that having 1 mm Al eq filter always on and the possibility to choose between 3 different size Cu filters embedded in the patient protocols will give a much better result at the end of the procedure, dose-wise. Having these filters always on, not by automatic selection, will be saving much much more low energy radiation, which does not influence the image quality, but considerably increases the overall dose.

Consequently, in order to allow more operators to access this procurement procedure and taking into consideration the fact that each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as:

“System must be equipped with min. four-level pre-filtration for each X-ray tube for X-ray beam quality improvement and dose reduction, automatic selection control based on the real-time patient dose absorption according to C-arm angulation, without interruption acquisition or changing existing organ programOR automatic selection based on protocol selection”

**Answer 90**: It is acceptable.

91. System must have effective way to control skin dose. If the accumulated reference air kerma exceeds a configures threshold, a warning sound is given and pop-up displays on the system, so operator must change existing C-arm position

Please accept the amendment of this technical requirementas follows “System must have effective way to control skin dose. If the accumulated reference air kerma exceeds a configured threshold, a warning sound is given OR pop-up displays on the system, so operator must change existing C-arm position”, without altering the required performance level.

Please note that this requirement completely restricts the access at the procedure for all Philips Medical Systems angiography systems, as one of the most established manufacturers of devices of this kind cannot meet this requirement with any of the systems in its portfolio.

The system we would like to offer enables visible and audible signals, which are configurable by application specialist or field service engineer, depending on the requests of the customer. The biplane angiography system has a comprehensive and clear workflow for dose awareness. In case the accumulated air kerma exceeds a threshold, a visible warning is given, which is displayed on the monitor in the examination room and in the control room. This warning consists of coloring the Air Kerma value with an orange-red color, which makes the message visible and clear to the operators, or to the nurses in the control room.

Consequently, in order to allow more operators to access this procurement procedure and taking into consideration the fact that each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as:

“System must have effective way to control skin dose. If the accumulated reference air kerma exceeds a configurated threshold, a warning sound is given OR pop-up displays on the system, so operator must change existing C-arm position”"

**Answer 91:** It is acceptable.

92. AEC - Automatic exposure control – min. 5 parameters automatically optimized in real time (kV, mA, ms, small/big focal spot, Cu pre-filtration level) during different C-arm angulation, without need to change program or to interupt exposure, which enables minimized dose and optimized resolution independent of C-arm angulation

Please accept the amendment of this technical requirementas follows “AEC - Automatic exposure control – min. 3 parameters automatically optimized in real time (kV, mA, ms) during different C-arm angulation, without need to change program or to interrupt exposure, which enables minimized dose and optimized resolution independent of C-arm angulation”, without altering the required performance level.

As explained before, the system we would like to offer has 3 different size Cu filters (selectable and editable by application specialist) embedded in the patient protocols. They are selected and customized in accordance with type of patient (body size), anatomical area and type of procedure.

We, as one of the leaders in innovating technologies that work on reducing the radiation dose for the patient and for the medical staff, have reached the conclusion that having Cu and Al filters always on, embedded in the patient protocols will give a much better result at the end of the procedure, dose-wise. As it is maybe easy to reduce dose and maintain the image quality with smaller patients (small thickness of water equivalent), the actual challenge arises when having to deal with normal or bigger patients and steep projections. Having these filters always on, not by automatic selection, will be saving much much more low energy radiation, which does not influence the image quality, but considerably increases the overall dose.

In addition to the filters, the system we would like to offer has features embedded into the whole image chain, that can reduce doses up to even 70%, together with features which improve image quality. Therefore, as far as dose reduction goes, filters is just one tiny part of a complete and complex technology which achieves great results in dose reduction.

Consequently, in order to allow more operators to access this procurement procedure and taking into consideration the fact that each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as:

“AEC - Automatic exposure control – min. 3 parameters automatically optimized in real time (kV, mA, ms) during different C-arm angulation, without need to change program or to interrupt exposure, which enables minimized dose and optimized resolution independent of C-arm angulation”."

**Answer 92:** It is acceptable.

93. Active detector size min. 17x17cm, but not more than 25x25cm with rotation in landscape/portrait position for each detector

Please accept the amendment of this technical requirementas follows “Active detector size min. 17x17cm, but not more than 25x25cm with rotation in landscape/portrait position for each detector, in case the detector is not square”, without altering the performance of the system.

Since the Contracting Authority requires a minimum size of 17x17 cm, namely a square detector, the rotation becomes redundant.

Consequently, in order to allow more operators to access this procurement procedure and taking into consideration the fact that each manufacturer has its own way of configuring and optimizing the system, therefore please kindly accept other solutions for this technical request, such as:

“Active detector size min. 17x17cm, but not more than 25x25cm with rotation in landscape/portrait position for each detector, in case the detector is not square”

**Answer 93:** It is accepted.

94. Synchronized rotation of detector and collimator in all C-arm positions in bot planes (plane A and plane B) in order to get always upright live image, usefull with radial approach

Please also accept an equivalent solution for obtaining correct image positioning for radial approach and accept the amendment of this technical requirementas follows“Synchronized rotation of detector and collimator in all C-arm positions in both planes (plane A and plane B) OR equivalent solution, useful with radial approach”, without altering the required performance level.

In terms of industry applicable standards, a biplane system supporting a frontal (head-end) floor mounted C-arm providing a motorized rotation of 120° LAO, 120° RAO, with a respective 45° cranial, 45° caudal angulation value, together with a lateral ceiling mounted C-arm which can be independently rotated and angulated to provide full caudal and cranialangulations for all LAO projections, provide sufficient positioning flexibility in order to perform all angiographic procedures, completely covering the therapeutic need of the Contracting Authority, namely all minimally invasive cardiology diagnostic and interventional procedures, in all its forms.

In order to achieve all necessary projections in cardiovascular interventional procedures, in conditions of safety and comfort for the patient and the medical staff, the angio system and its two C arms unit is built in such way that it can be subjected to rotational, angulation movements, either independently or simultaneous, in order to acquire any projection at any angulation to the patient. Thus, this system is able to perform the most demanding procedures from a positioning point of view.

With regard to the matter at hand, namely, simple access to the patient during catheter interventions, the system we would like to offer fully enables it. The C-arms’s and the table’s geometrical movements and pivoting, together with a wide C-arm depth, will grant easy and safe access to all desired arterial/venous access points, for all kinds of patients, including radial, by pivoting the table.

