Odisha Tribal Development Society (OTDS)

(An autonomous Society under the administrative control of ST & SC Development Department)

RFP No. 33 Date 22.02.2024

REQUEST FOR PROPOSAL

Sealed proposals are invited, including price offers, by the Odisha Tribal Development Society(OTDS) from reputed firms/agencies with expertise in establishment of STEM lab. This includes the Setting up of the STEM Lab, Training Resources Plan and Monitoring and Evaluation support. Interested firms/agencies may submit their bids to the CEO, Odisha Tribal Development Society, SCSTRTI Campus, CRPF Square, Bhubaneswar. They are also required to submit authenticated copies of the necessary documents as indicated in the RFP. The bid, complete in all respects, must reach Chief Executive Officer, OTDS, on or before 07.03.2024, by 5:00 PM, via Registered Post/Speed Post only.

The bids will be opened on 12.03.2024, at 4.00 PM-5.00 PM, in the presence of the members of the Selection Committee and the bidders. Incomplete proposals and proposals received after the scheduled date and time shall be rejected. The rates should be exclusive of all taxes. Detailed information is available on the Portal https://stsc.odisha.gov.in/

-/sd DIRECTOR ST cum CEO, OTDS

REQUEST FOR PROPOSAL (RFP)

ESTABLISHMENT OF STEM LABS AND EQUIPMENT FOR RESIDENTIAL INSTITUTIONS

> Odisha Tribal Development Society CRP SQUARE, BHUBANESWAR Govt. of Odisha

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DATA SHEET Name of the work: Establishment of stem labs and equipment for residential institutions.

Sl. No.	Particular	Details
1	Name of the Client	Chief Executive Officer, Odisha Tribal Development Society
2	Method of Selection	QCBS method
3	Joint venture / Consortium	Not allowed
4	Date of Issue of RFP	24.02.2024
5	Date of Pre-bid meeting	01.03.2024, 4:00 PM-5.00 PM at SCSTRTI Meeting Hall
6	Last Date and Time for submission of Bid	07.03.2024 (5:00PM) at SCSTRTI, CRP Square, Bhubaneswar-3
7	Date of opening of technical proposal	12.03.2024, 4.00 PM-5.00 PM at SCSTRTI Meeting Hall
8	Date of presentation (PPT)	14.03.2024, 11.00 AM-1.00 PM at SCSTRTI Meeting Hall
9	Date of opening of Financial Proposal	14.03.2024, 1.00 PM at SCSTRTI Meeting Hall
10	Bid Processing Fee(Non- Refundable)	Rs.5000/- (Five Thousand Rupees Only) in shape of Banker's Cheque/Demand Draft in favor of "Chief Executive Officer, Odisha Tribal Development Society" drawn in any scheduled commercial bankpayable at Bhubaneswar.
11	Earnest Money Deposit (EMD) (Refundable)	Rs. 1,00,000/- (Rupees one lakh) only
12	Address & Mode for Submission of Proposal	Address: - Chief Executive Officer, Odisha Tribal Development Society SCSTRI Campus, CRPF Square, Bhubaneswar-3. Mode of submission-Registered post / Speed postonly
13	Place of opening of Bid Proposals & PPT of theme- based design	Meeting Hall of SCSTRTI CRPF Square, Bhubaneswar

DISCLAIMER

This Request for Proposal (RFP) is issued by the CEO, Odisha Tribal Development Society (OTDS), under the ST & SC Development Department, Government of Odisha.

The information contained in this Request for Proposal (RFP) document or subsequently provided to Bidder(s), whether verbally or in documentary or in any other form, by or on behalf of Chief Executive Officer, Odisha Tribal Development Society by any of its employees is provided to bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is neither an offer nor invitation by the CEO, OTDS to the prospective bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in formulation of their applications for qualification and thus selection pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the CEO, OTDS in relation to the work/s. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require. The assumptions, assessments, statements and information contained in this RFP may not be complete, accurate, adequate or correct. Each bidder should therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this document and obtain independent advice from appropriate sources.

Information provided in this RFP to the bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Client accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Client shall have no liability to any person including any bidder under any law, statute, rules or regulations, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assumptions, assessments, statements or information contained therein or deemed to form part of this RFP or arising in any way in the selection process. The Authority also accepts no liability of any nature whether resulting from negligence or otherwise, however caused arising from reliance of any bidder upon the statements contained in this RFP. The issue of this RFP does not imply that the CEO, OTDS is bound to select and shortlist Applications. CEO, OTDS reserves the right to reject all or any of the Applications or Bids without assigning any reasons whatsoever.

The Applicant shall bear all the costs associated with or relating to the preparation and submission of its application. All such costs and expenses will remain with the bidder and the Client shall not be liable in any manner what so ever for the same or for any other costs or other expenses incurred by the bidder in preparation / submission of the proposal, regardless of the conduct or outcome of the Bidding Process.

REQUEST FOR PROPOSAL

Relevance of STEM:

With the rapid change in market trends and the nature of desirable skills in the workforce, the education sector has introduced STEM education, an acronym for well-known terms– Science, Technology, Engineering, and Mathematics. STEM education is a teaching and learning approach that primarily focuses on hands-on and problem-based learning methodology. It emphasizes developing logical and critical thinking skills by allowing students to learn and understand things from the perspective of the real world so as to equip students with the skills that are required to succeed in their respective careers whether it be in jobs, entrepreneurship, etc.

The ST & SC, M and BCW Department Odisha wants all students studying in their hostels to have exposure to STEM learning in a manner that not only instils 21st century skills in the students but also helps then connect the world around them with the concepts detailed out in their science and math textbooks. They recognize the crucial role STEM fundamentals and building a scientific temper will play in boosting their student's future career prospects.

