

**REQUEST FOR EXPRESSION OF INTEREST (Eoi)  
MEDICAL SIMULATION LAB FOR IMSF (ON BEHALF OF IISc)  
AT IISc CAMPUS, BANGALORE**



**Eoi DOCUMENT  
DSITC OF MEDICAL SIMULATION LAB  
No: IMSF (ON BEHALF OF IISc) /Eoi/24-25/02 – DSITC OF  
MEDICAL SIMULATION LAB**

**Director,  
IISc Medical School Foundation (on behalf of IISc)/, Bangalore  
– 560012.**

## EoI: OVERVIEW

This Expression of Interest (EoI) invites proposals for a complete turnkey solution for the establishment of a modern and advanced Simulation Lab. The solution must include the design, supply, installation, and commissioning of all major equipment, systems, and accessories required to ensure the efficient and effective operation of the Simulation Lab, meeting all relevant regulations and standards of safety, as well as operational excellence. Additionally, the turnkey solution should encompass all construction and infrastructure requirements, including civil, mechanical, electrical, and plumbing (MEP) works, HVAC systems, and architectural modifications essential to supporting the seamless functioning and training of the Simulation Lab. Proposals should demonstrate the vendor's capability to deliver a cohesive and integrated solution tailored to the needs of a modern medical education environment.

### PROJECT BRIEF:

The Proposed IMSF (On behalf of IISc) project is being constructed at Indian Institute of Science Campus, Bangalore - 560 012. The said Project is a combination of RCC and Steel Structure Building and it is 02 Basements + Ground + 9 Storeys + Helipad. Both basements are in RCC - Concrete Structure, but columns and roof framing works are in Structural Steel. The DSITC of ELV works are to be executed in coordination with all other services. The project details are listed below.

- Total number of Beds: 832 Nos.
- Type of Structure: RCC + Structural Steel.
- Total site area: 14.35 Acres.
- Total built up area: 14,67,478.62 Square feet.
- Total number of basements(B): 02
- Building overall length (outer to outer): Length 239.58mtrs x Breadth 90.41 Mtrs.
- Total height of the building: 49.85 Mtrs. (Including Helipad)
- Total number of blocks: 05 along with Core and Atrium areas etc., (A, B, C, D and E)
- Block A and Core areas (2B + GF + 03 upper floors + terrace) @ Height of 17.55 Mtrs
- Block B and Core areas (2B + GF + 09 upper floors + terrace) @ Height of 41.85 Mtrs
- Block C and Core areas (2B + GF + 09 upper floors + terrace) @ Height of 41.85 Mtrs.
- Block D (2B + GF + 07 upper floors + terrace) @ Height of 33.75 Mtrs
- Block E (GF + 05 upper floors + terrace) @ Height of 25.65 Mtrs.
- Atrium and Core areas.
- Basement 2 and 1 Parking Area – Partial areas.

At IISc, the planned infrastructure is designed to support a wide range of advanced clinical capabilities, essential for patient care, teaching, and research. This comprehensive setup will facilitate the integration of cutting-edge technologies and services across various clinical areas, ensuring optimal outcomes and fostering innovation in healthcare practices. Further details about IISc and its requirements can be accessed from:

<https://medicine.IISc.ac.in/>

### DESIGN AND PLANNING CONSIDERATIONS:

The design of the simulation lab must ensure optimal functionality while supporting academic and research activities, with full compliance to all applicable regulations and safety standards. Vendors are required to integrate essential elements such as an efficient workflow, appropriate equipment layout, and robust safety measures. The design must align with relevant national and international standards, guidelines, and accreditation requirements, while facilitating a conducive environment for teaching, learning, and research. Submissions must clearly specify the standards and guidelines applied to each aspect of the design, highlighting how the facility will support academic and research objectives.

### KEY CONSIDERATIONS INCLUDE:

- Aesthetically appealing and functional department layouts.
- Optimized workflows to enhance operational efficiency.
- Adequate electrical infrastructure to support current electrical load and accommodate future expansion.
- Proper ventilation systems to maintain air quality.
- Medical gas pipeline systems (Dedicated Gas manifold for simulation lab as applicable).
- Appropriate plumbing installations and other necessary services for the proper functioning of the department.
- Comprehensive civil works, including construction of new structural elements, flooring, wall finishes, and ceilings as applicable, ensuring the department is built to meet healthcare facility standards from the ground up.
- Vendors are expected to address these considerations in their proposals to ensure a highly functional simulation lab environment.