Moreover, taking into consideration the explanation at point 51 regarding the detector’s rotation, we reiterate this becomes redundant in case of a square detector.

Consequently, in order to allow more operators to access this procurement procedure, please kindly accept the amendment of this technical requirement in „Synchronized rotation of detector and collimator in all C-arm positions in both planes (plane A and plane B) OR equivalent solution, useful with radial approach” without altering the required performance level."

**Answer 94**: It is accepted.

95. Image storage capacity min. 100.000 images, 1024 x 1024 pixels, 12 bits

Please also accept a biplane angiography system having the possibility to store a minimum of 100.000 images at size of 1024 x 1024 , at 10 bits.

We appreciate that the difference between the requested value and the value offered by the system we are proposing is technically and clinically irrelevant. An image stored at a 1024 x 1024 matrix at 10 bits will not at all alter the image information and the diagnostic quality.

Consequently, in order to allow more operators to access this procurement procedure, please kindly accept the amendment of this technical requirement in „Image storage capacity min. 100.000 images, 1024 x 1024 pixels, 10 bits” without altering the required performance level."

**Answer 95:** It is acceptable to offer Image storage capacity min. 100.000 images, 1024 x 1024 pixels, 10 bits.

96. PART 1

System must have all available features for offered model for dose reduction with improved image quality at the same time (CARE&CLEAR, DOSEWISE&CLARITY IQ or eqv.)

In your Bidding Documents, you defined under item 72 that the system needs to have all possibilities for dose-reduction by mentioning Philips trademarks.

As the official and sole authorized distributor of Philips products in the Republic of Serbia, we point out that you incorrectly labeled and requested two different products, namely the common dose reduction function and image enhancement, as well as an additional incorrectly named product from a potential bidder offered by Philips. DoseWise & Clarity IQ does not exist as a product but the following already exists:

- Common dose reduction and image quality enhancement feature - Dose & Wise which is similar to or the same as the common dose reduction features from other manufacturers such as requested. Care&Clear. These common features are found in the system CoreBlock and form an integral part thereof. As such, they are comparable and give approximately the same results.

- Clarity IQ - a separate product, that is, technology that does not have an equivalent on the market of the Republic of Serbia

In this case, you defined that the potential bidder offering Philips products, in addition to its common dose reduction feature (Dose & Wise), needs to offer Clarity IQ technology that is not a radiation dose reduction function without loss in image quality. We herewith highlight that by your requirement you defined Clarity IQ technology. Clarity IQ technology is a registered name of the manufacturer whose we are sole agents and distributors in the Republic of Serbia. As such, we emphasize that Clarity IQ technology is a unique technology that significantly reduces dose per patient while maintaining the same or better image quality in the field of diagnostic coronary angiography for PCI, EP and other interventions. The results and effectiveness of Clarity IQ technology have been proven by multiple independent clinical studies with live patients as well as in the field of pediatric cardiology. Please find attached the manufacturer's statement once again.

Clarity IQ is a complex technology incorporating software and hardware components that allows for dose reduction and image processing on a larger scale. The hardware component provides the much greater computing power required to maintain compound and complex real-time image processing.

**Answer 96:** It is not acceptable. Purchaser request is clear and precise so every Bidder can prepare valid offer. Offered system must have ALL available features for offered model for dose reduction with improved image quality at the same time, whci means ALL features must be included no matter if they are standard or optional with some manufacturers. In bracket Purchaser just announced market names of some of manufacturer in order to make this request more clear to all potential Bidders, so if offered system is manufactured by Philips than DOSEWISE&CLARITY IQ features have to be offered, if offered system is manufactuured by Siemens than Care&Clear features have to be offered, so same logic for other manufacturers. Operator needs to have ALL available features provided by manufacturer for offered model in order that chosen system can be used in most safe way regarding care about patient dose with highest possible image quality. It is not scientificly validated or approved that any of the manufacturers features is set as reference level for others and every manufacturer claims that with their all available features, they can lower the dose 70-80% compare to previous technologies. Also, all relevant studies made worlwide were done exactly with systems that include technologies which are clearly indicated in bracket from different manufacturers.

97. QUESTION PART 2

In its Bidding Documents, the Contracting Authority predicted that there was an equivalent to Clarity IQ technology with the common dose reduction feature - Dose&Wise, more precisely defined common dose reduction features of other manufacturer (Care+Clear) as equivalent to the product we represent. Clarity IQ technology is a registered name of the manufacturer whose we are sole agent and distributor in the Republic of Serbia. As such, we emphasize that Clarity IQ technology is a unique technology that significantly reduces dose per patient while maintaining the same or better image quality in the field of diagnostic coronary angiography for PCI, EP and other cardiac interventions. The results and effectiveness of Clarity IQ technology have been proven by multiple independent clinical studies with live patients. On the other hand, our manufacturer has common dose reduction features also possessed by other angiographic device manufacturers - Dose&Wise. Attached please find a study showing a comparison chart of common dose reduction features from different manufacturers - common features are Dose&Wise for the manufacturer we represent, Care+Clear for another manufacturer. We emphasize that our manufacturer on all their products i.e. angiographic rooms has common dose reduction functions with the same or better image quality as other angiographic room manufacturers - in our manufacturer's products this segment, more precisely common available dose reduction functions with retention of the same or better image quality is called Dose&Wise. Common options such as Dose&Wise or Care+Clear from another manufacturer are integral to the angiographic devices that different manufacturers have in their portfolio, they are integral to the ""core block"" or more precisely of devices, and they are delivered independently of other options that are possible, such C-arch, patient station, or acquisition station are supplied. Therefore, it is not possible to deliver an angiography device without common dose reduction features, as for the products of our manufacturer it is not possible to deliver Azurion angiography room without Dose&Wise dose reduction feature with the retention of the same or better image quality. In other words, your definition - Clarity IQ & DoseWise, Care + Clear, or equivalent third-party technology - discriminates against our manufacturer to offer an additional Clarity IQ product, while giving other manufacturers the ability to offer common dose reduction features. Also, in your definition you specify equivalent third-party technologies, and on this occasion, we emphasize that Dose&Wise is equivalent to Care+Clear defined technology or a common technology of other manufacturer. In order to specify your request and the possibility of offering an adequate, i.e. required equivalent technology that you defined by your request, please specify your requirement as follows:

**Answer 97**: It is not acceptable. Same answer like for Question 96. PART 1.

98. PART 3

The system needs to have all available manufacturer's radiation dose reduction features without losing image quality or at the same time enhancing image quality for a device model that meets the Contracting Authority's minimum technical specification (Care+Clear or Dose&Wise or equivalent technology of other manufacturer). Bidders need to clearly state and indicate what features have been offered and included in the bid, as well as provide evidence of fulfillment of the above requirements in the manner stipulated by the Contracting Authority in the Bidding Documents.""