The first step towards readying Odisha's youth for the digital age will be to address the fear of STEM-related subjects, especially Science and Mathematics, by allowing them to bring their textbooks and subsequently their imagination to life. Thus, the idea of setting up STEM Labs in hostels focused on equitable access to quality resources that help students visualize concepts in their textbook through curriculum-aligned tinkering activities, play and prototyping, with a laser focus on designing solutions for the VUCA (volatile, uncertain, complex, and ambiguous) world. The department is already setting up ICT labs in the hostels to make learning facilities available for students during and after school hours as part of the residential education program. A part of the ICT labs will also include the STEM and tinkering labs set up.

SECTION: 2 INFORMATION TO THE BIDDER

Eligibility and Evaluation Criteria:

Bidders should confirm to the eligibility criteria given below and must produce the required supportive documents /information as indicated against each as part of the technical proposal. If the Bidder does not meet the following eligibility criteria, their bid will not be considered for technical evaluation.

Sl	Eligibility Criteria	Documents to be annexed
1.	Submission of 'EMD of INR 1 Lakhs in the form	Original DD/Chq in favour of
	of DD (inserted in the sealed envelope	Chief Executive Officer, Odisha
	containing the 'Technical Bid') & deposit of bid	Tribal Development Society,
	processing fees of Rs 5000/- (Non- Refundable)	Bhubaneswar SCSTRTI Campus,
		CRP Square, Bhubaneswar
2.	The bidder should be registered under	Copy of certificate of incorporation/
	Companies Act or any other Association having	partnership deed/ proprietor
	certain legal identity.	Registration Document/Trust
		Deed/Society Registration
		Certificate or any other relevant
		certificates
		with registration number
3.	The bidder should have experience of	Work orders/Contract
	establishing STEM lab/ Implementing the STEM	Document/Completion of Work
	education or Similar nature of project/program	Certificates from the previous
	for Government of India/ Government of	Clients.
	State/PSUs/Autonomous Bodies/Federations of	
	Industries etc. during the past 03 (Three)	
	financial years.	
4.	The bidder should have a minimum average	• Audited Financial Statements of
	annual turnover of Rs.50 lakhs from the	current and last FY((2021-22,
	establishing STEM lab and implementing the	2022-23 & 2023-24) duly
	program in last three financial years (2021-22,	certified by Chartered
	2022-23 & 2023-24).	Accountant.
		• Tax audit Report of the relevant
		period
5.	The bidder should have a dedicated Core Team of	CV & Detail works done by the team
	three members with minimum 2 years of	members.
	experience in executing similar nature of job	
	required to be deployed for the assignment.	
6.	The bidder must have valid GST registration	GST certificate copy and PAN card
	and holder of permanent Account No. (PAN)	copy must be enclosed. Also, the
		bidder has to submit the monthly
		return copy (GSTR-1 & 3B) of last
		quarter of the FY 2023-24, Income
		tax return
7.	The bidder should not be blacklisted by	Bidder must furnish undertaking to
	Central or State Government	this effect

Documents needs to be submitted along with Technical Proposal (Part-A):

The bidders have to furnish the following documents duly signed along with their Technical Proposal:

- Filled in Bid Submission Check List.
- Covering letter on bidder's letter head requesting to participate in the tender process.
- Bid Processing Fee & EMD as applicable.
- Copy of Certificate of Incorporation/Registration/Trade License
- Copy of PAN
- Copy of Goods and Services Tax Identification Number (GSTIN) & last deposit challan.
- Copies of IT Return for the last two assessment years.
- General Details of the Bidder
- Financial Details of the bidder along with all the supportive documents such as Balance Sheet & Income/Expenditure/Statement duly signed as per the instruction.
- List of completed assignments of similar nature
- Self-Declaration regarding Conflict of Interest
- Undertaking for not having been black-listed by any Central/State Government/Any other autonomous bodies/International & National Organization in the recent past.

NB: Bidders should submit the supporting documents mentioned as above. Bids of agencies not conforming to the eligibility criteria listed above will be summarily rejected. Submission of forged documents will also result in rejection of the bid.

1. Bid Processing Fee:

The bidder must furnish as part of technical proposal, the required bid processing fee amounting to Rs.5000/- (Five Thousand Rupees) only in shape of DD/Banker's Cheque from any scheduled commercial bank in favour of "Chief Executive Officer, Odisha Tribal Development Society" payable at Bhubaneswar. Proposals received without bid processing fee will be rejected.

2. Earnest Money Deposit (EMD):

Earnest Money Deposit (EMD) for this shall be Rs.1,00,000/- (Rupees One Lakh) only in the form of Demand Draft drawn on any schedule bank payable in favour of "Chief Executive Officer, Odisha Tribal Development Society", Bhubaneswar. The EMD in the form of Demand Draft shall be submitted in the envelope marked as Technical Bid. Bid without the EMD shall be liable to the rejection of the Bid.

3. Pre-Bid Meeting:

A Pre-Bid meeting will be organized to address the queries relating to the overall selection process and scope of the work. The Pre-Bid meeting will be held on 01.03.2024 at 4.00 PM in the Meeting Hall of SCSTRTI, CRPF Square, Bhubaneswar. The client will address the queries submitted by the bidders. Representatives (Maximum 2 member from each bidder) with due authorization letter are allowed to attend the meeting. The Bidders must obtain for themselves on their own responsibility and act own expenses all the information after the visiting the school and ascertaining for themselves the school, location surroundings, area, access to site, applicable laws and regulation or any other matter considered relevant for submission of the proposal.

4. Submission of Proposal:

Bidders must submit their proposals by Registered Post/Speed Post only to the specified address on or before the last date and time for submission of proposals as mentioned in Bidder Data Sheet. The Client will not be responsible for postal delay / any consequence in receiving of the proposal. Any proposal received after the deadline will be rejected outright.

