



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

**GLOBAL TENDER NOTIFICATION  
(Through e-procurement portal only)**

The Director, NIMHANS invites tender from eligible tenderers through the Karnataka Government E-Procurement portal for supply of following **EQUIPMENT**.

Sl. No.	Name of the Item	Quantity (in Nos.)	EMD (in ₹)
1.	<b>MOBILE NEURONAVIGATION ON BUYBACK BASIS</b>	01	<b>2,00,000/-</b>

**Tender Schedule**

<b>Downloading of Tender documents from website - <a href="https://eproc.karnataka.gov.in/eportal/index.seam">https://eproc.karnataka.gov.in/eportal/index.seam</a></b>	From 04.01.2020 Onwards
<b>Last date for tender enquiry</b>	17.01.2020 upto 11:00 AM
<b>Tender submission last date and time</b>	27.01.2020 upto 11:00 AM
<b>Technical bid will be opened online by the authorized officer on</b>	28.01.2020 at 11:00 AM

Sd/-,  
Director

**TENDER DOCUMENT**  
**Terms and conditions**

1. The bid documents for the above item should be addressed to “The Director, National Institute of Mental Health & Neuro Sciences, Post Box No. 2900, Hosur Road, Bengaluru – 560 029, Karnataka, India” and should be uploaded in E Procurement portal only on or before the due date.
2. The TENDER BID should be valid for **four months** from the due date. **NIMHANS, Bengaluru will not take any responsibility for any technical issues.**
3. **Earnest Money Deposit (EMD):**
  - 3.1. The (EMD) shall be denominated in Indian Rupees [₹] and should be paid in the E-PROCUREMENT PORTAL as per the facility provided.
  - 3.2. The EMD shall not bear any interest and will be refunded to
    - a. successful tenderer on receipt of Agreement and Bank Guarantee.
    - b. unsuccessful tenderer upon finalization of tender bid and award of tender to successful bidder.
    - c. all the tenderers if the tendered item is cancelled or retendered.
4. The tender documents and all correspondence’s relating to the bid should be in **English language only.**



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

5. Technical bid should comprise of (uploaded copy of documents should be self attested, stamped and better quality – preferably .PDF format) -
- 5.1 Brochure/Catalogue and Data sheet of the equipment.
  - 5.2 Technical Compliance Statement
  - 5.3 Proprietary certificate from the manufacturer mentioning the unique technology or feature/s mentioned apart from the brand name (If applicable).
  - 5.4 Pre requirements required at the installation site (Before submitting the bid, the tenderer should make pre-visit to the installation site and indicate the requirement along with the price bid wherever necessary)
  - 5.5 Delivery Period of the item to be supplied and Time required for installation from the date of purchase order has to be indicated.
  - 5.6 List of Institutes where the equipment has been supplied with copy of purchase orders.
  - 5.7 Copy of GST, PAN, TIN document
  - 5.8 Whether tenderer is manufacturer / accredited agent / sole representative, indicate details of principal's name & address. The offers of tenderer who are not manufacturer or direct authorized agent will be summarily rejected. Sub- distributors will not be accepted.
  - 5.9 Non – blacklisting certification that the firm has not been blacklisted in the past by any government/Private institution and certification for No Vigilance/CBI case pending against the firm/supplier by making an affidavit on non – judicial stamp paper of ₹100/-.
  - 5.10 Declaration towards acceptance of all terms and conditions should also be provided.
6. Financial Bid should comprise of-
- 6.1. **Quotation should be only for DAP i.e. NIMHANS Door Delivery Price inclusive of main equipment cost, each article wise/spares rates, taxes, other Government levies, Customs duty, any local agency commission, transportation, delivery of the equipment to the Institute premises, installation and commissioning, etc.** with a detailed break up mentioning manufacturers name, License number and name of the brand/make. Tender bids without price bid/quotation will be rejected. **CMC COST SHOULD BE QUOTED IN INR ONLY.**  
**Detailed breakup of the cost should be provided under icon “Action column” by clicking the % symbol which will be mentioned as Added statutory components.**
  - 6.2. The tenderer should also quote 5 years CMC cost for the post warranty period in INR under Action column in E procurement portal but CMC cost will not be considered for successful tenderer decision.
    - 6.2.1 In case of Import, Customs Duty will be considered only at 5.50% of the total Purchase order value and the required Customs clearance documents will be provided by NIMHANS on prior intimation (atleast 5 working days prior intimation) of shipment along with details and relevant documents from the supplier.
    - 6.2.2 If the tenderer is quoting in Indian Rupees (INR) for items NOT MANUFACTURING IN INDIA (NMIC), the CUSTOM DUTY EXEMPTION