Otherwise, you are discriminating against potential bidders because you are equating common dose reduction features with advanced Philips-Clarity IQ technology that does not have an equivalent solution among other manufacturers. The discrimination in this case is performed in a way that we are the only one, as official distributors of a particular manufacturer, forced to offer an additional product with the required common dose reduction features and maintain the same level of image quality (Dose & Wise), while other bidders have no obligation to offer an additional product. We believe that this is destroying equality between potential participants and preventing the offering of an equivalent solution to indicated technologies of other manufacturers. In case you do not accept our request, please answer the following question: Can we, as representatives of Philips exclusively distributing Clarity IQ technology, offer equivalent radiation dose reduction features without losing image quality while improving image quality for a device model that fulfills the Contracting Authority's minimum technical specification to the requested Care+Clear system, with the submission of appropriate studies proving this?"

**Answer 98:** It is not acceptable. Same answer like for question 96. PART 1.

100. (2) two monitors min. 19`` in control room and display provided on Large monitor in examination room

Please consider to allow following definition:

97 One monitor min. 19`` in control room and display provided on Large monitor in examination room

For hemodynamic parameters in control room its more that enough one monitor.

**Answer 100**: It is acceptable to offer One monitor min. 19`` in control room and display provided on Large monitor in examination room.

**1.6, Defibrillator with pacemaker option**

101. "1.In your Bidding Documents, lot 1., item 1.6, option 5 The Contracting Authority defined the following:

„Battery capacity of min. 150 shocks with a maximum energy or 3.5 h of ECG monitoring“

Since defibrillators are rarely used at full capacity, the required technical specification is defined with the aim of restricting competition. Is it acceptable to the Contracting Authority to modify the said item to:

„Battery capacity of min. 100 shocks with a maximum energy or 2.5 h of ECG monitoring“

which does not deviate significantly from what is required, and allows the participation of more bidders of branded equipment.

**Answer 101:** It is not acceptable. It is significantly deviation. The higher battery capacity allows higher number of the patients per one charging and less numbers of chargings over time.

102. In your Bidding Documents, lot 1., item 1.6, option 9, the Contracting Authority defined the following:

„Thermo printer uses paper min. 70 mm width“

Since the paper width is negligible and in no way affects the diagnostics, is it acceptable to the Contracting Authority to modify the said item to:

„Thermo printer uses paper min. 50 mm width“

which does not deviate significantly from what is required, and allows the participation of more bidders of branded equipment.

**Answer 102:** It is not acceptable. It is significant deviation. Wider paper allows more and better visibility of printing patient data.

103. In your Bidding Documents, lot 1., item 1.6, option 11 the Contracting Authority defined the following:

„Integrated device memory for a minimum of 12 hours of ECG or 500 events“

As each device has the ability to print the results, therefore results are usually inserted into the patient's file, then such a high requirement is aimed at preventing other bidder from offering their equipment. Is it acceptable to the Contracting Authority to modify the said item to:

„Integrated device memory for a minimum of 8 hours of ECG or 50 events“

which allows the participation of more bidders of branded equipment.

**Answer 103:** It is partially acceptable. It is significant deviation. The larger memory allows higher number of patient exams to be stored and less numbers of chargings over time. The change will be made through Amendment.

104. In your Bidding Documents, lot 1., item 1.6, option 12, the Contracting Authority defined the following:

„The complete device software must be in Serbian“

Since English is widely used in modern devices and in the field of healthcare English is the language used in all studies, education, technology, such a defined requirement only limits competitiveness. Is it acceptable to the Contracting Authority to modify the said item to:

„The complete device software must be in Serbian or in English“

**Answer 104:** It is acceptable. This specification is changed and now states: „The complete device software must be in Serbian or in English“

**1.7 Hospital Defibrillator**

105.In your Bidding Documents, lot 1., item 1.7, option 5, the Contracting Authority defined the following:

„Battery capacity of min. 150 shocks with a maximum energy or 3.5 h of ECG monitoring“

Since defibrillators are rarely used at full capacity, the required technical specification is defined with the aim of restricting competition. Is it acceptable to the Contracting Authority to modify the said item to:

„Battery capacity of min. 100 shocks with a maximum energy or 2.5 h of ECG monitoring“

which does not deviate significantly from what is required, and allows the participation of more bidders of branded equipment."

**Answer 105**: It is not acceptable. It is significant deviation. The higher battery capacity allows higher number of the patients per one charging and less numbers of chargings over time.

106.In your Bidding Documents, lot 1., item 1.7, option 9 The Contracting Authority defined the following:

„Thermo printer uses paper min. 70 mm width“

Since the paper width is negligible and in no way affects the diagnostics, is it acceptable to the Contracting Authority to modify the said item to:

„Thermo printer uses paper min. 50 mm width“

which does not deviate significantly from what is required, and allows the participation of more bidders of branded equipment.

**Answer 106:** It is not acceptable. It is significant deviation. Wider paper allows more and better visibility of printing patient data.

107.In your Bidding Documents, lot 1., item 1.7, option 11, the Contracting Authority defined the following:

„Integrated device memory for a minimum of 12 hours of ECG or 500 events“

As each device has the ability to print the results, therefore results are usually inserted into the patient's file, then such a high requirement is aimed at preventing other bidder from offering their equipment. Is it acceptable to the Contracting Authority to modify the said item to:

„Integrated device memory for a minimum of 8 hours of ECG or 50 events“

which allows the participation of more bidders of branded equipment.

**Answer 107:** It is not acceptable. It is significant deviation. The larger memory allows higher number of patient exams to be stored and less numbers of chargings over time. The change will be made through Amendment.