The Procedure for submission of the proposal is described below:

- I. Technical Proposal: The envelope containing the filled in technical proposal forms shall be sealed and superscribed **"Technical Proposal – Selection of Agency for establishment of STEM labs in 422 residential institutions"** and be furnished inside one envelope.
- II. Financial Proposal: The envelope containing financial proposal, shall be sealed and superscripted "Financial Proposal – Selection of Agency for establishment of STEM labs in 422 residential institutions". The duly filled-in Financial Proposal Submission Forms should contain the detailed price offer for the proposed assignment in the prescribed format and have to be furnished inside one envelope.

The "Technical Proposal" and "Financial Proposal" must be submitted in separate sealed envelopes (with respective marking in bold letters) along with the prescribed formats/information mentioned in the RFP Document. The first envelope must be marked as "TECHNICAL PROPOSAL" (NAME OF THE ASSIGNMENT)" and the second envelope must be marked as "FINANCIAL PROPOSAL (NAME OF THE ASSIGNMENT). All above envelopes have to be sealed and placed inside a third & main envelope with proper labeling of following information in bold:

NAME OF THE ASSIGNMENT: - ESTABLISHING THE STEM LAB FOR 422 RESIDENTIAL INSTITUTIONS AMONG THE STUDENTS OF ST AND SC DEVELOPMENT, MINORITIES AND BACKWARD CLASSES WELFARE DEPARTMENT, ODISHAFOR CLASSES VI, VII & VIII.

RFP NO. DATE:

DATE OF SUBMISSION OF BID: -NAME AND ADDRESS OF THE BIDDER: -

5. Opening of the proposal:

The FIRST ENVELOPE containing "Technical Proposal" will be opened in the initial stage by the Client in presence of the bidders' representatives at the designated location, date and time specified in the Bidder Data Sheet. The Client will constitute an Evaluation Committee to evaluate the proposals submitted by bidders. Only one representative from the participating bidder will be allowed to attend the bid opening meeting. This will be followed by power point presentation. The SECOND ENVELOPE containing FINANCIAL PROPOSAL of the technically qualified bidders will be opened after completion of technical evaluation stage (technical proposal + PowerPoint presentation).

6. Evaluation of Proposal:

Technical Evaluation (1ST Stage): The Technical proposals will be evaluated as per the following criteria:

Sl	Criteria & marks	Supporting document
1.	Total Turnover of the agency/ firm:	Turn over certificate
	(Average Annual Turnover of current and last three financial	Chartered Accountant
	years (2021-22, 2022-23 & 2023-24)	based on the audited
	• Average Annual Turnover of Rs 50.00 lakhs = 10 marks	financial Statements
		for current and last FY.
	• Additional 5 marks for each additional INR 10.00 lakhs	
	uto a maximum of 25 marks.	
	(Max mark: 25)	
2.	Number of similar nature of project done for Government of	Work orders/Contract
	India/ PSUs/Autonomous Bodies/ Federations of Industries/	Document/Completion
	Corporates etc. during the past 03 (Three) financial years.	of Work Certificates
		from the previous
		Clients.
	(Similar nature of project would mean supplies tools and	
	equipment's, STEM education program implementation for	
	class VI, VII & VIII).	
	• Experience of managing One (01) similar project– 15	
	marks	
	Additional 5 marks for each additional similar*	
	project done - up to a maximum of 25 marks	
	(Max mark: 25)	
3.	The bidder should have a dedicated Core Team (Lab	CV's of the candidates
	establishment/STEM trainer's) of three members with	can be attached
	minimum 3 yrs. experience required to be deployed for the	
	assignment.	
	 Three members with experience required to be deployed for the assignment-5 mark 	
	 Additional one mark for each additional member 	
	(Max mark 10)	
4.	PowerPoint presentation on the Methodology and	PPT during
	Approach:	Presentation stage.
	Bidders are required to create a PowerPoint presentation	
	outlining their Methodology and Approach based on the	
	requirements of the RFP. The presentation should	
	demonstrate a comprehensive understanding of the STEM	
	education by the bidder and must include the following:	
	\circ A detailed plan, as per the scope of work detailed	
	out in Section 3, from the inception to the closure	
	of the assignment.	
	\circ The role of the proposed Core Team in the program.	

Sl Criteria & marks	Supporting document
 Component-wise plan and expected outputs. 	
 Curriculum Alignment of Activities and Student 	
Assessment Methodology	
 Layout design of the STEM lab including placement of 	
tools and material	
 Completion timeline. 	
The presentation should include key evidence for all the	
criteria outlined in the RFP. Presentations that fail to	
address these requirements comprehensively will receive a	
lower score.	
 Excellent understanding of the assignment with a presentation covering all aspects of the STEM education. 	
: 40 marks	
 Good understanding of the assignment and coverage of major aspects of the STEM education. : 30 marks 	
\circ Low understanding of the assignment and	
failure to cover all major aspects of the STEM	
education.	
: 10 marks	
(Max mark 40)	
Total Mark - 100	
Passing Marks required to be eligible for Financial Bid Opening: 70) Marks

Bidders will make a Power Point Presentation (PPT) before the Client during the technical evaluation stage. The objective of the presentation is to enable the Client to evaluate the bidders about their understanding and preparedness for the proposed assignment. Clarifications, if any, as required by the Client will also be discussed during the meeting. The financial proposals of the technically qualified bidders will be opened. The bidder should remain present on the day for opening of the financial bid. The bidder whose technical proposal secures a score above the minimum qualifying mark of 70 in the technical evaluation stage, will be qualified for opening of the financial proposal.

FINANCIAL EVALUATION: The financial proposals of the technically qualified bidders shall be opened at this stage in the presence of the bidders' representatives.

