## REQUEST FOR EXPRESSION OF INTEREST (EoI) DSITC OF REHABILITATION WORKS FOR IMSF (ON BEHALF OF IISc) AT IISc CAMPUS, BANGALORE



# EOI DOCUMENT DSITC OF REHABILITATION WORKS No: IMSF (ON BEHALF OF IISc) /EoI/24-25/07 – DSITC OF REHABILITATION WORKS

Director,

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

#### **Eol: OVERVIEW**

This Expression of Interest (EoI) invites proposals for a comprehensive turnkey solution to establish a state-of-the-art rehabilitation department. The solution should include all necessary equipment, systems, and infrastructure to support therapy, rehabilitation, and patient care. Proposals must address the provision of essential equipment and supplies to ensure smooth and efficient operations, while complying with relevant regulations and standards for patient safety. The turnkey solution should also encompass all construction and infrastructure requirements, including civil, mechanical, electrical, and plumbing (MEP) work and any architectural modifications to facilitate the department's operations.

A comprehensive approach will guarantee that all systems function seamlessly, and the vendor will also provide staff training on equipment usage and maintenance, as well as ongoing technical support post-installation.

#### **Key Specialties:**

- 1. Gait & Balance Rehabilitation
- 2. Neuro & MSK Rehabilitation
- 3. Cardiac Rehabilitation
- 4. Pediatric Care
- 5. Pain Management
- 6. Medical Gymnasium

#### **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 co-ordination 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 Block: 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 and commissioning of a Rehabilitation Department must focus on creating a functional, patient-centered environment that supports recovery while adhering to relevant regulations and safety standards. Vendors are expected to integrate key elements such as optimized space utilization, efficient patient and staff workflows, and robust safety protocols. This includes ensuring compliance with accessibility standards, infection control measures, and handling of medical equipment. Additionally, the design must comply with applicable national and international standards, guidelines, and accreditation requirements. Vendors are required to specify the standards and guidelines applied to each relevant aspect of the rehabilitation department's design in their submission, demonstrating a commitment to creating a safe, accessible, and effective rehabilitation environment.

#### **KEY CONSIDERATIONS INCLUDE:**

- Aesthetically appealing and functional layouts for rehabilitation.
- Optimized workflows to enhance operational efficiency.
- Adequate electrical infrastructure to support current electrical load and accommodate future expansion.
- Comprehensive safety measures, including therapy stations and emergency protocols.
- Proper ventilation systems to maintain air quality.
- Integrated patient management systems for data management, with compatibility to hospital EMR systems.
- Seamless integration of rehabilitation technologies for enhanced operation.

#### **SCOPE OF WORK**

SL. No	Group	Scope of Work	Responsibility (Vendor/Client)	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	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	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	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	Wall Paneling	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	Outer Glazing Work	Client Scope	
7	Outer Walls with Plastering and Painting	Client Scope	
8	All REHAB Doors in External Corridor Area	Client Scope	Vendor to share main Door dimension to Client as external works outside turnkey perimeter is under the scope of Client.
9	Toilet Walls	Client Scope	
10	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.
11	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.
12	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.
				Client will provide the main cable line to the turnkey area distribution panel. Vendor to define load requirements and cable sizes.  If required the turnkey vendor
13	Electrical	Power, Lighting & Earthing	Vendor Scope	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.
14	Plumbing	Water Supply, Distribution, and Drainage	Client Scope	
15	HVAC	Air Conditioning, AHU, Chilled Water Lines	Client Scope	The vendor shall provide the design and specifications for the AHU, which must meet the following requirements:  1. It must be a smart AHU incorporating a heat pipe. 2. Integrated pumps (IP online) should replace traditional two-way valves. 3. Detailed AHU technical specifications must be included. 4. The cooling coil should be designed per the project needs. 5. The total AHU capacity must be specified. 6. The GPM (gallons per minute) flow rate should be indicated.

				7. The recirculation flow rate should be detailed.
				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
16		Exhaust Points	Client Scope	The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor
				Vendor has to give location and layout. Client to ensure execution without conflicts.
17	MGPS	Medical Gas Work	Client Scope	The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor.
				Vendor to specify required network ports and locations; Client handles execution.
18	ELV	Networking and Data Boards	Client Scope	The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's onboard contractor
				Vendor to provide port and location details; Client handles execution.
19		Internet Connection	Client Scope	The vendor is responsible for providing the necessary technical input, and overseeing the execution by the client's

				onboard contractor
20		Fire Detection System	Client Scope	Vendor to recommend layout; Client to execute based on approved designs. Necessary openings in false ceiling to be provided by the vendor.  The vendor is responsible for providing the necessary
	Fire			technical input, and overseeing the execution by the client's onboard contractor
21		Fire Suppression System	Client Scope	Includes pipe routing and placement ofsprinklers/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
22		Medical Furniture	Vendor Scope	Loose medical furniture (workflow) under vendor scope.
23	Interior	Fixed Furniture (Cupboards, etc.)	Vendor Scope	As applicable
24		Loose Furniture (Chairs)	Vendor Scope	As applicable
25		Signage	Vendor Scope	As applicable
26	Others	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. Equipment manufacturers must have a presence in India for over 10 years.
- 2. Equipment sourced from countries sharing land borders with India will be excluded from this Expression of Interest (EoI).
- 3. 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 and operational package.
- 4. Suppliers should have a registered office and trained engineers, spare parts, calibration equipment, and installation references available in Bangalore.
- 5. Equipment manufacturers must demonstrate experience in providing Rehabilitation solutions and services, supported by a proven track record in similar projects.
- 6. Turnkey service providers may partner with other suppliers to fulfill 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.
- 7. Any eligible company as per Make in India-PPP (domestic bidder) may submit the Eol.