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

CERTIFICATE WILL NOT BE ISSUED BY THE INSTITUTE. The Rate quoted should be inclusive of Custom duty & other incidental charges.

7. Successful tenderer decision will be made on the basis of **total cost of the equipment (Inclusive of all miscellaneous charges as mentioned in Clause 6.1) + 5 years CMC cost for the post warranty period (i.e. for 6<sup>TH</sup> to 10<sup>th</sup> year).**
8. The cost of the “**MOBILE NEURONAVIGATION ON BUYBACK BASIS**” will be freed for 1 Year from the date of purchase order; however Institute reserves the right to procure/reject the purchase of equipment with the successful tenderer on repeat order basis within 1 year from the date of purchase order.
9. The tender bids (technical and price bid) should be typewritten; every correction in the tender should be initialed along with seal by the tenderer, failing which the tender will be rejected. All pages of the bid submitted must be signed along with seal and sequentially numbered by the tenderer.
10. **Evaluation of Bids:-**

The technical bid of the tenderer will be evaluated to determine whether

  - a. They are complete with respect to specifications.
  - b. They are free from computational errors.
  - c. The requisite documents have been submitted and properly signed.
11. **Tender Opening:**
  - a. The Technical bids will be unlocked through E procurement portal in the Committee Room, Adjacent to Registrar Chamber, NIMHANS, Bengaluru on the date specified in presence of tenderers or their representatives who choose to attend.

The Tenderers' or representatives who are present shall submit authorization letter along with copy of Photo id proof and shall sign a register evidencing their attendance.
  - b. The Financial bid of the technically qualified tenderer/s only will be opened on a notified date.
12. Equipment and its accessories should be covered with **minimum warranty period of 5 years** for normal or regular wear & tear from the date of complete installation (Ready to use in all respects). In case of software's, the validity of the license key should be clearly mentioned and should have user define provision with option to switch over from one system to other system of the same kind within the validity period.
13. Supply of spares should be guaranteed for a minimum period of 10 years from the date of supply or from the date of cessation of production of the model for 10 years, whichever is later, at the rates prevailing against payment.
14. Any modification or revision of bids after submission will not be entertained under any circumstances. Conditions such as “subject to the availability of stocks”, supplies will be made as and when supplies received from the principles etc., will not be considered under any circumstances.



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

15. A tenderer having once given a tender bid shall not withdraw it after its acceptance/opening and if does, the EMD paid by the tenderer will be forfeited and the tenderer is liable to make good the loss sustained.
16. If required, the tenderer should demonstrate the quoted model of the equipment at the institute during the technical evaluation, failing which their bid/offer shall be rejected. The tenderer will be intimated that they should get ready for demonstration. No request for extending time for demonstration will be entertained. Failure to demonstrate, their offer will be rejected.
17. The tenderer should supply the circuit diagram and instruction manual of the tendered equipment/s at the time of supply of the equipment.
18. Necessary training / instructions on operation of the system should be given by the qualified engineers of the tenderer firm to NIMHANS technical staff/s at free of cost after completion of the installation.
19. The successful tenderer should immediately submit an acceptance letter duly signed and sealed for the rate/s and offers agreed by both the parties to the Head of the Institution within reasonable time on receipt of the Purchase Order (Agreement Specimen will be enclosed with Purchase order & Stamp duty to be paid by the tenderer). The successful tenderer should also furnish a Bank guarantee only from a Nationalized bank to the extent of 10% of the total purchase order value, valid for 60 days beyond the completion of the warranty period of the equipment, no split period bank guarantee will be entertained.  
In the event of the successful tenderer failed to supply the item/execute the agreement/submit the Bank Guarantee the EMD deposited by them shall stands forfeited.