7. Evaluation Process:

Quality & Cost Based Selection (QCBS) method will be followed during the overall selection process. Based on the evaluation of technical proposal, the technically qualified bidders shall be ranked highest to lowest Technical Score in accordance to the marks obtained during the technical evaluation stage. The client will select the lowest evaluated price bid (Ll) among all the technically qualified bids and the selection of L1 agency will be done as per QCBS method following the formula given below:

$$B = \frac{C_{low}}{C} X + \frac{T}{T_{high}} (1-X)$$

Where,

С	=	Evaluated Bid Price
Clow	=	the lowest of all Evaluated Bid Prices among responsive Bids
Т	=	the total Technical Score awarded to the Bid
Thigh	=	the Technical Score achieved by the Bid that was scored best
		among all responsive Bids
Х	=	weightage for the Price as specified in the Bid

For selection the weightage will be Technical Bid-70% + Financial Bid 30%

8. Award of Contract:

The Client will notify the successful bidder in writing by issuing an offer letter / work order. Sub-contracting is not allowed under this assignment.

9. Other Terms & Conditions:

- a) Conditional RFP Proposals are liable for rejection.
- b) Intending Organizations/Agencies can have detailed information from the office of the CEO, OTDS, SCSTRTI campus, Bhubaneswar during office hours.
- c) The Selection Committee, constituted by the CEO, OTDS shall verify and select the technical bids.
- d) The Selection Committee reserves the right to reject any or all tenders without assigning any reason.
- e) The Agency /Organization has to impart curriculum aligned STEM education among the students with providing the 21st century skills through hands on learning with provide learning material/raw materials to the students/schools.
- f) The Agency /Organization has to provide the training to the teachers and staffs of residential schools on handling the STEM programme. The Agency/ Organization has to prepare and provide the modules to the teachers on the same.
- g) The Agency /Organization should have effective monitoring system. Most of the schools are in remote areas of Odisha State. Trainers of the Organization/Agency should go to the schools/hostels twice in a month and monitor the class room teaching/conducting practical in STEM education.
- h) The Agency / Organization should conduct a base line assessment in the beginning and conduct subsequent assessment every year and, also, after completion of the programme. Detailed reports should be submitted to the Department, Bhubaneswar on the performance of the students after each assessment conducted.
- i) The programme should contain enhancement of STEM education with 21st century skills among the students' residential high schools.
- j) If the training is incomplete or if the programme is not properly imparted, the Agency / Organization will be black listed and will be removed for next three years and complete amount due will not be paid.
- k) The selected Agency/Organization has to provide study material to the students for conducting practical and preparing models, and teachers handbook for the teachers to handling the programme.
- l) Further, the Organisation or Agency has to provide minimum of two years support service

- m) The selected Agency / Organization should not sublet the contract. If it is found to have sublet the contract, the contract will be terminated and the total amount in due will not be paid and liable to for feature of Security Deposit.
- n) The selected Agency / Organization shall enter in to a MoU on a non-judicial stamp paper as per Stamp Duty Act, Government of Odisha, with terms and conditions as per the format specified by the CEO, OTDS within 30 days from the receipt of written communication of Letter of Acceptance to this effect.
- o) No Association, Pools, Cartels, Syndication is permitted. (i.e.) registered legal entity alone can participate in the bid process.
- p) The CEO, OTDS shall have the power to issue notice in writing and to instruct / direct the Organization / Agency to make alterations / variations in the assigned work where necessary (within the purview of the scope of the work).
- q) Non-submission of any document required in the ToR will render the Bid to be rejected.
- r) The authority is not bound to accept the lowest and reserve the right to reject any or all quotations and tenders without assigning any reasons thereof.

10. Disclosure:

- a) Bidders have an obligation to disclose any actual or potential conflict of interest. Failure to do so may lead to disqualification of the bidder or termination of contract.
- b) Bidders must disclose if they are or have been the subject of any proceedings (blacklisting etc.) or other arrangements relating to bankruptcy, insolvency or the financial standing of the Bidder, including but not limited to appointment of any officer such as a receiver in relation to the Bidder's personal or business matters or an arrangement with creditors or of any other similar proceedings.
- c) Bidders must disclose if they have been convicted of or are the subject of any proceedings relating to:
 - Criminal offence or other serious offence punishable under the law of the land, or where, they have been found by any regulator or professional body to have committed professional misconduct;
 - Corruption including the offer or receipt of an inducement of any kind in relation to obtaining any contract;
 - Failure to fulfill any obligations in any jurisdiction relating to the payment of taxes or social security contributions.

11. Anti-corruption Measure:

- a) Any effort by Bidder(s) to influence the Client in the evaluation and ranking of financial proposals and recommendation for award of contract, will result in rejection of the proposal.
- b) A recommendation for award of Contract shall be rejected, if it is determined that the recommended bidder has directly or through an agent engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question. In such cases, the Client shall blacklist the bidder either indefinitely or for a stated period of time, disqualifying it from participating in any related bidding process for the said period.

12. Legal Jurisdiction:

All legal disputes are subject to the jurisdiction of Civil Courts of Bhubaneswar only.

13. Governing Law and Penalty Clause:

The schedule provided for delivery must be strictly adhered to, considering the stringent time constraints. Any unjustified and unacceptable delays in delivery shall make the bidder liable for liquidated damages, leading to the forfeiture of the Earnest Money Deposit (EMD). Subsequently, the Client reserves the right to cancel the contract for pending activities and complete the remaining work through another agency. The Client may deduct such sums from any money due or becoming due to the bidder. Payment or deduction of these sums shall not relieve the bidder of their obligations and liabilities under the contract. The rights and obligations of the Client and the bidder under this contract will be governed by the prevailing laws of the Government of India.