108.In your Bidding Documents, lot 1., item 1.7, option 12 The Contracting Authority defined the following:

„The complete device software must be in Serbian“

Since English is widely used in modern devices and in the field of healthcare English is the language used in all studies, education, technology, such a defined requirement only limits competitiveness. Is it acceptable to the Contracting Authority to modify the said item to:

„The complete device software must be in Serbian or in English“"

**Answer 108:** It is acceptable. This specification is changed and now states: „The complete device software must be in Serbian or in English“

**4.4.1 Radiography Fluoroscopy system with dynamic Flat Panel Detector for diagnostic MSK procedures**

109.In your Bidding Documents, for lot 4, ID 4.4.1, for item 3 you defined the following:

“ Frequency: min. 100 kHz”

Please clarify if you accept following definition:

Frequency min. 100 kHz or “appropriate” technology which reduce soft radiation?

Please note that Philips unique technology for RF system reduce completely soft radiation using following:

- IQX technology, Intelligent Exposure Control, IQX tehnology highlights are:

• Short exposure times eliminates motion blur

• Exposure times are kept within an application-dependent customizable time range. This ensures that every single image is correctly exposed and free from motion blur, even with rapidly changing density

• Automatic kV-optimization

• Automatically adjusts the settings, relative to the standard kV-value. Thus the settings are optimized for the actual object density and the needs of the examination.

• Fast, in-pulse adaptation to (changes in) density, kV-adjustment takes place within the first millisecond of the exposure, enabling adaptation to sudden changes in object density (e.g. during dynamic studies)

• Controlling range: customizable from -15 kV relative to a defined start value up to 125 kV

**Answer 109:** Specification will be amended as follows:

Frequency: min. 50 kHz

110. In your Bidding Documents, for lot 4, ID 4.4.1, you defined the following: mA range for pulsed fluoroscopy: 0,5-20 mA or more

Is it acceptable for the Contracting Authority to modify the requirement to: mA range for pulsed fluoroscopy: 0,5-20 mA in tolerance of lower limit of (+/- 1mA) or more. Please note that the upper limits of the exposure parameter are far more significant for the performances and capabilities of the device itself, while minimum values ​​are virtually never used. The system we intend to offer has three times the range and an upper limit than required ones. Allowing a deviation of only 1 mA will certainly not affect the functionality of the device, while the participation by more bidders will be allowed. Please modify your requirement to:

mA range for pulsed fluoroscopy: 0,5-(+/- 1mA) - 20 mA or more

**Answer 110**: It is acceptable, Purchaser has already made changes to technical specification published in Clarification no. 2, Answer Nr. 10 issued on January 28, 2020.

111. In your Bidding Documents, for lot 4, ID 4.4.1, for item 14 you defined the following: Dual focus: small focal spot max 0.7 mm and big focal spot min. 1.0 mm

Is it acceptable for the Contracting Authority to modify the requirement to: Dual focus: small focal spot max 0.7 mm and big focal spot min. 0,8 mm. Smaller values ​​of greater focus more accurately represent the imaged anatomy, better image quality of the imaged anatomy is achieved, and in fluoroscopic procedures has far greater application and advantage. By changing this requirement, the Contracting Authority will not lose out on the quality or functionality of the device itself, whereas greater competition in the procedure will be allowed."

**Answer 111**: It is not acceptable. Big focal spot is mainly used in radiography procedure of larger anatomies or for obese patients where power of X-ray beam is most important factor. More the bigger is focal spot means more power delivered to the patient during radiography.

112. In your Bidding Documents, for lot 4, ID 4.4.1, for item 21 you defined the following: Height adjustable patient table with lowest position (distance to floor) of 50 cm

Is it acceptable for the Contracting Authority to modify the requirement to: Height adjustable patient table with lowest position (distance to floor) of 50 cm (+/-15 cm)

A 15 cm difference does not have any clinical justification because the positioning of the patients difficult to move and with trauma involves their transfer from a wheelchair, stretcher or mobile table to the patient table of a fluoroscopic device. On the other hand, the characteristic defined in this way is eliminatory and there is no clinical study to prove and justify that the minimum height of the patient table is exactly 50 cm or lower.

**Answer 112:** It is not acceptable. Lowest possible table height enables patient more comfort when they have to stand up or sit on table by themselves, because they can sit on table with their legs on floor. Higher table height means for small patients they have to jump for lowest table height or need assistance from stuff to be stable. Also, end user or emergency help service have stretchers and tables of different heights so flexibility in height is of most important for comfort work with patients.

113.In your Bidding Documents, for lot 4, ID 4.4.1, for item 26 you defined the following: Automatic collimator with permanent filtration min. 1 mm Al and with additional filtration min. 0.1, 0.2 and 0.3 mm Cu

Is it acceptable for the Contracting Authority to modify the requirement to: Automatic collimator with permanent filtration min. 1 mm Al and with additional filtration min. 0.1 and 0,2 mm Cu or 0,3 mm Cu, since there is no clinical justification for such a requirement?

**Answer 113:** It is not acceptable. Al filter is inherent filtration and it is always in the X-ray beam. Purpose of Cu additional prefilters in the X-ray beam is to filter out low energy radiation which does not have any influence on image quality, but have huge impact on patient dose. Furthermore, it is clinical and operator objective need to have selection of more Cu filtration levels according to always maximize image quality while minimizing patient entrance dose. The increased filter thickness will lead to lower patient dose.The thinner the patient, the more copper is inserted into the beam ‒ resulting in a lower patient entrance dose by filtering out low energy radiation.

114. In your Bidding Documents, for lot 4, ID 4.4.1, for item 45 you defined the following: Digital pulsed fluoroscopy: min. 1024 x 1024, 12 bits with min. 30 fps, with ability of fps selection.

 Is it acceptable for the Contracting Authority to modify the requirement to:

„ Digital pulsed fluoroscopy or other enhanced image quality and dose management technique: min. 1024 x 1024, 12 bits with min. 30 fps, with ability of fps selection”

**Answer 114:** It is not acceptable. Digital pulsed fluoroscopy is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

115. In your Bidding Documents, for lot 4, ID 4.4.1, for item 47 you defined the following: Virtual collimation function (non exposure collimation on LIH)

Is it acceptable for the Contracting Authority to modify the requirement to:

Virtual collimation function (non exposure collimation on LIH) or Automatic Collimation with SID compensation, microprocessor controlled or “appropriate”

**Answer 115**: It is not acceptable. Digital pulsed fluoroscopy is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

116. In your Bidding Documents, for lot 4, ID 4.4.1, for item 47 you defined the following: HDD capacity: min. 10.000 images in 1024x1024 matrix, 12 bits

Is it acceptable for the Contracting Authority to modify the requirement to:

HDD capacity: min. 10.000 images in 1024x1024 matrix, 12 bits or Image storage capacity 800 GB (800.000.000 KB), 1024 x 1024 matrix or “appropriate”.