**20. Payment terms:**

- 21.1 Payment (NEFT / RTGS / Wire transfer / LC) will be made only after good working condition of the equipment certified by the end user. **NO ADVANCE PAYMENT WILL BE ENTERTAINED.**
- 21.2 In case of foreign payments made by Letter of Credit (LC) or wire transfer, bank incidental charges within India will be borne by the Institute and outside India should be borne by tenderer.
- 21.3 Any amendment or extension of LC sought by the tenderer thereafter should be borne by the tenderer.

**21. Uptime Guarantee:**

Penalty Clause for non-functioning of equipment in term of hardship to the patients and financial loss to institute: 95% up time of 365 days (24 hours a day) that is from the day of successful handing over of the whole complex. The company takes the responsibility for the functioning of all the components and equipment, including the third party items supplied and included in the project. The total downtime annually for any reason/involvement of any of the components cannot exceed 5% (all inclusive). Subsequently if downtime exceeds 5% of 365 days, 1% of PO Value will be levied as penalty for every 24 hours of downtime until 7 days from the day of breakdown. If downtime exceeds 7 days the penalty will be 2% of PO Value from the date on



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

- which the equipment broke down beyond 5% permissible downtime. In addition to this, warranty period will be extended at double the rate of the downtime period.
22. If, at any time, during the said period, the supplier reduce the said prices of such Materials/Equipment or sales such Materials/Equipment to any other person/organization/ Institution at a price lower than the chargeable, the company shall forthwith notify such reduction or sale to the Director, NIMHANS and the price payable for the Materials supplied after the date of coming into force of such reduction or sale shall stand correspondingly reduced.
  23. The losses to NIMHANS, Bengaluru, if any incurred on account of purchase made elsewhere by failure, neglect or refusal on the part of the tenderer to supply according to the terms of agreement will be recovered from them. If any article or things supplied by the tenderer have been partially or wholly used or consumed in the hospital and they are subsequently found to be in bad condition, unsound, inferior in quality or description, not in accordance with samples or otherwise faulty or unit for use, the wholesome of the contract price or price of such articles or things will be recovered from the tenderer. The tenderer will not be entitled for any payment whatsoever, for such articles for infringements of the stipulation of the conditions or for justifiable reasons the contract may be terminated by the Director and the tenderer shall be liable for losses sustained by the NIMHANS on the consequences of the termination which may be recovered from the EMD/Bank Guarantee or from their invoices due to them. In the event of such amount being insufficient, the balance will be recovered personally from the tenderer.
  24. Any corrections/changes in the tender will be uploaded as corrigendum in the NIMHANS and E procurement websites only.
  25. If the tender last/opening date falls on any general/government/institute holiday(s), then the successive dates will be postponed by equivalent days of holiday(s), however the time remains unchanged.
  26. The Director reserves the right of ordering/not ordering/cancelling/increase or decrease the quantity and to reject any or all tender quotations without assigning any reason. The decision of the Director, NIMHANS, Bengaluru, shall be final in all the controversies that may arise in the matter. Any dispute arising out of this will be subject to the jurisdiction of the Court in Bengaluru.
  27. Failure to adhere any of the above terms and conditions the bid(s) may be rejected and EMD may be forfeited.
  28. None of the terms and conditions of the supplier shall be applicable to the purchase contemplated hereunder, irrespective of it being attached to any documents to be provided to NIMHANS. Such exercise shall have no meaning and binding effect unless the same is accepted by NIMHANS in writing.

**NOTE: Please keep checking the NIMHANS and E-Procurement websites regularly for any further updates.**

**Sd/-,**  
**Director**



**DECLARATION**  
**(TO BE GIVEN BY THE TENDERER)**

Name of the Item : **MOBILE NEURONAVIGATION ON BUYBACK BASIS**  
Name of the company : .....