### THE REQUIREMENTS & SCOPE OF DSITC REHABILITATIONS EQUIPMENT ARE AS MENTIONED BELOW:

SL. No	SPECIALTIES	EQUIPMENT NAME	FUNCTIONALITY OF THE EQUIPMENT
1	Gait & Balance Rehabilitation	Zero/Anti-Gravity Treadmill	Anti-gravity treadmill that reduces body weight impact, used for lower limb rehabilitation.
2		Multi-directional Treadmill with Virtual Reality	Advanced gait trainer, simulates walking with Virtual Reality, and adjustable body weight support.
3		Gait treadmill with unilateral unweighing	Gait training device, assists in walking with unilateral unweighing
4		Robotic Gait Therapy Device with Pelvic Module	Robotic-assisted gait training device, helps improve walking ability in patients with neurological disorders.
5		Dynamic Balance and Fall Risk Device	Fall prevention device for assessment and training
6		Ceiling Mounted Body Unweighing System	Robotic-assisted gait training device, provides dynamic body weight support for walking therapy.
7		Mechanical Gait Trainer with Harness	Robotic gait trainer for improving walking ability in patients with neurological and orthopedic conditions.

8		Virtual Reality Rehabilitation Unit	Virtual reality system for motor and cognitive rehabilitation, provides
9		Cognitive Functional Testing Unit	engaging therapeutic activities. Sensory performance training system enhances visual and sensory processing abilities.
10		Four-Wheeler Driving Rehab System	Driving simulator for cognitive and motor rehabilitation, helps improve driving skills in patients with impairments.
11	Neuro & MSK Rehabilitation	Isokinetic System	Multifunctional strength training system with various training methods including isokinetic, isotonic, isometric, etc.
12		Early mobilization Robotic trainer	Robotic Arm for lower limb rehabilitation. Supplements the therapist's efforts by automating movement therapy. Usable right in the ICU.
13		Upper limb Rehabilitation and training system	Rehabilitation device for upper limb rehabilitation
14		Upper Limb Rehabilitation Trainer	Robotic arm rehabilitation device, aids in recovering upper limb function and strength.
15		Functional Proprioceptive Electrical Stimulation Device	Neuromuscular stimulation device, used for sensory and motor rehabilitation through vibration therapy.
16		Robot for Unilateral testing & training of lower limbs	Robotic strength training system, combines resistance training with real-time feedback for effective rehabilitation.
17		Wireless Agility training sensors	Wireless timing and training system, used for agility and reaction time improvement in sports and rehabilitation.
18	Cardiac Rehab	Recumbent Bike	Recumbent bike for cardiovascular and muscle rehabilitation, suitable for a wide range of patients.
19		Upper Body Ergometer	Cardiac stress testing system for the upper limbs, includes automatic positioning for patient convenience.
	l	Portable	Portable metabolic measurement

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		Cardiopulmonary	system, assesses cardiopulmonary
		Analysis System	function during exercise.
21		Bicycle Ergometer	Cycle ergometer for cardiopulmonary exercise testing, evaluates cardiovascular and pulmonary health.
22		Wheelchair Ergometer	Ergometer for wheelchair users, supports upper body cardiovascular training.
23		Audio-visual Augmented training with static cycle	Stationary cycle for lower limb rehabilitation, provides adjustable resistance for personalized training.
24		Cardiac Rehab Treadmill	The treadmill, designed for rehabilitation, supports various walking therapy programs.
25	Medical Gymnasium	Rehabilitation treadmill	Rehabilitation Treadmill meant for endurance and return to daily life training
26		Accessible Push Up Pull- Down Exercise Device	Strength training equipment, designed for accessibility and ease of use.
27		Accessible Biceps/Triceps Exercise Device	Strength training device for upper limbs, designed for users with mobility challenges.
28		Accessible Lat Pull Exercise Device	Upper body strength training machine, accessible design for all users.
29		Accessible Chest Press Exercise Device	Chest press machine for upper body strength training, features easy access design.
30		Accessible Abdomen/Back Exercise Device	Core strength training device, accessible for users with limited mobility.
31		Medical Leg Press Exercise Device	Lower body strength training device, suitable for rehabilitation and fitness.
32		Medical Leg Extension/Curl Exercise Device	Combines leg extension and curl exercises, designed for rehabilitation use.
33		Accessible Dip/Shrug Exercise Device	Strength training equipment for the upper body, designed for accessibility.
34		Cross Trainer	Cross trainer for cardiovascular training.
35		Stair Trainer	Climbing machine for cardiovascular