We kindly inform Contracting Authority that requested PACS system Customer plan to purchase trough the same Lot."

**Answer 116:** It is not acceptable. Number of images in certain format is well known and clear terminology in radiology society and there is no other appropriate request.

**4.4.2 Radiography Fluoroscopy system with dynamic Flat Panel Detector for interventional and diagnostic abdominal and urology procedures**

117.In your Bidding Documents, for lot 4, ID 4.4.2, for item 3 you defined the following:

“ Maximum inverter frequency: min. 50 kHz”

Please clarify if you accept following definition:

Maximum inverter frequency: min. 50 kHz or “appropriate” technology which reduce soft radiation?

Please note that Philips unique technology for RF system reduce completely soft radiation using following:

- IQX technology, Intelligent Exposure Control, IQX tehnology highlights are:

• Short exposure times eliminates motion blur

• Exposure times are kept within an application-dependent customizable time range. This ensures that every single image is correctly exposed and free from motion blur, even with rapidly changing density

• Automatic kV-optimization

• Automatically adjusts the settings, relative to the standard kV-value. Thus the settings are optimized for the actual object density and the needs of the examination.

• Fast, in-pulse adaptation to (changes in) density, kV-adjustment takes place within the first millisecond of the exposure, enabling adaptation to sudden changes in object density (e.g. during dynamic studies)

• Controlling range: customizable from -15 kV relative to a defined start value up to 125 kV

**Answer 117:** It is not acceptable. Frequency of the HV generator determine time to reach request kV value from starting point. More frequency menas less time to reach it, which means less unnessery lower energy radiation in X-ray beam. AEC, shortest exposure time and automatic setting of kV/mA values are already requested in technical specification beside frequency, so they cannot be defined as apprporiate technology.

118. In your Bidding Documents, for lot 4, ID 4.4.1, you defined for point 20 following:

“Maximum table load in horizontal position: min. 300 kg”

 Is it acceptable for the Contracting Authority to modify the requirement to:

“Maximum table load in horizontal position: min. 300 kg or Maximum table load in any position: min. 280 kg”

**Answer 118**: It is acceptable.

119.In your Bidding Documents, for lot 4, ID 4.4.1, for item 21 you defined the following: Lowest table plate height: min. 47 cm

Is it acceptable for the Contracting Authority to modify the requirement to: Lowest table plate height: min. 47 cm (+/-18 cm)

A 18 cm difference does not have any clinical justification because the positioning of the patients difficult to move and with trauma involves their transfer from a wheelchair, stretcher or mobile table to the patient table of a fluoroscopic device. On the other hand, the characteristic defined in this way is eliminatory and there is no clinical study to prove and justify that the minimum height of the patient table is exactly 47 cm or lower."

**Answer 119.:** It is partially acceptable. Lowest possible table height enables patient more comfort when they have to stand up or sit on table by themselves, because they can sit on table with their legs on floor. Higher table height means for small patients they have to jump for lowest table height or need assistance from stuff to be stable. Also, end user or emergency help service have stretchers and tables of different heights so flexibility in height is of most important for comfort work with patients. Small variation will be acceptable, so the specification will be amended as follows:

Lowest table plate height: min. 50 cm

120. In your Bidding Documents, for lot 4, ID 4.4.2, for item 26 you defined the following: min. 150 cm/sec

We kindly ask Contracting Authority to explain this requirement or confirm typo mistake.

**Answer 120**: It is type mistake, Purchaser has already made changes to technical specification published in Clarification no. 1, answer on question Nr. 7 issued on January 20, 2020.

121. In your Bidding Documents, for lot 4, ID 4.4.2, for item 34 you defined the following: Digital motorized tomography in selected table tilt angle.

 Is it acceptable for the Contracting Authority to modify the requirement to:

„Digital motorized tomography or digital motorized fluoroscopy in selected table tilt angle”

**Answer 121**: It is not acceptable. Digital tomography is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

122. In your Bidding Documents, for lot 4, ID 4.4.2, for item 45 you defined the following: Pixel pitch: max. 140 μm

Is it acceptable for the Contracting Authority to modify the requirement to:

Pixel pitch: max. 140 μm (tolerance +/- 8 μm)”

**Answer 122.:** It is acceptable to offer Pixel pitch: max. 150 μm

123. In your Bidding Documents, for lot 4, ID 4.4.2, for item 55 you defined the following: HDD capacity: min. 10.000 images in 1024x1024 matrix, 12 bits

Is it acceptable for the Contracting Authority to modify the requirement to :

HDD capacity: min. 10.000 images in 1024x1024 matrix, 12 bits or Image storage capacity 800 GB (800.000.000 KB), 1024 x 1024 matrix or “appropriate”.

We kindly inform Contracting Authority that requested PACS system Customer plan to purchase trough the same Lot.

**Answer 123:** It is not acceptable. Number of images in certain format is well known and clear terminology in radiology society and there is no other appropriate request.

124. In your Bidding Documents, for lot 4, ID 4.4.2, for item 51 you defined the following:

Digital pulse fluoroscopy: min. 15 fps in matrix of min. 1024x1024, 12 bit and the biggest field of view

Is it acceptable for the Contracting Authority to modify the requirement to :

Digital pulse fluoroscopy: min. 15 fps in matrix of min. 1024x1024, 12 bit and the biggest field of view or “appropriate” technology which improves image quality with lower dose. "

**Answer 124:** It is not acceptable. Digital pulsed fluoroscopy is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

125. In your Bidding Documents, for lot 4, ID 4.4.2, for item 53 you defined the following:

Digital acquisition: min. matrix 1024x1024, 12 bit at the biggest field of view

Is it acceptable for the Contracting Authority to modify the requirement to :

Digital acquisition: min. matrix 1024x1024, 12 bit at the biggest field of view or “appropriate” technology which improves image quality with lower dose.

**Answer 125:** It is not acceptable. Digital acquisition is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

126. In your Bidding Documents, for lot 4, ID 4.4.2, for item 54 you defined the following:

Digital serial acquisition: min. matrix 1024x1024, 12 bit, 7,5 fps at the biggest field of view

 Is it acceptable for the Contracting Authority to modify the requirement to :

Digital serial acquisition: min. matrix 1024x1024, 12 bit, 7,5 fps at the biggest field of view or “appropriate” technology which improves image quality with lower dose.