To

The Director,  
National Institute of Mental Health & Neurosciences  
(Institute of National Importance)  
Post Box No. 2900,  
Hosur Road, Bengaluru – 560 029

Dear Sir,

1. I/We hereby submit my/our tender for the .....
2. I/We have made requisite payment against EMD as per the tender document vide reference No. & date ....., else my tender bid may be rejected.
3. I/We have gone through all terms and conditions of the tender documents before submitting the same.
4. I/We hereby agree to all the terms and conditions, stipulated by the NIMHANS, in this connection including delivery, warranty, penalty etc. Quotations for each group are being submitted and shall be considered on their face value.
5. I/We undertake to sign the contract/agreement, if required, within reasonable time from the date of issue of the letter of acceptance, failing which our/my security money deposited may be forfeited and our/my name may be removed from the list of suppliers at the NIMHANS, Bengaluru.

**NOTE: ALL TERMS & CONDITIONS SUCH AS TAXES/LEVIES ETC, HAS BEEN INDICATED IN THE QUOTATIONS FAILING WHICH IT WILL BE PRESUMED THAT THE RATES ARE INCLUSIVE OF ALL TAXES/LEVIES AND OTHER TERMS AND CONDITIONS ARE ALSO AS PER YOUR REQUIREMENTS.**

Yours faithfully,

Signature of Tenderer & seal



**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

**CHECK LIST  
(TO BE FILLED BY THE TENDERER)**

1	Name & Address of the Tenderer																																								
2	Name & Address Of the Manufacturer																																								
3	Name of the Equipment & Model Quoted	<b>MOBILE NEURONAVIGATION ON BUYBACK BASIS</b>																																							
4	Validity of the Quotation	<b>Four months from the due date</b>																																							
5	a. Delivery Period b. <b>Warranty Period</b> c. Installation Period	<b>5 years</b>																																							
6	Tender Bid details (Yes or No against each item)	<table border="1" style="width: 100%;"> <tr><td>a.</td><td>Application Fee submitted</td><td></td></tr> <tr><td>b.</td><td>EMD submitted</td><td></td></tr> <tr><td>c.</td><td>Brochure/Catalogue uploaded</td><td></td></tr> <tr><td>d.</td><td>Technical Compliance Statement</td><td></td></tr> <tr><td>e.</td><td>Manufacturer Proprietary certificate uploaded</td><td></td></tr> <tr><td>f.</td><td>Pre requirements details uploaded</td><td></td></tr> <tr><td>g.</td><td>List of users uploaded</td><td></td></tr> <tr><td>h.</td><td>Copy of GST/PAN/TIN &amp; Bank details uploaded</td><td></td></tr> <tr><td>i.</td><td>Distributor authorization letter uploaded</td><td></td></tr> <tr><td>j.</td><td>Non-blacklisting certification uploaded</td><td></td></tr> <tr><td>k.</td><td>Declaration enclosed</td><td></td></tr> <tr><td>l.</td><td>Equipment Door delivery cost quoted</td><td></td></tr> <tr><td>m.</td><td>AMC &amp; <b>CMC cost for 5 years post warranty period</b></td><td></td></tr> </table>	a.	Application Fee submitted		b.	EMD submitted		c.	Brochure/Catalogue uploaded		d.	Technical Compliance Statement		e.	Manufacturer Proprietary certificate uploaded		f.	Pre requirements details uploaded		g.	List of users uploaded		h.	Copy of GST/PAN/TIN & Bank details uploaded		i.	Distributor authorization letter uploaded		j.	Non-blacklisting certification uploaded		k.	Declaration enclosed		l.	Equipment Door delivery cost quoted		m.	AMC & <b>CMC cost for 5 years post warranty period</b>	
a.	Application Fee submitted																																								
b.	EMD submitted																																								
c.	Brochure/Catalogue uploaded																																								
d.	Technical Compliance Statement																																								
e.	Manufacturer Proprietary certificate uploaded																																								
f.	Pre requirements details uploaded																																								
g.	List of users uploaded																																								
h.	Copy of GST/PAN/TIN & Bank details uploaded																																								
i.	Distributor authorization letter uploaded																																								
j.	Non-blacklisting certification uploaded																																								
k.	Declaration enclosed																																								
l.	Equipment Door delivery cost quoted																																								
m.	AMC & <b>CMC cost for 5 years post warranty period</b>																																								
8	Training will be provided (Yes or No)																																								
9	a. Whether after sales, service is available in Bengaluru? If yes, quote b. What is the arrangement for post contract / warranty monitoring of the equipment?																																								
10	Details of the EMD Submitted (Reference no., date & bank details)																																								
11	Any Other Information (Enclose separately in letter head – Yes or No)																																								