14. Client's right to accept any proposal and to reject any or all proposal(s)

The Client reserves the right to accept or reject any proposal, and to annul or amend the bidding / selection evaluation process and reject all proposals at any time prior to award of contract award, without assigning any reason thereof and thereby incurring any liability to the bidders. Misrepresentation/improper response by the bidder may lead to the disqualification of the bid. If such disqualification/rejection after the Proposals have been opened and the highest-ranking Applicant gets disqualified/rejected, then the client reserves the right to consider the next best bidder, or take any other measure as may be deemed fit in the sole discretion of the Client, including annulment of the selection Process.

15. Number of Proposals:

Each Bidder shall submit only one (1) Proposal, in response to this RFP. Any Bidder who submits or participates in more than one Proposal shall be disqualified. The Bidder shall be responsible for all costs quoted with the preparation of its proposal and its participation in the bidding process.

SECTION: 3

SCOPE OF WORK

The Agency should provide the following Services:

SI.	Works	Particulars	Remarks
No.	to be		
	done		
A	Setting up of the STEM Lab	 Creation of a wall unit that will house all the tools and materials that will be provided as part of the STEM Lab Proper arrangement of all provisioned tools and materials as stipulated Clear guidance on material provision list with count Clear safety instructions for lab use Digital Support for the Lab – Integrated Whatsapp ChatBot 	Detailed Plan with Design of the said workare to be presented during Te chnical Presentation.
В	Training Resources and Plan	2. I I OVIGE a Decanea Design Timming Floade	Samples of said work are to be presented during Technical Presentation.
С	Student Assessments	 before the start of the intervention 2. Provide Formative Assessments to be taken post each model making activity 3. Provide Endline Assessment to be taken at the end of the academic year 4. Provision of a digital dashboard to be able to visualize student learning progress 	Samples of said work are to be presented during Technical Presentation.
D	Ongoing Monitoring and Evaluation	 Visit each school twice a month for training the teachers During visit check on lab utilization and student progress 	
E	Science Exhibitions	 Support the school in conducting a school level science exhibition Provide teachers and students researched opportunities to showcase their innovations (central/state level inspire awards) Work with the administration to support district level and state level science 	

SI. No.	Works to be done	Particulars	Remarks
		exhibitions/competitions	
F	Ongoing Support	 Free replacement of tools in case anything breaks down for up to 5 years Subsidized restocking of the labs for additional 2 years 	
		3. Clear 3 year plan for progressive learning outcomes to be achieved in the STEM Lab	

The following list of materials is to be provided in the lab in a manner that the kits are not prefabricated and the students can make the list of models attached below using the loose materials provided in the lab:

MODEL MAKING ACTIVITIES TO BE ACCOMPLISHED BY STUDENTS ON THEIR OWN (without any pre-fabricated materials):

S.No.	ProjectType	ExperimentName	Objective/Aim
1	BASIC ELECTRICITY	Simple Electric Circuit	To understand how to make a basic circuit using wires, bulbs, batteries, and other materials.
		Series Parallel Circuit	To learn about Parallel and Series circuits as well as their function
		Symbol Of Electric Component	To know the symbols of electronic components required to do the electrical drawing of electrical circuits.
		Study Lamp	To identify and explain the different parts of an electric circuit, make our own Study lamp, and explain its works.
		Good Conductor/ Bad Conductor	To understand the ability of a material to conduct electricity and differentiate between good and bad conductors.
		Household Circuit	To apply the principle of parallel circuit and will design a working model of a household circuit
		Electroplating	To understand the process of preventing metal from corrosion
		Electromagnet	To understand that electric current creates a magnetic field and describe how an

S.No.	ProjectType	ExperimentName	Objective/Aim
			electromagnet is made.
		Electrolysis	To understand the process to separate a compound or molecule into its component parts.
2	MAGNETISM	Model Making On Magnetic Attraction Between Different Materials	To learn about the attraction of metal towards magnets
		Model Making On Polarity Of Magnets	To understand the behavior and polarity of the magnets
		Differentiating Magnetic & Non Magnetic Material	To learn about the attraction of metal and non metal towards magnets
		Model Making On Heating Effect Of Magnet	To understand the effect of heat on a magnet by a simple activity
		Types Of Magnets	To know the different types of magnet and their uses
		Magnetic Car	To understand the behavior and polarity of the magnets
		Attraction & Repulsion	To understand the behavior and polarity of the magnets
3	LIGHT	Periscope	To see objects which are out of our direct line of sight
		Kaleidoscope	To understand multiple reflections by making a handmade toy with ever- changing patterns and shifting images
		Multiple Image In Mirror	To learn about the multiple reflections of an object using a plane mirror
		Pinhole Camera	To make a DIY camera without using any lens
		Bird & Cage	To learn how our brain responds to an optical illusion
		Newton Wheel	To make a Newton wheel and prove that the white color combines seven different colors
		Concave Lens & Convex Lens	To understand the image

S.No.	ProjectType	ExperimentName	Objective/Aim
			formation by convex and concave lens
		Light Travel Straight Path	To understand the propagation of light in a medium
4	SOME NATURAL PHENOMENA	Electroscope	To detect the presence of electric charge on a body.
		Static Straw Spinner	To understand the effect of static charge on a body
5	FORCE & PRESSURE	Newton Car	We will be able to explain the motion of a body
		Bottle Fountain	To understand about the properties of air
		Hydraulic Bridge	To apply the principles of hydraulics in building a working model of a hydraulic bridge
		Hydraulic Jack	To apply the principles of hydraulics in building a working model of a Hydraulic Jack
6	SOUND	Straw Flute	To learn about the formation of sound using vibrations
		Bottle Horn	To learn about the formation of sound using vibrations
		Paper Cup Telephone	To understand the transformation of sound waves into vibrations
		Steel Ruler Sound	Demonstrating how the length of the ruler influences the frequency of vibration.
7	GENERATION OF ELECTRICITY	Wind Turbine	Learn about natural energy sources and understand the concept of Windmill for power generation
		Hand Made Generator	To make a hand-made DC Motor and understand its working
		Solar Energy	To make a solar bulb and understand how it works.
8	ADVANCE LEVEL ELECTRONICS	Bluetooth Speaker	To make a hand-made Bluetooth speaker and know its working
		Automatic Water Dispenser	To understand the application of