**Answer 126:** It is not acceptable. Digital serial acquisition is unique terminology in radiology society and there is no other eqvivalent technique to requested one.

127. In your Bidding Documents, for lot 4, ID 4.4.2, for item 67 you defined the following:

Application „IMAGE STICHING“ for enabling of seamless merging of more radiographic images of long anatomic structures into one continuous image (spine, peripheral bones and blood vessels)

We kindly ask the Contracting Authority to remove the required application as it significantly restricts competition and does not represent common advanced option of radiofluoroscopic devices. Namely, the Image Stitching application is most commonly used in orthopedics, specifically for radiographic rather than radioscopic studies. We assume that the Contracting Authority made a mistake and, within the radiofluoroscopic device intended for urology, actually asked for this requirement under item 4.3. (point 6.4.)

Once again, the Image Stitching application is used exclusively in MSK procedures (radiographic procedures) and is used in orthopedics."

**Answer 127:** This request will be removed from technical specification.

128. In your Bidding Documents, for lot 4, ID 4.4.2, for item 67 you defined the following:

Application “THOMOSYNTHESIS” for acquiring of digital multilayered tomography images of different slice thickness in serial acquisition from different angles, using CT image reconstruction algorithm.

We kindly ask the Contracting Authority to remove the required application as it significantly restricts competition and does not represent common advanced option of radiofluoroscopic devices. THOMOSYNTHESIS is an option that was practiced with fluoroscopic devices before the appearance of multislice CT Systems. Nowadays, these applications that help tomographic studies from several (four or five) projections are completely abandoned, primarily due to high radiation doses and the small amount of information obtained - with modern computed tomography systems you get much more information with significantly lower doses, which in particular plays a significant role in the pediatric institutions to which the subject equipment is intended.

For all the aforementioned, please remove your requirement from the Bidding Documents, especially since you have also planned to purchase the CT System.

**Answer 128:** This request will be removed from technical specification.

129. In your Bidding Documents, for lot 4, ID 4.4.2, for item 72 you defined the following: Possibility of printing various types of films: 35x43 cm; 35x35 cm; 26x36 cm; 25x30 cm; 20x25 cm;

Is it acceptable for the Contracting Authority to offer 11x14 inch or 28x35 cm films instead of 26x36 cm films, since the 26x36 cm film size is used solely by one manufacturer? Different manufacturers use different units of measure. These are two approximate film sizes, they are used for the same purpose, and the only difference is that the manufacturers have defined the size in different units of measure.

**Answer 129:** It is acceptable to offer 26x36 cm or 28x35 cm film size.

130.In your Bidding Documents, for lot 4, ID 4.4.2, for item 73 you defined the following: Processing capacity at least 80 sheets/hour size 35x43 cm

Is it acceptable for the Contracting Authority to modify the requirement to: Processing capacity at least 70 sheets/hour size 35x43 cm? By modifying this requirement you would not lose out on the functionality of the device you purchase, whereas more bidders would be allowed to submit adequate bids."

**Answer 130:** It is acceptable to offer Processing capacity at least 70 sheets/hour size 35x43 cm.

**4.3 Fixed Radiography system with Wireless Flat Panel Detectors - Ceiling mounted**

131. In your Bidding Documents you defined the following under item 1.4:

„1.4. Time range min. 0,01-10 sec. In steps“

 In practice, radiographic exposures last up to 1 second, depending on the exposure parameters. Anything beyond that increases the dose received, may cause the image to blur due to patient movement, etc. Simply for radiographic exposures, a 10-second exposure duration is absolutely unjustified and generally represents an eliminatory parameter. Please modify your requirement to

„1.4. Time range min. 0,01-6 sec in steps“

**Answer 131** : It is acceptable. The specification will be amended.

132. In your Bidding Documents, for lot 4, ID 4.3, under item 3.2 you defined the following: Translation X(Longitudinal) min. 4000mm x Y(Lateral) min 3000mm x Z(Vertical) min. 1800 mm

Is it acceptable for the Contracting Authority to modify the requirement to: Translation X(Longitudinal) min. 4000mm x Y(Lateral) min 3000mm x Z(Vertical) min. 1600 mm. This modification, with the movement of the patient table, will enable all types of imaging, with more bidders able to submit acceptable bids.

**Answer 132**: It is accepted. The specification will be amended.

133.In your Bidding Documents, for lot 4, ID 4.3, under item 3.6 you defined the following: Multi functional Touch Screen Display min 12 inch

Is it acceptable for the Contracting Authority to modify this requirement to: Multifunctional Touch Screen Display min 10 inch? With this minimal modification, you would not lose out on the functionality of the device being the subject matter of the public procurement whereas you will allow more bidders to prepare adequate bids.

**Answer 133**: It is accepted. The specification will be amended.

134.In your Bidding Documents, for lot 4, ID 4.3, under item 3.8 you defined the following: Detector tilting motorized min. range: -30/+90

Is it acceptable for the Contracting Authority to modify the requirement to: Detector tilting motorized min. range: -20/+90? With this minimal modification, you would not lose out on the functionality of the device being the subject matter of the public procurement whereas you will allow more bidders to prepare adequate bids.

**Answer 134**: It is accepted.

135. In your Bidding Documents, for lot 4, ID 4.3, under item 4.2 you defined the following: Max patient Weight (kg): min. 350 kg

Is it acceptable for the Contracting Authority to modify the requirement to: Max patient Weight (kg): min. 270 kg. All human patients can be imaged on a patient table with load capacity of 270 kg. By lowering this requirement, the Contracting Authority will not lose out on functionality, especially given that it is a pediatric institution.

**Answer 135**: It is accepted.

136.In your Bidding Documents, for lot 4, ID 4.3, under item 4.3 you defined the following: Up and Down range: 550-900mm

Is it acceptable for the Contracting Authority to modify the requirement to: Up and Down range: 530-860mm? The most important parameter for tables with vertical movement is the lowest table height. Especially in pediatric facilities where patients are short and may have difficulty climbing the patient table. With the modification we propose, the minimum table height would remain unchanged, while the maximum table height would be lowered to allow greater competitiveness in the process."