Signature of Tenderer along with seal



## **MOBILE NEURONAVIGATION ON BUYBACK BASIS**

### **For Technical Clarifications contact:**

**Dr. Dwarakanath Srinivas, Prof & Head – Mobile: - +91-80-9480829605**

**Office Landline: +91-80-26995403/5724**

**Dept. of Neurosurgery, Faculty Building, NIMHANS, Hosur Road, Bengaluru**

**Email ID: [dwarakaneuro@yahoo.com](mailto:dwarakaneuro@yahoo.com) & [surgery.nimhans@gmail.com](mailto:surgery.nimhans@gmail.com)**

## **UPDATED TECHNICAL SPECIFICATIONS FOR MOBILE NEURONAVIGATION SYSTEM ON BUYBACK BASIS**

1. Solid-state drive - 512GB or more ample space to store examinations of patients
2. Capability of importing images from CD, DVD, PACS, USB
3. RAM - 8 GB or more for fast performance and image manipulation
4. Optical camera with large tracking volume provides flexibility in positioning and addressing line-of-sight issues
- 5. Navigation Platform:**
  - Navigation system should be easy to set up and should work under Windows/Linux/Unix operating system environment. The system should be plug n play and system software should be user friendly wizard guided to control set up, registration and navigation procedure
  - System should have Optical and advanced wireless passive marker tracking technology
  - The system should have touch-sensitive screen and could be used in sterile field. The display should be of Full HD resolution (1920X1080) with screen size of 21 Inch or more.
  - It should have Rapid data transfer directly to the navigation station with USB 3.0 port for direct data import and also have direct and seamless integration with the hospitals PACS system
  - The system must have dynamic referencing so that registration is not lost even if the camera or patient moves.
  - It should have separate mobile cart for the camera stand for flexible positioning and laser pointer for easier positioning & aiming. The mobile stand for the camera should be telescopic with pneumatic braking to take care of line of sight issues
  - It Should be HIPPA compliant including authentication, accountability log and automatic log-off features



- The navigation system should be operable without keyboard or mouse
- Optical camera should have a large tracking volume for flexibility in positioning and addressing line-of-sight issues.
- System should have RAM of 8 GB & 240GB SSD for fast performance
- System should have high end processor like i5 or equivalent with SSD 240GB, and min 2GB Graphics
- System should have feature of screenshot for documentation
- System should have video Input and output ports for external device integration e.g. Ultrasound, C-Arm and Microscope

#### **6. Electromagnetic Module**

- Software should offer electromagnetic navigation in neurosurgical procedures with a Field size of atleast 50 x 50 x 50 cms
- Software should have a interface designed for intra-operative touch screen control
- Should provide disposable wired electromagnetic standard instruments for patient registration and navigation suitable for 200 surgeries or a set of disposable instruments set for 200 surgeries should be provided
- Should have facility to integrate third party instruments-required adapter size should be for small, medium, large, extra-large, conical and for cylindrical instruments.
- The data sheet of disposables should clearly indicate the number of times it can be used and the manufacturer should provide a written undertaking to that effect as well so that the disposables are only used the actual number of times they are approved/intended to be used

#### **7. Platform Main Cart**

- 2 cart assembly to ensure optimized placement of cart and better OT management
- 2 operational medical grade Large high definition 27-inch or better touch screen monitors that provide ultimate flexibility in interacting with the system
- One-handed docking and undocking mechanism
- The Platform should be able to support Optical Navigation and Electromagnetic Technology
- The optical navigation should be based on passive marker technology

#### **8. Camera Cart**

- Updated optical camera with latest technology
- The system should have separate camera cart



## **9. Planning**

- Plan procedures when and where convenient
- Supports tumor resection, biopsy, and catheter placement procedures
- Intuitive software workflows designed for ease of use

## **10. Electromagnetic Navigation**

- The Electromagnetic Navigation Module should be able to support Cranial and ENT surgeries.
- The System should have the options of both Flat Emitter and Side Emitter to support the workflow of the surgeries