S.No.	ProjectType	ExperimentName	Objective/Aim
			an IR Sensor
		Ldr Light	To understand the application of a Light Dependent Resistor
		Dpdt Switch Car	To make a handmade Wired Remote Car and know the function of a DPDT Switch
9	CHEMISTRY	 Testing Of Acid, Base, And Salts Natural And Artificial Indicators For Acid & Bases Detection Filtration Electrolysis Making An Electrochemical Cell Testing Of Starch, Protein, And Fats Photosynthesis Neutralization Reaction Kitchen Chemistry Electroplating 	Understand basic chemistry using easy to access materials
10	MISCELLANEOUS	Resistor	To know about the application of a resistor in an electric circuit
		Diode	To know about the application of a Diode in an electronic circuit
		Capacitor	To know about the application of a Capacitor in an electronic circuit
		Relay	To know about the application of a Relay in an electronic circuit
		Ir Sensor	To learn about IR sensor and its application
		3d Pen	To learn how to draw a raised graphic on a piece of paper or any flat surface
		Transistor	To know about the application and types of transistor in an electronic circuit
		Arduino	To learn how to create circuits, use resistors, and get introduced to Ohm's law while building a series of cool projects and experiments.

S.No.	ProjectType	ExperimentName	Objective/Aim
		Programing	To learn to program for building smart devices/software that can sense their environment and respond accordingly.
		Carpentry	To learn and develop techniques for effective usage of mechanical tools
		Soldering	To learn about joining metal pieces through Soldering and using a hot glue gun.
11	BIOLOGY	Human Lungs	To understand the process of respiration by the human lungs
		Human Body System	To understand the different body systems present in the human body
		Kidney Model	To understand the working of the excretory system present in the human body
		Human Ear	To learn how sound reaches the human ear
		Skeleton	To learn about the Skeletal system in a human body
		Butter Fly Life Cycle	To identify the stages in a butterfly's life cycle.
		Syringe Microscope	To find out what sort of microscopic critters are floating around in our water?
12	MATHEMATICS	Introduction to Decimals	Decimal Numbers, Decimals to Fractions, Comparing Decimals, Forming Decimals
		Introduction to Fractions	Writing Fractions, Representing half ot full, Equivalent Fractions, Addition and Subtraction of Fractions
		Introduction to Integers	Operations of Integers
		Number Sense	Identifying Numbers, Counting Numbers, Numbers to Quantity 1 & 2, Factors of Numbers
		Introduction to Algebra	Algebraic Identities, Operations of Polynomials

S.No.	ProjectType	ExperimentName	Objective/Aim
		Introduction to Geometry	Types and Properties of Lines, Types of Angles, Measurement of Angles, Triangles (types and properties), Area of enclosed figures

The following material has to be provided in each STEM Lab so that the students can get an actual workshop/makerspace feel and can make the above mentioned models/activities by picking and choosing required material as instructed by the teacher/trainer:

S no	Component	Unit
1	Tubular Claw Hammer 450g	4
2	Big Screw(2 inch)	50
3	Copper coil(35 gauge)	1
4	19 X 6 X 3cm 400g C-shape Rubber Handle Steel Stanley Combination Pliers	5
5	Hack saw Blade 12.5mm * 0.6 mm	10
6	Wire Cutter 6 inch	5
7	DC Testor	5
8	Mini Hexa Frame 6inch 120gm	5
9	Screw driver, (32 in 1) 11X5X3 cms weighs 250gm	3
10	Manual Hand Drill 1/4 inch	2
11	Drill Bit (1.5 mm, 2 mm, 2.5 mm, 3 mm, 3.2 mm, 3.5 mm, 4 mm, 4.5 mm, 4.8 mm, 5 mm, 5.5 mm, 6 mm, 6.5 m)	2
12	Soldering Iron 25W,230V	5
13	Soldering Wire 50gm 1mm	10
14	Soldering Paste Flux 15 gm	10
15	Soldering Iron Stand with Sponge 3.97 x 5.59 x 9.14 cm; 318 Grams	5
16	Glue Gun 20Watts	5
17	Glue Gun Stick 7mm	50
18	Big Hexa Frame 19 inch	2
19	Big Hexa Blade 12.5mm x 0.6 mm	2
20	Hot air gun 1800W	2
21	Noseplash Carbon Steel 6inch 155mm	2
22	Measuring Tape 10m,25mm	12
23	wrench set (6mm-12mm)	2

S no	Component	Unit
24	Measuring Tape 13mm 3m	2
25	C-Clamp 3 inch	2
26	Sandpaper 28 x22 cms 100G	10
27	Plastic Box 13" x 8" inch	25
28	Scissor 8.3 inch	10
29	Knife/Metal Paper Cutter 18 mm	20
30	4.5mm Steel Paper Puncher	10
31	40mx24mm Paper Masking Tape	12
32	Fevicol 1KG	10
33	Icecream Stick 4-1/2"	5
34	Magnet Set: 2 Ring Magnets 2.5 inch (one blue one red) 1 Bar Magnet incidating north and south 1 Horseshoe Magnet incidating north and south 10 Disk Magnets 1 inch 2 Car Magnets i inch 2 Square Magnets 1 inch	2
35	Neodinum Magnet 6mm x 3mm	10
36	Square Magnet 6mm x 3mm	50
37	Golden Board pin 8.8 mm and Nail Size 1 cm	10
38	Mirrors(15 x5cm)	90
39	Mirrors(8 x 8cm)	60
40	Mirrors(5 x 5 cm)	60
41	Colour paper (75 GSM 15x15 cm Size)	2
42	Magnet Round Black 18x4mm	100
43	Adhesive Acrylic Foam Mounting Tape 24mm	8
44	Fewi kwik 20ml	10
45	Steel Scale 12 inch	5
46	Paper Straw packet 8 mm 7.75 inch	5
47	Plastic Straw packet 6mm	5
48	Bamboo Stick packet (thick) 10 inch- 3mm	5
49	Bamboo Stick packet (thin) 5 inch -2mm	5
50	Sunboard (11.7 inch x 16.5 inch)	10