**Answer 136:** It is acceptable. The Minimum requested range is 550- 850mm or wider.

137.In your Bidding Documents, for lot 4, ID 4.3, under item 4.5 you defined the following: Transverse movement range: min ± 140 mm

Is it acceptable for the Contracting Authority to modify the requirement to: Transverse movement range: min ± 130 mm? Since the subject matter of the public procurement is a radiographic device with a ceiling-mounted tube stand that has significantly greater capacity of the positioning of the tube itself, modification of this requirement will not affect the functionality of the device and therefore all types of imaging will still be enabled.

**Answer 137:** It is accepted.

138.In your Bidding Documents you defined the following under item 4.6:

"Longitudinal tracking of detector with longitudinal travel and rotation of tube“

Considering that the longitudinal movement of the detector cannot exceed 20 cm in the patient desk, or that the required movement does not cover most of the imaging regions without patient moving and repositioning, whereas the only tracking that makes sense for maintaining a constant SID is vertical tracking of the detector and X-ray tube, for the purpose of the competitiveness in the subject procedure, we recommend that you should redefine your requirement to:

 4.6. „Longitudinal tracking of detector with longitudinal travel and rotation of tube or vertical tracking of detector with RTG tube“

**Answer 138:** It is not accepted. Longitudinal tracking is requested on Patient table and Vertical wall stand. Stitching examinations are requested too (e.g. long bone).

139.In your Bidding Documents, for lot 4, ID 4.3, under item 4.8 you defined the following: Wireless foot switch

Is it acceptable for the Contracting Authority to remove this requirement from the Bidding Documents? Given that the X-ray technician certainly needs to be next to the patient when positioning, manufacturers usually integrate foot switches with the table itself.

**Answer 139:** It is acceptable wireless or wired footswitch. This function enables table positioning away from table.

140. In your Bidding Documents, under item 4.17 as well as item 4,26 you defined DQE ( Detective Quantum Efficiency) of min. 70% i.e. min. 75%. Since all manufacturers define this factor as a percentage amount at 0 or at 1 or more lp / mm, please define this factor for the required characteristics as follows:

Detective Quantum Efficiency (DQE) min. 70% (tolerance +/-6%) at 0 lp/mm

**Answer 140:** It is not accepted. High efficiency detector is requested because of same image quality with lower dose.

141.In your Bidding Documents, for lot 4, ID 4.3, under item 4.20 you defined the following: Effective area dimensions: min. 42.5x42.5 cm

Is it acceptable for the Contracting Authority to modify this requirement to: Effective area dimensions: min. 42.5x42.5 cm (+/- 1%)? If you were to allow only 1 percent deviation, you would certainly not lose out on the functionality of the device being the subject matter of this procurement, while you would greater competition in the process.

**Answer 141**: It is accepted.

142.In your Bidding Documents, for lot 4, ID 4.3, under item 5.6 you defined the following: Anatomical Programmed Radiography (APR matching, x-ray conditions, mechanical position, image processing parameters, markers) enabling dose optimization

Is it acceptable for the Contracting Authority to modify the requirement to: Anatomical Programmed Radiography (APR matching, x-ray conditions, image processing parameters, markers) enabling dose optimization. This modification would leave the required dose optimization functionality unchanged, while more bidders would be able to offer their solutions."

**Answer 142:** It is accepted.

143.In your Bidding Documents, for lot 4, ID 4.3, under item 6.1 you defined the following: FPD angle measurement is available on THU display for free exams.

Is it acceptable for the Contracting Authority to remove this requirement from the Bidding Documents?

**Answer 143:** It is acceptable.

144.In your Bidding Documents, for lot 4, ID 4.3, under item 6.4 you defined the following: Stitching imaging: single image of complete anatomy (spine and long bones) is provided by synchronized automated movement of tube and detector

Is it acceptable for the Contracting Authority to modify the requirement to: Stitching imaging? This modification of the requirement would give you the functionality you need, but without limiting competition in the way it has to be met. Different manufacturers have differently defined the ways in which their devices perform Image stitching, but at each one the result is almost identical."

**Answer 144 :**It is not accepted. Advanced functionality for the Stitching is requested.

**ID 4.5, Mobile radiography digital system with 2 FPD (Flat Panel Detectors)**

145.In your Bidding Documents, for lot 4, ID 4.5, under item 4 you defined the following: Maximum current value, min. 450 mA

Is it acceptable for the Contracting Authority to modify the requirement to: Maximum current value, min. 400 mA. Current is only one of the acquisition parameters that affects the total dose. The dose is also affected by other defined exposure parameters. As in the subject procedure the equipment is procured for a pediatric institution, the maximum mA required parameters will not be achieved because the required image quality is achieved by a combination of exposure time, mA and kV (exposure parameters), and in this case there is no justification for asking for the maximum mA value of min. 450 mA. In this case, there is no justification because there are manufacturers who have a much wider range of kV (parameters) or a much stronger generator, and can achieve the same image quality with a different combination of exposure parameters. Please reduce your requirement to 400 mA in order to allow competition in the procedure.

**Answer 145:** It is accepted.

146. In your Bidding Documents, for lot 4, ID 4.5, under item 6 you defined the following: Minimum exposure time 1 ms

Is it acceptable for the Contracting Authority to modify the requirement to: Minimum exposure time 2 ms? Lowering this requirement by only 1 ms (one thousandth of a second) will not affect the functionality and clinical usability of the device, whereas more bidders will be able to submit the adequate bids.

**Answer 146**: It is not accepted, due to low dose management requirements.

147.In your Bidding Documents, for lot 4, ID 4.5, under item 42 you defined the following: Image preview in max 3 seconds after exposure

Is it acceptable for the Contracting Authority to modify the requirement to: Image preview in max 4 seconds after exposure. A 1 s difference will not significantly affect the speed of the device itself. Considering the time a mobile radiography device takes to reach the patient, then to position the wireless flat panel detector, position the patient, and perform the imaging itself, we see that 1 second of a longer wait for the Image preview is negligible. Also, the image preview function does not provide a diagnostic image but only a preview of an image that is incomplete and has no true diagnostic value.

**Answer147:** It is accepted.

148.In your Bidding Documents, for lot 4, ID 4.5, under item 56 you defined the following: Buttons for fine movement of the system back/forward on front side of collimator or on arm, next to X-ray tube, for easy and faster tube positioning, without need to go in front of the system.