## **11. Spine Navigation –Module**

- System should offer Fluoro based spinal application with live Fluoro integration (C-arm).
- The system should use existing C-Arm integration Kit which already available in the Neurosurgery Department at NIMHANS or new C-arm for Integration kits for atleast two C-arms should be provided .Any flat panel 2D C-arm which the institution might buy in future also should be integrated
- System should be provided with Radiolucent Spine Reference Clamp to reduce artifacts in intra-operative navigated surgeries
- Software should allow Zoom, Flip, Rotate , Windowing and PAN features

## **12. Spine Software**

- Supports broad portfolio of integrated navigated instruments
- The system should at least have factory calibrated image guided jamshidi needle, factory calibrated nerve Integrated jamshidi needle and image guided factory calibrated first dilator designed specifically for image guided surgery.
- Streamlined instrument management interface
- Should be able to Navigate Powered Drill
- It should support universal auto-registration with the available 2D Imaging systems
- The system should provide an instrument calibration unit for calibrating the geometry (Length, Diameter and Shape) of any instrument provided by spine implant companies like Medtronic, Globus, Depuy synthes etc and the shape of the same has to be virtually simulated by the software on the screen. In case this is not available please provide navigated instrument for cervical, thoracic and Lumar Spine surgeries
- The system should also have the facility for Fluro based spine application with live Fluro integration (C-arm). The system should be capable of being integrated with any available 2D C-arm at the hospital irrespective of the shape and size of the C-arm intensifier. Atleast two 2D C-arm in the department has to be integrated with the system at a time irrespective of the size of the C-arm 12" or 9" and shape Flat panel or Round Bore and digital or Analog.



**13. Cranial Software**

- Supports tumor resection, biopsy, and catheter placement procedures
- Intuitive software workflows designed for ease of use
- Flexible registration techniques for use with or without fiducials
- The system should have facility to integrate with commercially available ultrasounds to calculate brain shift and depth of tumor resection intra-operatively continuously to ensure there is no or minimum inaccuracy involved due to brain shift.

**14. Frameless Biopsy**

- Frameless Biopsy
- It should have a real time tracking of biopsy needles for the biopsy procedures
- It should have Fine-adjustment for navigated frameless biopsies guided by the navigation system
- The system should be an articulating arm based and the arm should be fixed mayfield or sugita skull clamp
- It should allow precise online tracking according to the preplanned trajectory

**15. Microscope Integration –Module: Mandatory Optional Item**

- The Software should have the following features
- Navigation System should be capable of Integration with Navigation Ready latest Microscope from Leica / Zeiss

**16. Merge Software**

- Advanced image correlation algorithms and tools that provide automatic and manual image fusion of different imaging modalities such as MR, CT, O-arm, fMRI, and PET

**17. 3D Software**

- Enables advanced visualisation of structures such as tumor, cortex, bone, blood vessels, skin and MIP view, crop view etc

**18. Stereotaxy Software**

- A streamlined procedure workflow for biopsy, depth electrode, catheter, and probe placement
- Supports a variety of stereotactic frames, localizers, and ring and arc configurations to meet specific procedure needs
- Integra, CRW - CT and Luminant localizers
- Elekta Leksell Vantage & Model G - CT and MR localizers
- Inomed RM & ZD - Rev R, and Rev U localizers(Inomed has dbs which has tie up with boston scientific...)



- Standard and lateral ring and arc configurations are supported
- Flexibility through integrated tools that support both stereotactic frame-based procedures in a single solution.

#### **19. DBS Software**

- Seamless integration of complex imaging data and advanced planning and navigation.
- Supports a variety of stereotactic frames with automatic localizer detection and registration.
- Integra CRW - CT and Luminant localizers
- Elekta Leksell Vantage & Model G - CT and MR localizers
- Inomed RM & ZD - Rev R, and Rev U localizers
- Simplified AC-PC image reformatting for indirect targeting.
- Overlay a model of microelectrodes and DBS leads onto surgical plans providing visualization of lead and contacts relative to the target and surgical plan.
- Fully-integrated Automatic patient specific Multimodel preferably 3D segmentation of Basal Ganglia and should be integrated with stereotaxy planning to gain a better understanding of the relative location of structures for teaching purposes
- Seamless transfer of white matter tracts from the DTI software for visualization of all information together when planning procedures.