### SCOPE OF WORK

SN	Group	Scope of work	Scope	Remarks
1	Civil	Plain Cement Concrete	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.

2	Civil	Floor & Wall Tiles	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
3	Civil	Glass Partition	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
4	Civil	Gypsum Partition	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
5	Civil	Wall Panelling	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
6	Civil	Outer Glazing work	Client scope	
7	Civil	Outer Walls with Plastering and outside painting	Client scope	Vendor to share main Door dimension to Client as external works outside turnkey perimeter is under the scope of Client.

8	Civil	Toilet Walls	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
9	Civil	Painting	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
10	Civil	Windows	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
11	Civil	Doors	Vendor scope	If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.

12	Electrical	Electrical Work (Power Lighting, earthing etc)	Vendor scope	<p>Client will provide the main cable line to the turnkey area distribution panel. Vendor to define load requirements and cable sizes.</p> <p>If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.</p>
13	Plumbing	Plumbing work (Supply, Distribution & drain)	Vendor scope	<p>If required the turnkey vendor can take support of the contractor who is onboarded by the client for execution of work. But the turnkey vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.</p>
14	HVAC	Air Conditioning Work (Supply, Return & AHU)	Vendor scope	<p>The vendor shall provide the design and specifications for the AHU, which must meet the following requirements:</p> <ol style="list-style-type: none"> <li>1. It must be a smart AHU incorporating a heat pipe.</li> <li>2. Integrated pumps (IP online) should replace traditional two-way valves.</li> <li>3. Detailed AHU technical specifications must be included.</li> <li>4. The cooling coil should be designed per the project needs.</li> <li>5. The total AHU capacity must be specified.</li> <li>6. The GPM (gallons per minute) flow rate should be indicated.</li> <li>7. The recirculation flow rate should be detailed.</li> </ol>

				The vendor is responsible for providing the ducting design from the AHU, offering the necessary technical input, and overseeing the execution by the client's onboard contractor
15	HVAC	Exhaust point at the required places.	Client scope	The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor
16	MGPS	Medical Gas Work (Supply, Distribution)	Client scope	<p>The client shall provide an MGPS connection, as applicable, from the dedicated gas manifold to the equipment.</p> <p>The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.</p>
17	ELV	Dedicated Data boards	Vendor scope	<p>Turnkey vendor to specify required network port and locations.</p> <p>The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor</p>
18	ELV	Internet connection	Vendor scope	<p>Turnkey vendor to specify required port locations</p> <p>The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.</p>

19	Fire	Fire Detection	Client scope	<p>Vendor to recommend layout; Client to execute based on approved designs. Necessary openings in false ceiling to be provided by the vendor.</p> <p>The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor</p>
20	Fire	Fire suppression systems	Client scope	<p>Includes pipe routing and placement of sprinklers/detectors. Client to execute per approved vendor design. The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.</p>
21	Interior	Medical Furniture	Vendor scope	As applicable
22	Interior	Fixed Furniture (Cupboard etc)	Vendor scope	As applicable
23	Interior	Loose Furniture (Chair)	Vendor scope	As applicable
24	Interior	Signage	Vendor scope	As applicable
25	Interior	Workflow items	Vendor scope	As applicable
26		Others like Pneumatic chute work	Client scope	

**Note:**All approved makes will be shared by the Client for relevant items as defined in the scope.



**PROPOSAL REQUIREMENTS:**

Interested vendors must account for all aspects of the project, including packing, transportation, handling (loading, unloading, lifting, storing), scaffolding, and coordination with other contractors. Furthermore, the contractor shall provide a defects liability period of two years post-commissioning to guarantee service reliability.

**SUPPLIER ELIGIBILITY:**

1. Vendors must demonstrate experience in providing simulation lab solutions and services, with a proven track record in similar projects. Additionally, vendors must have a minimum of 3 turnkey projects.
2. Materials sourced from countries sharing land borders with India will be excluded from this Expression of Interest (EoI).
3. Vendors may partner with other suppliers to fulfil the requirements, and it is not necessary for all items to be supplied directly by the primary vendor. However, the complete responsibility of the completion of all the tasks will be that of the primary vendor.
4. Vendors must provide a complete turnkey solution as a package, ensuring all systems are integrated and operational. The organization will determine the specific requirements for a comprehensive turnkey solution, which the vendor must provide as a fully integrated solution for implementation.
5. Vendor is to have a capability for operational management of the facility.
6. Supplier should have registered office and trained engineers/Spare parts/Calibration equipment/installation reference available in Bangalore
7. Any eligible company as per Make in India-PPP (domestic bidder) may submit the EoI.