S no	Component	Unit
51	Syringe(10 ml)	100
52	Plastic pipe(5 metre)	5
53	Thread packet	10
54	Green Laser Pointer	3
55	Lens & mirror set	1
56	Safety pins 2 ¼ inch	1 box
57	Butter paper 90 GSM	1
58	Level pipe set 5MM, 10 meter	1
59	Paper pin packet 20L x 20W Centimeters	1
60	Balloon packet	1
61	Paper cup set	1
62	Rubber band packet	1
63	SMD Led Bulb 4V	100
64	RGBY LED3mm 4 Color Red Green Blue Yellow Diffused Color Lens LED Light Bulb	300
65	LED Bulb 4v with holder	100
66	2 inch DC Bulb Holder	25
67	Bluetooth Kit(Pam8403 Mini DC Amplifier Module Kit, Wireless Bluetooth Receiver Chip 5v 2 channel)	25
68	Pam8403 Mini DPC Amplifier Module Kit audio Kit	25
69	SPST ON-OFF Round Rocker Switch with Light	100
70	Dc Wire reel 10 sq mm 20 meter	4
71	IN4007 DIP Rectifier Diode 1A	50
72	9v Battery clip 14cm	100
73	Rechargeable battery 4v 1AH/1000mAH	20
74	18650 3.7V battery 1 position battery holder plastic box with 2 wire leads	25
75	Battery charging module 5 inch B type	25
76	Dc Regulator 1.8-2v 2 ampere	50
77	3.7V 600 mAh Li-ion Rechargeable Lithium Battery	25
78	Zinc carbon battery 9v	100
79	DC Toy Motor Mini Electricmotor 3-6V 15000RPM	140

S no	Component	Unit
80	300 rpm Gear BO Motor Single shaft 12	50
81	Fan Blade(Hole Dia - 5mm, Blade Length - 3 inch (Centre hole to Blade End), Width - 1.8 inch)	100
82	7v Solar 100 mAh (18x 20 cm)	3
83	6v solar 6V-100 mAh (70 x 70 x 03 mm)	30
84	Battery Charging kit(C-Type) TP4056 battery charging module	25
85	Breadboard + jumper wires kit	10
86	Speaker 4 inch,80hm 0.25watt	30
87	IR Sensor 150gms,12 x 10 x 10 Cm	25
88	TIP-32 C 100V 3A -220 IC	25
89	BT136-600E 600V 4Amp High Switching Speed Silicon Track Transistor	25
90	7805 L7805 IC +5V 1.5A L 7805 CV CCCKJ V6 MAR1610 volt regulator	25
91	Robot Durable Rubber Tire Yellow wheel 65mmX30mm	100
92	9V 1A DC Power Supply Adapter	5
93	Bc547 (18 x 14 x 2 Cm)	100
94	Transitor BC548 (18 x 14 x 2 Cm)	100
95	Multimeter(22 x 21 x 5 Cm) 70gm	5
96	Universal Buzzer 3 - 24V	50
97	Photo resistors LDR 5mm	50
98	Resistor set(100 Ohm 150 Ohm 220 Ohm 330 Ohm 470 Ohm 680 Ohm 1K Ohm 2K2 Ohm 3K3 Ohm 4.7K Ohm 6.8K Ohm 10K Ohms) 15 x 10 x 8 Cm	100
99	DC 3-9V Double Side Low Noise Mini Micro Submersible Motor Water Pump	30
100	Pulley 65mm x 18.5mm	50
101	DPDT Rocker Switch 6-Pin 3 Way ON-Off-ON 16A 250VAC / 20A 125VAC	30
102	IC UM66 3.3V	85
103	DC Round Dynamo Motor 6000 RPM, 16 KW, 5 volts	80
104	Sew-on Snap Fastner Buttons 10mm	10 Set
105	DIY Chemistry KIT with 20 dilute chemicals, lab glassware and equipments	1
106	Century Pre-laminated Ply Particle Board (18mm 8x6 ft)	3.5
107	Fevicol 2kg	1

S no	Component	Unit
108	Nails 0.8 mm	50
109	Nails 1.5 mm	50
110	Nails 2mm	50
111	J Hook 1.5 mm	10
112	J Hook 3 mm	10
113	Mathematics Kit1. Ganit Mala - 2 Meters Rope with coloured beads2. Arrow Cards - Whole Numbers3. Arrow Cards - Decimal Numbers4. Integers Mala - 2 Meters Rope with coloured beads5. Fraction Kit (Circle/Strip)6. Factors/Multiples - Ganit Mala + 1 meter PVC pipe 0.5"7. Dienes Blocks8. Currency9. Tangrams10. Algebra Tiles11. Algebraic Identities:a. $(a + b)^2$ b. $(a - b)^2$ c. $a^2 - b^2$ 12. Geo Board: Circle, Square - 10x10 inch board, board pins, thread	1

SECTION: 4

TECHNICAL PROPOSAL SUBMISSION FORMS

<u>TECH- 1</u>

<u>COVERING LETTER</u>

(ON BIDDER'S LETTER HEAD)

Place: Date:

To The CEO, Odisha Tribal Development Society, Bhubaneswar

Sub: Selection of Agency for the establishment of STEM Labs and equipment for 422 residential institutions among the students of ST and SC Development, Minorities and Backward Classes Welfare Department, Odisha for classes VI, VII &VIII.