Is it acceptable for the Contracting Authority to remove this requirement from the technical specification? After parking the mobile radiographic device, moving the tube itself allows fine positioning without any need for additional movement of the device. This requirement has no clinical purpose and is a technique that is not standardized or applicable to mobile X-ray systems. This definition is eliminatory because it is a description of a technology of one manufacturer - the functionality obtained by this technology is also achievable in the above described manner, and we believe that specially positioned buttons for positioning the device exclude competition and make no additional, clinically proven contribution to everyday work. "

**Answer 148**: It is not accepted. The Functionality is efficient in small intensive care tight spaces where precise positioning near hospital beds is requested.

149. In your Bidding Documents, for lot 4, ID 4.5, under item 57 you defined the following: Distance from focal spot to floor in vertical direction, in range of min 500 – 2100 mm.

Is it acceptable for the Contracting Authority to modify this requirement to: Distance from focal spot to floor in vertical direction, in range of min 700 – 2000 mm. In digital motorized systems, the realization of a particular imaging position is influenced not only by the range of the SID in the vertical direction, but also by the length of the telescopic arm, the various rotations of the tube and tube stand and the like. Therefore, insisting on only one parameter, without considering the possibility of combining other parameters on patient positioning, represents an eliminatory parameter that aims to discriminate and restrict competition. Please harmonize your technical requirement with our proposal, bearing in mind that the length of the telescopic arm is not even defined, while some of the required rotations are in a larger range than required ones.

**Answer 149**: Better access to patient is requested. It is acceptable the variation of 20%.

150. In your Bidding Documents, for lot 4, ID 4.5, under item 59 you defined the following: X-ray tube rotation around arm min +/- 150º

Is it acceptable for the Contracting Authority to modify the requirement to: X-ray tube rotation around arm min +/- 150ºor X-ray tube rotation around arm in min range:300º? In this way, the Contracting Authority would retain exactly the same functionality as the total rotation is the same, but would allow the devices to be offered where the manufacturers have differently determined the possibility of rotation by the directions. Different manufacturers define their functionality differently, and the originally defined requirement makes it impossible to offer mobile digital radiography devices that may have a larger range of tube rotation around the arm.

**Answer 150**: It is accepted.

151. In your Bidding Documents, for lot 4, ID 4.5, under item 60 you defined the following: X-ray tube rotation around vertical axes min 90°/-20°

Is it acceptable for the Contracting Authority to modify the requirement to: X-ray tube rotation around vertical axes min 90°/-10°. Changing this requirement would still allow all types of imaging, the functionality of the device would remain unchanged while allowing competition in the subject procedure. Note that this type of rotation, as well as the positioning capabilities of the device, are not the only way to position the device for imaging.

**Answer 151**: It is accepted.

152.In your Bidding Documents, for lot 4, ID 4.5, under item 61 you defined the following: System weight max 400 kg

Is it acceptable for the Contracting Authority to modify the requirement to: System weight max 600 kg. Since a motorized motion-based mobile radiographic system is requested, the weight of the device itself is of no significance. The device has an electric motor drive, and no additional force is required. Also, by inspecting the premises of the Contracting Authority, it was found that the entire radiology is on the ground floor while the load-carrying capacity of the lifts as well as the ceiling load-carrying capacity of the Institute are sufficient for the weight of the device of 600 kg or more. "

**Answer 152**: It is acceptable variation up to 10% of requested. Transport with elevator is planned.

153.

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**Answer 153.** It is accepted.

154. As a potential Bidder, we are hereby asking for clarification of the Bidding Documentation. Questions are following: 1) For Lot No. 9 - Laboratory, Item 70 - Fully automated urine analyser, Point 7. – Is it acceptable that the parameters „Mucus and WBC Clumps“ are defined as semiquantitative analysis? Characterics of these semiquantitative analysis will not affect the reliability of the analysis and results, and above all its diagnostic value.

 For Lot No. 9 - Laboratory, Item 70 - Fully automated urine analyser, Point 9. – Do you find appropriate the linearity characteristics as follows: Linearity: RBC: 2.0-10 000.0/µl, NL RBC: 2.0- 10 000.0 /µl, WBC: 1.0- 10 000.0 /µl, WBC Clumps: 1.0- 10 000.0, EC: 1.5- 200.0 /µl, Sqam. EC: 1.0-200.0/µl, Non Sec: 1.5-200.0/µl, Tran EC: 1.5-200.0/µl, Rtec: 1.5-200.0/µl, CAST: 1.00-30.00/µl, Hy CAST:1.00-30.00/µl, Path CAST:1.00-30.00/µl, BACT: 5.00-10 000.0/µl, XTal: 10.0-200.0/µl, YLC: 35.0-200.0/µl, SPERM: 50.0-200.0/µl, MUCUS: 1.00-30.00. The abovementioned value of the linearity will not affect the measurement quality, reliability of the analysis and results, and above all its diagnostic value. Please do clarify the abovementioned, in a manner of providing the appropriate Bid

**Answer 154**. It is acceptable.

155. "GE Healthcare can provide a volume CT Scanner system with a digital tilt technology protocols that can be selected prospectively, which allows images to be reconstructed at a specified tilt angle. This capability, combined with organ dose modulation

and tilted head holder accessory for the patient allows for reducing the dose to sensitive organs such as the eyes while also reducing dental artifacts.

Can you please confirm that a deviation on the requirement will be accepted – Tilting technology Physical or Digital.

**Answer155 :** It is acceptable.

156.Taking into consideration the average European population weight and the patients weight that are expected at Mother and Child Institute Belgrade, minimal requirement of 300kg table load capacity exceeds the regular requirements.
Providing a table with a maximum load capacity of 227kg will be sufficient to handle patient load and eventually additional respiratory, life care equipment.
Can you please confirm that a deviation on the requirement will be accepted – Patient couch maximum load capacity at least 227 kg

**Answer 156.** It is acceptable.

157. In term of a long term storage, as a redundant and proven solution is archiving images on a PACS server, which is requested on the lase Lot of the tender with an archive storage capacity at least 6TB (1.25 million non-compressed images in 512x512 pixel matrix)
GE Healthcare can provide a volume CT Scanner system with a console image storage capacity of 700,000 non-compressed images in 512x512 pixel matrix.
Can you please confirm that a deviation on the requirement will be accepted – On-line storage capacity at least 700,000 non-compressed images in 512x512 pixel matrix

**Answer 157.** It is acceptable.

Public Procurement Committee