**THE REQUIREMENTS & SCOPE OF DSITC REHABILITATIONS EQUIPMENT WHICH INCLUDES, BUT NOT LIMITED TO THE FOLLOWING:**

SL.NO	Equipment list-Area wise	Details of Equipment
1	<b>Reception and waiting lobby</b>	IV Training Simulator
		Ultrasound Training Simulator
		Lumbar Puncture and Epidural Injection Trainer
		Advanced Surgical Life Support Simulator
		Critical Care Patient Simulator
		Female Pelvic Examination Trainer
2	<b>Shoe &amp; Book racks room</b>	Male Pelvic Examination Trainer
		Abdominal Examination Trainer

3	<b>Surgical Simulation Hall 1</b>	Pneumothorax and Chest Tube Insertion Trainer
		Obstetrics Simulation Trainer
		Peripherally Inserted Central Catheter (PICC) Training
		Nerve Block Training Simulator
4	<b>Surgical Simulation Hall 2</b>	Flexible Endoscopy Simulator
		Paracentesis Procedure Trainer
		Emergency Extrication Simulation
		Safe Patient Transfer Simulation
5	<b>Surgical Simulation Hall 3</b>	Extrication and Trauma Simulation Area
6	<b>Surgical Simulation Hall 4</b>	Trauma Patient Simulator with Moulage (Realistic Simulation)
		Spine Surgery Simulator
7	<b>Surgical Simulation Exam. Room -01</b>	Gastrointestinal, Urology, and Bronchoscopy Training Simulators
		Peripherally Inserted Central Catheter (PICC) Mentor
8	<b>Surgical Simulation Exam. Room -02</b>	Simulation Control System
		Surgical Procedure Training Simulator
		Obstetrics Simulation Trainer
		New-born Care Simulator
9	<b>Control room 1 (Surgical Simulation 1&amp;2)</b>	Operating Theatre Setup and Training Area
		Robotic Surgery Training Simulator
		Electroencephalography (EEG) Simulation
10	<b>ICU-Critical Care room-01</b>	Cataract Surgery Training Simulator
		Angiography Training Simulator
		Advanced Life Support (ALS) Simulator
		Paediatric Care Simulator
		Airway Management and Ventilation Trainers
		Surgical Operation Theatre Setup
		Intensive Care Unit Simulation Setup
		Medical Skills Practice Area
Operating Theatre Station		

		General Skill Training Area
		Minor Surgical Procedure Simulation Room
11	ICU-Critical Care room-02	Trauma Care and Extrication Simulation
		Resuscitation Training Area
		Pre-operative Anaesthesia Training Area
		Advanced Cardiac Life Support (ACLS) Simulator
		Infant Advanced Cardiac Life Support Simulator
		Laptop for Simulation Software
		Laparoscopy Training Simulator
		Cardiac Catheterization Lab Simulation
		Laparoscopy Training System
		Virtual Reality Medical Simulation
		Holographic Medical Training Device
		General Training Area
		12
Local Network Infrastructure Setup		
AAL Virtual Management System		
13	Resuscitation practice area	Simulation Recording and Debriefing Software Module
		AAL Gateway for Data Integration
		Cloud-Based Simulation Software
		3D Printer for Medical Simulation Models
14	Minor procedure room 1	CAD Files for Simulation Model Design
		3D Scanner for Medical Reverse Engineering
		High-Performance Computer for Medical Simulations
		AI-based Drug Screening Model
		Interactive Kiosk for Simulation Training
		Digital Media Studio for Simulation
		General Training and Simulation Areas
		IV Training Simulator
Ultrasound Training Simulator		

		Lumbar Puncture and Epidural Injection Trainer
		Advanced Surgical Life Support Simulator
		Critical Care Patient Simulator
15	<b>Control room 3 (Minor procedure room)</b>	Female Pelvic Examination Trainer
		Male Pelvic Examination Trainer
		Abdominal Examination Trainer
16	<b>Pre-anaesthesia simulation room</b>	Pneumothorax and Chest Tube Insertion Trainer
		Obstetrics Simulation Trainer
		Peripherally Inserted Central Catheter (PICC) Training
17	<b>OT room 1</b>	Nerve Block Training Simulator
		Flexible Endoscopy Simulator
		Paracentesis Procedure Trainer
		Emergency Extrication Simulation
		Safe Patient Transfer Simulation
		Extrication and Trauma Simulation Area
		Trauma Patient Simulator with Moulage (Realistic Simulation)
		Spine Surgery Simulator
		Gastrointestinal, Urology, and Bronchoscopy Training Simulators
		Peripherally Inserted Central Catheter (PICC) Mentor
		Simulation Control System
18	<b>Scrub and change room</b>	Surgical Procedure Training Simulator
19	<b>Control room 4 (OT room 1)</b>	Obstetrics Simulation Trainer
		New-born Care Simulator
		Operating Theatre Setup and Training Area
20	<b>OT room 2</b>	Robotic Surgery Training Simulator
		Electroencephalography (EEG) Simulation
		Cataract Surgery Training Simulator
		Angiography Training Simulator
		Advanced Life Support (ALS) Simulator
		Paediatric Care Simulator

		Airway Management and Ventilation Trainers
		Surgical Operation Theatre Setup
		Intensive Care Unit Simulation Setup
		Medical Skills Practice Area
		Operating Theatre Station
21	<b>Control room 5</b>	General Skill Training Area
	<b>(OT room 2)</b>	Minor Surgical Procedure Simulation Room
		Trauma Care and Extrication Simulation
22	<b>Microscopy Surgery</b>	Resuscitation Training Area
23	<b>Maternal Care</b>	Pre-operative Anaesthesia Training Area
	<b>Minor Procedure room-03</b>	Advanced Cardiac Life Support (ACLS) Simulator
		Infant Advanced Cardiac Life Support Simulator
		Laptop for Simulation Software
24	<b>Neonatal Care</b>	Laparoscopy Training Simulator
	<b>Minor Procedure room-02</b>	Cardiac Catheterization Lab Simulation
		Laparoscopy Training System
		Virtual Reality Medical Simulation
		Holographic Medical Training Device
25	<b>Patient examination room 2</b>	General Training Area
		Sub microscopic Surgical Training Simulators
		Local Network Infrastructure Setup
		AAL Virtual Management System
26	<b>Class Room (46 Pax)</b>	Simulation Recording and Debriefing Software Module
		AAL Gateway for Data Integration
		Cloud-Based Simulation Software
		3D Printer for Medical Simulation Models
		CAD Files for Simulation Model Design
		3D Scanner for Medical Reverse Engineering
27	<b>Waiting Area</b>	High-Performance Computer for Medical Simulations
		AI-based Drug Screening Model
28	<b>Virtual Simulation Hall</b>	Interactive Kiosk for Simulation Training
		Digital Media Studio for Simulation

		General Training and Simulation Areas
		IV Training Simulator
		Ultrasound Training Simulator
		Lumbar Puncture and Epidural Injection Trainer
29	<b>Deans Room</b>	Advanced Surgical Life Support Simulator
		Critical Care Patient Simulator
		Female Pelvic Examination Trainer
		Male Pelvic Examination Trainer
		Abdominal Examination Trainer
30	<b>Meeting Room- 01</b>	Pneumothorax and Chest Tube Insertion Trainer
		Obstetrics Simulation Trainer
		Peripherally Inserted Central Catheter (PICC) Training
		Nerve Block Training Simulator
		Flexible Endoscopy Simulator
31	<b>Store Room</b>	Paracentesis Procedure Trainer
		Emergency Extrication Simulation
32	<b>Pantry Area</b>	Safe Patient Transfer Simulation
		Extrication and Trauma Simulation Area
		Trauma Patient Simulator with Moulage (Realistic Simulation)
		Spine Surgery Simulator
		Gastrointestinal, Urology, and Bronchoscopy Training Simulators
33	<b>Office Lounge</b>	Peripherally Inserted Central Catheter (PICC) Mentor
		Simulation Control System
34	<b>Administrator office</b>	Surgical Procedure Training Simulator
		Obstetrics Simulation Trainer
		New-born Care Simulator
		Operating Theatre Setup and Training Area
		Robotic Surgery Training Simulator
35	<b>Clinical Simulation trauma rooms, Simulation room</b>	Electroencephalography (EEG) Simulation
		Cataract Surgery Training Simulator