			and lower body strength training.
36		Audio-visual Augmented training with static cycle	Stationary cycle for lower limb rehabilitation, provides adjustable resistance for personalized training.
37	нвот	Hyperbaric Oxygen Therapy - HBOT	Hyperbaric oxygen therapy chamber, used for enhancing healing and recovery.
38	Pain Management	TECAR Therapy	High-frequency diathermy device, used for deep tissue healing and pain relief.
39		Pain Management Electrotherapy unit	Electrotherapy device for pain relief and muscle stimulation.
40		Complete Podiatry Unit	Plantar Pressure Assessment & Training device
41		Ultrasound Therapy Unit	Ultrasound therapy device for pain relief and promoting tissue healing.
42		Tensiomyography Device	Muscle diagnostics and profiling system, measures muscle function.
43		High Power Laser	High power laser therapy device, used for pain management and tissue repair.
44		Electromagnetic Muscle Stimulation Device	Electromagnetic Muscle stimulation device, used for enhancing muscle strength and recovery.
45		Thermography Robot	Robotic rehabilitation system, designed to deliver contact-less therapy using thermography imaging and air pressure jets
46		4 Chamber Compression Therapy Unit	Compression therapy device, used for improving circulation and reducing swelling.
47		8 Chamber Compression Therapy Unit	Compression therapy device, used for improving circulation and reducing swelling.
48		Portable Cryotherapy Device	Localized Electric cryotherapy device, used for reducing inflammation and pain.
49		Radial Shockwave Therapy Device	Shockwave therapy device for pain relief and stimulating tissue repair.
50	Pediatric Care	Virtual Reality Rehabilitation Unit (Pediatric)	Virtual reality system for motor and cognitive rehabilitation, provides engaging therapeutic activities.
51		Pediatric Rehabilitation	The treadmill, specifically designed

		Treadmill	for pediatric rehabilitation, supports walking therapy.
52		Pediatric Ergometer	Pediatric cycle ergometer for cardiovascular and muscle rehabilitation in children.
53	Gait Lab	Optical Motor movement analysis system	Optical measurement system for gait analysis, used to assess and improve walking patterns.
54	Gait & Motion Analysis	12 Camera Gait & Motion Analysis lab with Force plate	Comprehensive Biomechanics Lab for gait & motion analysis, used for assessing and improving walking and movement patterns
55	Spinal Decompression	Orthotic Spinal Decompression System	Robotic spinal rehabilitation device, assists in the recovery and strengthening of spinal muscles.
56	Medical Infra	Automated Vital checker	Measures and records vital signs automatically for quick health assessments.
57		Digital stethoscope	Amplifies and records heart and lung sound for improved diagnostic accuracy.
58		weight scale	Measures patients' weight for monitoring progress and adjusting treatment plans.
59		Hydrocollator Unit	Provides moist heat therapy to relieve pain and enhance blood flow to injuries.
60		Electrical Stimulator	Applies electrical currents to stimulate muscles, reduce pain, and promote healing
61		Medical Lifter and Standing Frame	Assists in lifting and transferring patients with limited mobility safely.
63		Bobath Bed	Allows easy positioning of patients with neurological conditions for therapeutic exercises.
64		DLOTCA Test Battery	Assesses cognitive function to tailor rehabilitation plans for neurological impairments.
65		Five Section treatment Table	Provides a versatile platform for various therapeutic activities and treatments.
66		Manual and Powered Myofascial trigger	Facilitates muscle relaxation and pain relief through targeted therapy

	Release	techniques
67	Measuring Tape	Measures body dimensions for assessments in rehabilitation and physical therapy
68	Anthropometry Kit	Assists in measuring body composition and proportions for personalized treatment planning
69	Hand held Dynamometer	Measures muscle strength to evaluate physical function and track rehabilitation progress.
70	Digital Skinfold Caliper	Measures skinfold thickness to assess body fat percentage and composition
71	Recliner Wheelchair	Provides comfort and support for patients with limited mobility during transport and rehabilitation.
73	Sit and Reach Test Box	Assesses flexibility, particularly in the lower back and hamstring areas, for functional evaluation.
74	Tilt Table	Aids in the gradual adjustment of body position, promoting orthostatic tolerance and balance training.
75	Massage Gun	Delivers targeted muscle treatment through percussive therapy to reduce tension and soreness.
76	Evacuation Wheelchair	Designed for safe patient transport during emergencies, ensuring quick evacuation.
77	Recliner Wheelchair with headrest	Offers enhanced comfort and support for patients during transport and rehabilitation.
78	X-ray View Box	Illuminates x-ray films for clear viewing, aiding in diagnostic assessments.
79	Plethysmography	Measures changes in volume within an organ or whole body, often used for cardiovascular assessments.
80	Defibrillator and Crash cart with Laryngoscope	Provides emergency resuscitation and airway management in critical situations.

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:

Contact Officer:Mrs. Dhanyasree S., Admin Executive

IISc Medical School Foundation / Office of Admin, Deans Main Building

IISc, Bangalore – 560 012

Contact No: 08022933584

Email Id:office@iiscmedicalschoolfoundation.org