#### **20. DTI Software**

- General-purpose surgical planning software application that enables import of DICOM datasets, review in 2D and with 3D volume rendering, multi-modality image fusion, segmentation of structures with manual and semi-automatic tools, and export of results to a PACS or to a Navigation™ System for display at the time of surgery.
- The DTI Package performs white-matter tractography. It enables realignment of diffusion-weighted gradients if necessary, co-registration with other anatomical and functional datasets, and tensor calculations. It provides for interactive fiber-tracking with start, mid, and end regions, including arbitrarily shaped regions. All tracts can be exported to a Navigation System for display at the time of surgery.
- Fully automated DICOM DTI Data Processing including De-noising, Motion and Eddy current correction
- Region of interest based tracking using built-in simple ROI Brush
- Intuitive user interface for manual adjustment of tracking parameters and instant update of fibre tracking results
- Automatic calculation of colored fractional anisotropy (FA) and anisotropic diffusion coefficient (ADS) maps
- Support of DICOM DTI data from Siemens, Philips, GE and manufacturers using standard DICOM MR diffusion information (at least 6 and upto 256 directions)



- All tracts can be exported to a Navigation System for display at the time of surgery
- Fibre tracking software should support Brain projection views while visualisation of fibre tracts
- Conversion of results into 3D objects for export to Navigation system

## **21. SCHALTENBRAND AND WHAREN ATLAS**

- 2D / 3D Atlas to gain a better understating of the relative location of structures for teaching purposes
- Contour overlay of atlas structures in 2D views
- Interactive Talairach Grid for aligning structures to patient's anatomy
- Segmentation should be based on multiple types of MRI (T1, T2, FLAIR) images of the same patient.
- It should be based on anatomical mapping based on Synthetic Tissue Model and it should do immediate data processing upon patient selection and should have Automatic body part detection.
- Customisable list of Objects to be segmented depending on workflow and clinical protocol.
- The list of segmented objects should include Thalamus Right, Thalamus Left, STN Right, STN Left, Putamen Left, Putamen Right, Nucleus ruber Right, Nucleus ruber Left, Globus Pallidus External, Globus Pallidus Internal, Substantia Nigra Left, Substantia Right, Caudatus Right, Caudatus Left, Capsula Intema Right, Acpsula Intema Left.
- Interfaces with intraoperative imaging systems, including iMRI, iCT, C-arms to orient surgeons with 3-D images of the patients anatomy
- Tracks surgical instruments in real time, based on preoperative and intraoperative images
- Relays movements of instrumentation relative to patient anotomy via optical or electromagnetic navigation options
- Helps guide your planning and approach prior to and during surgery, allowing you to create, store, and simulate progression along one or more surgical trajectories
- Integrates with external devices like endoscopes and microscopes, Ultra sound and streaming visualization workflows

## **22. Capabilities**

- Wireless connectivity to hospital and medical devices, allowing the import and export of exams from anywhere within the hospital network

## **23. Connectivity**

- Operating system adapts to any 16:9 aspect ratio, with resolutions up to full HD 1920 x 1080 and display on multiple screens in the OR
- Digital and analog output, allowing integration



**NATIONAL INSTITUTE OF MENTAL HEALTH & NEURO SCIENCES**  
(Institute of National Importance), P.B. No. 2900, Hosur Road, Bengaluru – 560 029  
Ph: 26995923/13/5023-25/5090 E-mail: [aaos@nimhans.ac.in](mailto:aaos@nimhans.ac.in)  
Fax: 080-26571563/26564830/2121/6811 Website: [www.nimhans.ac.in/tender](http://www.nimhans.ac.in/tender)

**E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553/CALL-2 04.01.2020**

**24. Cyber security**

- The system should be HIPPA compliant

**25. The hardware and software's of the system should be FDA and CE approved**

**26. One full time man power support has to be provided by the vendor for service and application support**

**27. All available software should be quoted mandatorily**

**WARRANTY: 5 YEARS**

**COMPREHENSIVE MAINTENANCE CONTRACT [CMC]: 6<sup>TH</sup> to 10<sup>TH</sup> Year (5 Years)**