		Angiography Training Simulator
		Advanced Life Support (ALS) Simulator
		Paediatric Care Simulator
		Airway Management and Ventilation Trainers
		Surgical Operation Theatre Setup
		Intensive Care Unit Simulation Setup
		Medical Skills Practice Area
		Operating Theatre Station
36	<b>Scrub room</b>	General Skill Training Area
		Minor Surgical Procedure Simulation Room
		Trauma Care and Extrication Simulation
37	<b>Debriefing room</b>	Resuscitation Training Area
		Pre-operative Anaesthesia Training Area
		Advanced Cardiac Life Support (ACLS) Simulator
38	<b>Clinical Simulation trauma rooms, Simulation room</b>	Infant Advanced Cardiac Life Support Simulator
		Laptop for Simulation Software
		Laparoscopy Training Simulator
		Cardiac Catheterization Lab Simulation
		Laparoscopy Training System
39	<b>Control Room (Clinical Simulation)</b>	Virtual Reality Medical Simulation
		Holographic Medical Training Device
		General Training Area
40	<b>Simulated Ambulance staging area &amp; extrication area</b>	Sub microscopic Surgical Training Simulators
		Local Network Infrastructure Setup
		Virtual Management System
		Simulation Recording and Debriefing Software Module
41	<b>Vertical extrication and safe transport</b>	AAL Gateway for Data Integration
		Cloud-Based Simulation Software
		3D Printer for Medical Simulation Models
		CAD Files for Simulation Model Design
		3D Scanner for Medical Reverse Engineering
42	<b>Control room and observation deck</b>	High-Performance Computer for Medical

		Simulations
		AI-based Drug Screening Model
		Interactive Kiosk for Simulation Training
43	<b>Scrub room</b>	Digital Media Studio for Simulation
		General Training and Simulation Areas
		IV Training Simulator
44	<b>Briefing/ debriefing</b>	Ultrasound Training Simulator
		Lumbar Puncture and Epidural Injection Trainer
		Advanced Surgical Life Support Simulator
45	<b>Simulation room-01</b>	Critical Care Patient Simulator
		Female Pelvic Examination Trainer
		Male Pelvic Examination Trainer
47	<b>Nursing Simulation</b>	Abdominal Examination Trainer
		Pneumothorax and Chest Tube Insertion Trainer
		Obstetrics Simulation Trainer
48	<b>Future Expansion Area</b>	

**The Conditions of EoI are the terms under which IMSF (On behalf of IISc) will receive and assess Expressions of Interest (EoI). Non-compliance with these conditions may result in the EoI being disqualified without further review.**

The EoI must include all relevant details and information requested in this document. Following the submission of the Expression of Interest (EoI), vendors who meet the initial requirements will be invited to deliver a presentation. This presentation serves as an opportunity for vendors to showcase their proposed solutions, including technical capabilities, product features, and how their offering aligns with the project’s objectives. Vendors are required to bring all their Original Equipment Manufacturer (OEM) partners to the presentation and fully demonstrate their complete potential, including all components relevant to the EoI. During the presentation, vendors should also address any questions from IMSF (On behalf of IISc), clarify details of their solution, and demonstrate the suitability of their approach. If necessary, IMSF (On behalf of IISc) will communicate any additional specifications or OEM requirements that need to be incorporated into the solution.

After the presentation phase, Selected vendors will be required to submit detailed technical bid, including comprehensive information on the technology, equipment, systems, and



services they plan to provide. The technical bid must also demonstrate compliance with the relevant global and national industry standards. If any updates or modifications are required based on discussions during the presentation, the technical bid may have to be revised as per the points raised in the discussion. Once all the technical criteria are evaluated. The vendors whose technical bid matches with the requirements of IMSF (On behalf of IISc) will be asked to submit the financial bid.

These financial bids should outline the financial aspects of their proposals, including costs for equipment, installation, support, and any other related services. The final selection will be based on a combination of technical merit and cost-effectiveness to ensure the best overall solution for IMSF (On behalf of IISc).

**The due date for submission of EoI is 20th Jan 2025.**

Enquires, and requests for further information about this RFQ, should be directed to the Contact Officer as follows:

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