Dear Sir,

I, the undersigned, offer to provide the services for the proposed assignment in respect to your Request for Proposal No. Date- I hereby submit the proposal which includes this technical proposal sealed under a separate envelope. Our proposal will be valid for acceptance up to 180 Days and I confirm that this proposal will remain binding upon us and may be accepted by you at any time before this expiry date.

All the information and statements made in this technical proposal are true and correct and I accept that any misinterpretation contained in it may lead to disqualification of our proposal. If negotiations are held during the period of validity of the proposal, I undertake to negotiate on the basis of the proposal submitted by us. Our proposal is binding upon us and subject to the modifications resulting from contract negotiations.

I have examined all the information as provided in your Request for Proposal (RFP) and offer to undertake the service described in accordance with the conditions and requirements of the selection process. I agree to bear all costs incurred by us in connection with the preparation and submission of this proposal and to bear any further pre-contract costs. In case, any provisions of this RFP/ ToR including of our technical & financial proposal is found to be deviated, then your department shall have rights to reject our proposal including forfeiture of the Earnest Money Deposit absolutely. I confirm that, I have the authority to submit the proposal and to clarify any details on its behalf.

I understand you are not bound to accept any proposal you receive I remain,

Yours faithfully

Authorized Signatory with Date and Seal: Name and Designation: Address of Bidder:

<u>TECH-1</u>

Bidder Organization (General Details)

Sl. No.	Description	Full Details
1	Name of the Bidder/ Agency	
2	Address for communication: Tel Fax: Email id:	
3	Name of the authorized person signing & submitting the bid on behalf of the Bidder: Mobile No.:Email id:	
4	Registration / Incorporation Details Registration No: Date & Year. :	
5	Bid Processing Fee Details Amount: BC/DD No.: Date: Name of the Bank:	
6	EMD Details Amount: BC/DD No.: Date: Name of the Bank:	
7	PAN	
8	Goods and Services Tax Identification Number (GSTIN)	
9	Willing to carry out assignments as per the scope of work of the RFP	
10	Willing to accept all the terms and conditions as specified in the RFP	

Authorized Signatory [In full and initials with Date & Seal]:

Name and Designation with Date and Seal:

<u>TECH-2</u>

Financial Information in NR					
Details	FY 2021-22	FY	FY 2023-	Average	
		2022- 23	24		
		23			
Turnover from STEM lab					
establishment (in					
Lakh)					
(Submission of copies of Income & Expenditure St	atement and Bala	ance Sheet	for the respect	ive financial	
years is mandatory along with this	form)				

Bidder Organization Financial Details

Signature and Seal of the Company Auditor with Date:

Authorized Signatory of the Bidder [In full and initial with Date and Seal]:

Communication Address of the Bidder:

[NB: No Scanned Signature will be entertained]

<u>TECH-3</u>

Sl.	Period	Name of the	Name of	Contract	Date of Award /	Date of	Remarks
no.		Assignment	the Client	value (in	commencement	completion	
		with details		INR) and	of assignment	of	
				duration		assignment	
				in month			
Α	В	С	D	Е	F	G	Н
1							
2							
3							

(BIDDER'S PAST EXPERIENCE DETAILS)

Table -1 (List of completed assignments only of similar nature during last 3 years)

Authorized Signatory [In full and initials with Date & Seal]:

Name and Designation with Date and Seal:

<u>TECH-4</u>

DECLARATION REGARDING ANY CONFLICTING ACTIVITIES

Are there any activities carried out by your Agency which are of conflicting nature as mentioned in Section 2: [Information to the Bidder] under Eligibility Criteria. *Ifyes, please furnish details of any such activities.*

If no, please certify,

IN BIDDER'S LETTER HEAD

I, hereby declare that our Agency as Individual is not indulged in any such activities which can be termed as the conflicting activities as mentioned in Section 2: [Information to the Bidder] under Eligibility Criteria.

I, also acknowledge that in case of misrepresentation of any of the information, our proposal / contract shall be rejected / terminated by the Client which shall be binding on us.

Authorized Signatory [In full and initial with Date and Seal]:

Communication Address of the Bidder:

<u>TECH – 5</u>

UNDERTAKING

(On the stamp paper of appropriate value regarding ineligibility and non-blacklisting of the Bidder.)

I/We, here by undertake that our Agency has not been blacklisted/debarred by any of the Central Ministry / State Govt. Department/Office or by any PSUs and I/ We are not blacklisted by any authority during the recent past.

> Yours Sincerely

Authorized Signatory Name & Designation of the Signatory Name of the Bidder and Address:

SECTION: 5

FINANCIAL PROPOSAL SUBMISSION FORMS

<u>FIN-1</u>

COVERING LETTER

(In Bidder's Letter Head)

Place: Date

To The Chief Executive Officer, Odisha Tribal Development Society, Bhubaneswar

Sub: Submission of Financial Proposal for establishment of STEM Labs and equipment.

Sir,

I, the undersigned, offer to establish STEM Labs and equipment for 422 residential institutions among the students of ST and SC Development, Minorities and Backward Classes Welfare Department, Odisha for classes VI, VII &VIII in accordance with your RFP No. , Dated. _ .Our Financial Proposal for Rs /- Rupees) only is attached herewith. This amount is exclusive of the taxes applicable. I do hereby undertake that in the event of acceptance of our BID, the services shall be provided as per the terms and conditions stipulated in the RFP document and subsequent executive instructions, if any.

Sl	Descriptions	Rs.	Rs.
No		(In figures)	(In words)
1.	Establishment of STEM Labs and equipment for one residential institutions as per the indicated scope of work		
The to	otal amount for establishing the STEM lab in 422 re	sidential instit	autions: