

# **REQUEST FOR PROPOSAL**

For

## **ESTABLISHMENT OF STEAM LABS INTO SEVEN FDE SCHOOLS (RURAL)**



Project Coordination Unit (PCU)  
Ministry of Federal Education and Professional Training (M/o FE&PT)  
Khyaban-e-Suharwardy, Zero Point, Pakistan Manpower Building, Gate 3, Islamabad

**November 2024**

## **TENDER / REQUEST FOR THE ESTABLISHMENT OF STEAM LABS INTO SEVEN FDE SCHOOLS (RURAL)**

Ministry of Federal Education & Professional Training (M/o FE&PT) invites the sealed bids from the eligible vendors/firms for the establishment of STEAM Labs for its Seven (07) schools located in rural areas. For this purpose, the M/o FE&PT invites proposals from eligible vendors/firms (joint venture or consortium) to establish specified STEAM labs within 3 months (90 days). The proposals should be inclusive of all applicable taxes and premiums and must meet the RFP's specifications.

2. The interested Firms/Vendors are invited to submit sealed bids by following **“Single Stage-Two Envelop - QCBS”** bidding procedure in accordance with the PPRA Rules 36(b). Each bid shall comprise two envelopes containing, financial proposal and technical proposal each along with any supplementary documents that the organization feels relevant may be submitted to the Procurement Specialist. **Technical Proposals** will be opened first; those who will qualify in the technical criteria and specifications will be evaluated financially. Only those who are registered with legal entities are eligible to apply for the bid.

3. The last date for submission of bids will be 04-12-2024 by 02:00 PM at the address given below. Technical Proposals will be opened on the same date at 02:30 PM in the presence of the representative of the firms who may wish to attend in Committee Room, Ministry of Federal Education & Professional Training, Islamabad, Block-C, 1st Floor, Pak Secretariate. Bid security of PKR 1,400,000/0 (Pakistani Rupees One Million four Hundred Thousand) in the shape of Pay Order, CDR, or Banker's Cheque, in the name of Procurement Specialist, Project Coordination Unit, M/o FE&PT is required and must be furnished along with Financial Proposal. M/o FE&PT will not be responsible for any cost or expense incurred by the bidders in connection with preparation or submission of bids. In case of official holiday on the day of submission, next day will be treated as closing date. Bid notice has also been posted on PPRA website ([www.ppra.gov.pk](http://www.ppra.gov.pk)) Electronic proposals will not be entertained other than bids required to be submitted through PPRA e-Procurement Portal-EPADS at ([www.eprocure.gov.pk](http://www.eprocure.gov.pk)). The procuring agency has right to cancel the activity any time. The detailed bidding document/RFP can be downloaded from the PPRA and M/o FE&PT's website. Pre-Bid meeting will be held at address given below on 26-11-2024 at 02:30 PM.

Procurement Specialist

Project Coordination Unit (PCU), Khyaban-e-Suharwardy, Zero Point, Pakistan Manpower Building, Gate 3,  
Ministry of Federal Education and Professional Training (M/o FE&PT), Islamabad.

Phone 051-9252497 [uzma.malik.pcu@gmail.com](mailto:uzma.malik.pcu@gmail.com)

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## 1. Request for Proposal (RFP):

The Ministry of Federal Education & Professional Training (M/o FE&PT), Islamabad invites bids from eligible vendors/firms for the “**Establishment of STEAM Labs for its Seven (07) Schools**” located in rural areas of Islamabad through Request for Proposal (RFP) method under PPRA rules. For this purpose, the M/o FE&PT invites proposals from eligible vendors/firms for establishment of these labs.

The Proposals should be inclusive of all applicable taxes and premiums and must meet the RFP’s specifications. Additionally, PKR One Million Four Hundred Thousand bid security in the form of a Pay Order, CDR, or Banker’s Cheque, in the name of Procurement Specialist, Project Coordination Unit, M/o FE&PT is required along with the financial proposal. A Bank Performance Guarantee of ten percent (10%) in form of bank guarantee would be required later from the successful bidder.

## 2. Eligibility Criteria

The vendors/firms are requested to submit copies of the following documents as evidence of their eligibility:

- a) A minimum of 2 years of experience in establishment of STEAM Labs and providing STEAM Kits is required. (Vendors/Firms are requested to attach a summary of all relevant project contracts and purchase orders in tabular form. This should include the **reference number, description, award and completion dates, duration (in days), and total amount**. Additionally, copies of these contracts and purchase orders should be attached in chronological order).
- b) Firms/vendors must have completed a minimum of 2 similar projects with government/semi government, donor agencies, or the private sector at national / international level within the past 2 to 6 years, accompanied by copies of the respective work orders/contracts.
- c) Must be registered with the FBR or the relevant provincial authorities and have an active taxpayer status.
- d) The average annual turnover of the last three years must be at least 50 million.  
  
(Audited financial statements, stamped by a chartered accountant, must be provided for the last three years.)
- e) The firm/Vender must not have been blacklisted by any organization or government, semi government, autonomous or any financial institution of Pakistan.
- f) In Case of a joint venture/consortium, if one of the partners in a JV alone fulfills the threshold in criterion (mention in sub-para (c)&(d), both equally in terms of financial instruments , otherwise in terms of scope of work sharing having similar projects portfolio one is huge capacity and other having short will be acceptable but not in terms of legal registration and in terms of taxation and financial worth turnover.

## 3. Validity of Offers

The offers shall be valid until ninety (90) days from the date of opening of the Proposal.

## 4. Proposal Variation/Modification

- a) Quantities can be increased or decreased at any time as per the client's need.
- b) Delivery should be conducted through legal channels, and no grey channels should be utilized. The delivery period including installation is set at 90 days. Transport and taxes import custom duties or any other associated cost will be born up by the supplier into their rates given in total.

## 5. Preparation of Bids

- a) Proposal shall be evaluated on total price basis and the Purchase Order shall be issued to the most advantageous bidder.
- b) Price Proposal/(s) shall be for all the items as described in the attached scope of requirements.

## 6. Quoted Price

The quoted price should encompass all applicable taxes and premiums and must be in PKR (Pakistani Rupees).

## 7. Clarifications / Pre Bid Meeting

For any clarifications regarding this RFP may be sent in writing to Procurement Specialist, Project Coordination Unit (PCU), Khyaban-e-Suharwardy, Zero Point, Pakistan Manpower Building, Gate 3, Ministry of Federal Education and Professional Training (M/o FE&PT), Islamabad before or during the pre-bid meeting i.e. **26th November, 2024 at 02:30 P.M.** which will be responded during the pre-bid meeting and documented through minutes. All prospective bidders or their authorized representatives are invited to attend the pre-bid meeting.

The bidders are requested to submit questions, if any, in writing so as to reach the employer before pre-bid meeting. Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents thereof, which may become necessary as a result of the pre-bid meeting shall be made by the employer exclusively through the issue of an addendum not through the minutes of the pre-bid meeting.

Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

## 8. Sealing and Marking of Proposals

Proposals should be submitted in a single-stage two-envelope format, clearly labelled with the RFP's title/number, description, the name of the Firm/Vendor/JVs/Consortium, and the name of the purchaser.

## 9. Submission of Proposals

- a) Proposals are to be submitted in the form attached *by courier or by hand*.
- b) The deadline for submission of Proposals is on or before **04th December, 2024 at 02:00 PM**.
- c) The address for submission of Proposals is:

**Attention:** Procurement Specialist, Project Coordination Unit (PCU), Khyaban-e-Suharwardy, Zero Point, Pakistan Manpower Building, Gate 3, Ministry of Federal Education and Professional Training (M/o FE&PT), Islamabad.

## 10. Opening of Proposals

Proposals will be opened by the Purchaser's representatives on the same day after the deadline for the submission of Proposals i.e. **04<sup>th</sup> December, 2024 at 02:30 PM**. The Bids will be opened in Committee Room, Ministry of Federal Education & Professional Training, Islamabad, Block-C, 1st Floor, Pak Secretariate.

## 11. Evaluation of Proposals / Bid Evaluation

The technical proposals of the qualified bids after evaluation as per Eligibility Criteria shall be evaluated. The Financial Proposals will be opened if Technical Proposal qualifies on given criteria i.e. more than **70%** of total marks of Technical Proposal. The Financial bid weightage will be 30% and bidder scoring high marks on basis of **70/30** will be determined as most advantageous bidder.

## 12. Criteria for Bid Evaluation

The Technical Proposal shall be evaluated based on firm's capability and relevant experience, and key personnel proposed for project team handling this assignment. The criteria and point system for the evaluation of Technical Proposals shall be as under:

S/N	Preliminary Criteria for Bids Responsiveness for further eligibility of getting into Technical evaluation stage	Marks
1	<ul style="list-style-type: none"> <li>i) Firms should be registered with SECP or any other govt entity.</li> <li>ii) Relevant FBR Income Tax &amp; GST Registration.</li> <li>iii) Minimum 2-3 Years of Experience of similar nature projects / services.</li> <li>iv) The total average annual turnover and net worth of the last three years must be at least 50 million proved by Audited financial statements.</li> <li>v) Affidavit for non-blacklisted on 100 Rupee Stamp Paper.</li> </ul>	Mandatory

S. No.	Description of Variable	Points
1	Demonstrated experience of establishment of STEAM Labs at school level 05 to 10 Labs (10 Marks) 10+ Labs (20 Marks)	20
2	Already developed STEAM based training modules, content, teaching manual and learning management system etc. <b>(10 Marks)</b> <ul style="list-style-type: none"> <li>• Ability to install &amp; implement STEAM technology at specifically at Primary, Middle and High Level <b>(5 Marks)</b></li> </ul>	15
3	Assessment & evaluation tool i.e. LMS embedded with STEAM Content, Orientations, Modules, Assessments, Projects and developed for monitoring student progress on learning outcomes (authentic assessment)	15

3	Human Resource Capacity (Project Manager (2.5), Technical Manager (2.5), Technical Team 5 to 10 Members (0.5 Each: Max 05 Marks), STEAM Trainers at least 5 to 10 (0.5 Each: Max 05 Marks) established pool within organization). Signed CVs must be attached with proposal from established pool and have work experience in similar nature projects in past.	<b>15</b>
3	<b>Approach and Methodology (Presentation)</b> Methodology (5), Implementation Plan/Strategy (10), Monitoring and Reporting Mechanism (5), Plan for STEAM Fellow's trainings & Cascading Mechanism and Post Training Evaluation (5).	<b>15</b>
4.1	STEAM Kits & Materials (Local Availability) Sample to be presented before committee during presentation.	10
4.2	Experience for organizing STEAM Fairs, Exhibitions, Events at National Level with demonstration of learner's projects. Provide documentary evidence. (5 Marks Each)	10
	<b>Total</b>	<b>100</b>
	<b>Passing Marks</b>	<b>70</b>

### 13. Documents:

- Bidder must have his own office with facilities, equipment, and skilled human resources.
- Blacklisted bidders/contractors with pending liabilities of any Govt. department and those companies/ contractors/ firms whose renewal/registration is not up to date shall not be eligible to participate in the bidding process.
- Bidder must submit integrity pact as per prescribed format
- Must attach all documents required in technical evaluation.
- Delivery and Implementation schedules

### 14. Award of Purchase Order

The Purchaser shall award the Contract to the most advantageous bidder basis of formula given above, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

The Purchaser shall invite by the quickest means the successful Supplier for any discussion/clarification that may be needed to conclude the Purchase Order.

The purchaser shall publish an evaluation report on its website with free access, before issuance of purchase order, and 07 days grievance period will be given. The information shall include the name of the successful Supplier, summary of its scope and their quoted and evaluated prices. The Competent Authority reserves the right to cancel all the offers.

On behalf of the Purchaser:

Procurement Specialist  
Project Coordination Unit (PCU), Khyaban-e-Suharwardy, Zero Point, Pakistan Manpower Building,  
Gate 3, Ministry of Federal Education and Professional Training (M/o FE&PT), Islamabad.  
Phone 051-9252497 uzma.malik.pcu@gmail.com

## **PURCHASER'S REQUIREMENTS**

- i) Payment will be made as per schedule tabulated in Terms of Reference.
- ii) In case of repair of any damage part the Firm shall provide an alternate similar goods on urgent basis without any delay and in this regard no extra charges shall be paid by the Client.
- iii) In case of failure of providing good quality services on one month notice contract will be terminated.
- iv) The rates should be inclusive of all taxes and transportation cost or repair maintenance cost in case any breakage done by the time of inspection or during inspection any item is not up to the quality requirement that item will be replace without any cost by the firm.
- v) Inspection will be done by the designated technical/procurement team of the FDE.
- vi) Invoice will be verified by the technical/procurement team.
- vii) Stock Registers will be maintained by the Procurement team/respective schools with the supervision of Technical/Procurement department Team.
- viii) FDE will ensure quality of material delivery and inspection etc.
- ix) Payment in advance is only on booking shipment mobilization against bank guarantee/Insurance bond.
- x) For each completed lab, the vendor will obtain delivery challan duly signed by the Authorized representative and will submit with invoice.





## **Term of Reference (TORs)**

**for**

**ESTABLISHMENT & OPERATIONS OF STEAM LABS AT  
ICT SCHOOLS**

**September 2024**

**Government of Pakistan**

**Ministry of Federal Education & Professional Training**

**Islamabad**

**[www.mofept.gov.pk](http://www.mofept.gov.pk)**

# 1. Introduction

The Ministry of Federal Education & Professional Training, Islamabad aims to establish state-of-the-art STEAM (Science, Technology, Engineering, Arts, and Mathematics) Labs and implement STEAM program in 4 Girls and 3 Boys schools in rural areas under the Federal Directorate of Education (FDE) situated in the Islamabad Capital Territory (ICT). This initiative is designed to transform traditional educational environments into dynamic, interactive spaces where students can engage in experiential learning. By integrating cutting-edge technology and modern pedagogical approaches, the program aims to nurture creativity, enhance critical thinking, and develop robust problem-solving skills among students.

The STEAM Labs will serve as incubators for innovation, providing students with the tools and resources to actively explore and engage in interdisciplinary learning. Through hands-on, project-based activities, students will have the opportunity to apply theoretical knowledge in practical scenarios, thereby deepening their understanding and fostering a passion for STEAM fields. The labs will be equipped with advanced technology and educational kits covering diverse areas such as Electronics, Robotics, Space Technology, Game Development, and more (as specified below in this document), ensuring that students gain a comprehensive exposure to emerging fields.

The STEAM Program about enhancing academic knowledge and equip students with the competencies and confidence to navigate and contribute to a rapidly evolving technological landscape. By cultivating a generation of thinkers, creators, and innovators, the initiative will prepare students to meet the challenges of the future, making them not only learners but also contributors to the advancement of society.

## 2. Project Objectives

- I. Establish **Seven (07) STEAM Labs** in Selected Schools of Federal Directorate of Education (FDE) schools within Islamabad, each equipped with necessary hardware listed below and the infrastructure to support a wide range of STEAM activities.
- II. Implement a comprehensive STEAM program / curriculum tailored for students of Primary, Middle and Secondary levels, that integrates hands-on, project-based learning experiences to ensure that students not only grasp theoretical concepts but also understand their practical applications.
- III. Address the existing gaps in hands-on practical knowledge by providing students with the tools, resources, and guidance needed to conduct experiments, build projects, and engage in activities that reinforce their understanding of STEAM subjects.
- IV. Contribute to the development of a knowledge-based economy by equipping students with practical skills in STEAM fields. This will lay a strong foundation for their future involvement in areas central to the industry 5.0 skills, such as robotics, artificial intelligence, and biotechnology. Equip students in primary, middle and secondary level with essential STEAM skills, giving them a deeper understanding of the practical aspects of STEAM like Astronomy, Electronics, Robotics, Space Tech, Game Development, Design & Arts, IoT, Mathematics, Arduino Use and Digital Literacy etc. This will help them develop the critical thinking and problem-solving abilities needed for success in these fields.

- V. Facilitate the transfer of knowledge and technology to the selected schools, IT & STEAM Fellows (Provided by the M/o FE&PT) and their teachers, enabling them to sustain and expand the STEAM program beyond the project's duration. Fellows / Teachers will be trained to use the STEAM labs effectively, ensuring that more students can benefit from the program in the future.
- VI. Target approximately 800 students per lab (40 Students x 4 Classes Per Day x 5 Days a Week) through this program. The duration of class would be at least one hour. The program will provide these students with a solid foundation in STEAM education, preparing them for advanced studies and careers in these fields. All students enrolled in the STEAM program will develop in a group of four a STEAM product as an output under any category of the STEAM program. The selected school will act as a STEAM hub for 5 nearby schools.
- VII. Continuously assess the effectiveness of the implemented STEAM technologies, platforms, software, simulators and digital content through Learning Management System (LMS). This evaluation will help quantify the success and outreach of the program, ensuring that it meets its objectives and provides valuable insights for future initiatives.
- VIII. Enable students to participate in STEAM fairs, competitions, and/or workshops to showcase student projects.
- IX. Enable students to work on real-world projects that require collaboration, creativity, and innovation. Establish a model that can be sustained and scaled to other regions, ensuring long-term impact.
- X. The project is expected to supplement the existing STEM/STEAM initiatives in FDE schools and will be providing dedicated resources at school level to ensure world-class STEAM learning experience.

### **3. Project Description:**

In the context of this project, a qualified service provider (Company, Joint Venture or Consortium), registered with the relevant authorities, holding the necessary NOCs for operating in Pakistan (where applicable), and listed as an active taxpayer, will be engaged to implement the proposed solutions in the designated schools. The selected service provider will be responsible for delivering and deploying the required technologies, software, hardware, digital content, curriculum, and training. Additionally, they will ensure that the classroom environment is fully equipped and optimized to facilitate seamless STEAM learning activities throughout the three-year operational period.

#### **3.1 Infrastructure Requirements**

A dedicated space of 500 square feet (at least) will be provided in each selected school for the establishment of the STEAM Lab. The overall design and layout of the lab should be aligned with the project's objectives of fostering innovation, collaboration, and hands-on learning. The bidder is responsible for designing and deploying a functional and aesthetically pleasing environment that aligns with the project's objectives.

**Student Workstations:** One table per group of four students, equipped with four chairs, to facilitate collaborative project-based learning.

**STEAM Branding:** Walls will be branded with STEAM-related themes and visuals to inspire creativity and emphasize the focus areas of the lab. Posters and infographics that are not only

aesthetically well-designed but also carry actual scaffolding materials for the relevant projects shall be used.

**Floor and Ceiling Upgrades:** The lab will undergo necessary floor and ceiling upgrades to ensure a comfortable and safe environment conducive to learning.

**Windows and Doors Repair:** Any required repairs to windows and doors will be carried out to maintain a secure and well-lit space.

**Electricity and Lighting:** Adequate electrical outlets and enhanced lighting will be installed to support various digital and electronic activities within the lab.

**Storage & Display Cabinets:** Cabinets will be provided to store STEAM kits, equipment, and materials, ensuring they are organized and easily accessible. Display cabinets/side tables will also be placed for STEAM kits and projects.

**Digital Screen:** A large 55" digital screen (Smart TV) will be installed to display educational content, presentations, and project instructions, supporting interactive and multimedia-based learning.

## 3.2 STEAM KITS

STEAM kits are essential tools that bring the principles of Science, Technology, Engineering, Arts, and Mathematics to life in an interactive and engaging manner. In the context of the STEAM Labs being established in selected FDE schools, these kits serve as the foundation for hands-on learning, allowing students to explore complex concepts through practical application. These kits transform abstract ideas into tangible experiences, enabling students to build, experiment, and innovate. This hands-on approach deepens their understanding and retention of concepts. By working with STEAM kits, students are encouraged to think creatively and critically, developing solutions to real-world problems. This nurtures their problem-solving skills and prepares them for future challenges. The kits often require students to work in groups, promoting collaboration and communication. This teamwork mirrors real-world scenarios, where interdisciplinary efforts are key to success. It will allow students to apply theoretical knowledge in a practical setting, bridging the gap between classroom learning and real-world applications. This makes learning more relevant and engaging.

In the STEAM Labs, these kits will be central to the educational experience, enabling students to explore diverse disciplines in a way that is both fun and educational. As a minimum the following kits should be made part of the project, The bidders are free to propose additional relevant material for each type of kit:

- 1. Electronics Kits:** Solar Panel, Model House, Breadboards, resistors, capacitors, transistors, LEDs, power supplies, multi meters, Arduino UNO and soldering stations.
- 2. IoT Box:** ESP8266 Node MCU, Android Cable, Relay Module (5V 2-Channel), Bread Board, 5V DC Fan, Ultrasonic Sensor, PIR Sensor, Temperature Sensor, Jumper Wires M-F and F-F, LED, Buzzer, Acrylic Sheet (Laser Cutting), SMD LED 4V, Female Pin Socket, M3x38 Hex Spacer Female, M3 Hex Spacer Screws, Electrical Wires (1 Foot Red & Black)
- 3. Robotics Kits:** Microcontrollers, motors, sensors, chassis, gears, and software tools for programming, camera, microcontroller for camera, Raspberry PI, and simulators
- 4. Space Tech Kits:** Water rocket, space mission simulations with controller, and astronomy software.

5. **Game Development Tools:** Open-Source Platform
6. **Design & Arts:** Design Software
7. **Mathematics Tools:** Graphing calculator, geometry kit, software for mathematical modelling. Competitive math books, competitive programming platforms (free).
8. **Hardware Toolkit:** Complete Hardware toolkit for STEAM Projects including soldering equipment, wires, Screwdrivers, pliers, wire strippers, and wrenches for general use. Measuring tools like rulers, callipers, and multi meters, child-safe drills and drill bits Nuts, bolts, screws, soldering mat, oscilloscope, power supply and washers for assembling projects.
9. **Recyclable and Eco-Friendly Materials:** Materials that can be easily recycled or repurposed for prototyping and model-building Cardboard and Foam Boards, Wooden Dowels and Blocks. The awareness among students to use recycled items to use in projects.

#### **Other Equipment:**

**3D Printer:** Installed at each lab, used to print the 3D Print necessary parts and designs made by the students for their projects. It will be used for learning about additive manufacturing. It is also used to get the basic knowledge of 3 axis machines. Its working principle is based of Fused Deposition Modelling.

**VR Box:** To visualize the 3D Models and simulate the games developed by the students.

Note: Bidders who will propose kits along-with spare parts and consumables easily available in local market will be given preference. In addition following will be provided with the kits.

Project Guides: Step-by-step guides for various STEAM projects to help students understand and execute their ideas. In addition, these guides would be developed for all SETAM kits as well.

Posters and Flyers: Visual materials to promote STEAM labs, events, and fairs within the school and community.

### **3.3 Human Resource Development:**

**STEAM & Coding Fellows** will be provided by the M/o FE&PT who will be trained by the service provider in each STEAM discipline enabling them to guide students in project-based learning and curriculum delivery. The STEAM Fellow will be trained for delivering high-quality, interdisciplinary STEAM (Science, Technology, Engineering, Arts, and Mathematics) education in designated FDE schools. The STEAM Fellow will also be responsible for managing and delivering STEAM-focused curriculum, mentoring students in hands-on projects, train the teachers on STEAM in assigned school. The STEAM Fellows will be trained to perform the following tasks:

- I. Instruct students in STEAM Projects, STEAM curriculum implementation, ICT fundamentals, digital literacy, and the development of algorithmic thinking and problem-solving skills.
- II. Extend regular support to existing teachers within the school teaching Mathematics, Science and Computer Studies.

- III. Deliver STEM-focused courses, integrating hands-on activities and project-based learning to reinforce theoretical concepts. The STEAM Fellow will also be responsible for facilitating the connection between the STEAM project's learnings with concepts from the national curriculum and regular subjects such as science, math, and others.
- IV. Guide students through the creation and development of STEAM projects, ensuring alignment with the STEAM Lab objectives.
- V. STEM and STEAM Integration: Facilitate interdisciplinary learning by integrating STEM (Science, Technology, Engineering, and Mathematics) with the Arts, encouraging creativity and innovation in student projects.
- VI. Mentor students in applying theoretical knowledge to real-world challenges, fostering a deep understanding of STEAM principles. Equations that explain physical behaviours and prove them on hardware demonstrations
- VII. Support students in preparing for and participating in STEAM fairs and exhibitions, showcasing their projects at national / international level and promoting awareness of STEAM education.
- VIII. Provide training to students and teachers on effectively using the LMS to enhance the learning experience.
- IX. Stay updated on the latest trends and advancements in STEAM education and digital skills development.
- X. Participate in professional development opportunities to enhance teaching methods and integrate new technologies into the curriculum.
- XI. Provide training and support to other teachers and school staff to ensure the successful implementation of the STEAM curriculum and use of the LMS
- XII. Foster a positive and inclusive learning environment that encourages all students to engage in STEAM activities.
- XIII. Encourage students in developing their digital and technical skills, guiding them through complex problem-solving processes.
- XIV. Engage with parents and the community to raise awareness about the importance of STEAM education and its impact on students' futures.

The Service Provider through its Project Management team will ensure the following:

- I. Result & Evidence based monitoring, refresher training where required, improve visibility of stakeholders through dashboards.
- II. Ensure active participation of students from these schools to National and International Olympiads
- III. Ensure student participation in extracurricular STEAM activities, competitions, and projects. Also organize these events.

- IV. Monitor and assess student progress, providing regular feedback and support to ensure academic success.
- V. Generate evidence-based reports on student performance, project outcomes, and the effectiveness of the STEAM curriculum.
- VI. Collaborate with school administration, project management and other STEAM / STEM initiatives of the M/o FE&PT to refine and improve the STEAM program based on assessment results.
- VII. Work closely with STEAM Fellows, teachers, and project stakeholders to ensure cohesive program delivery across all schools.
- VIII. Ensure training of exceptional students further on advance topics to find further opportunities for them.

The STEAM Fellow will work within the STEAM Labs in designated FDE schools, collaborating with students, teachers, and other stakeholders to deliver a comprehensive and innovative educational experience. The STEAM Fellow will be fully trained by the bidder, quarterly performance evaluation to be performed by the bidder.

The service provider will be provided STEAM fellows for their comprehensive training,

**Comprehensive STEAM Curriculum Familiarization:** Deep understanding of all STEAM disciplines with hands-on workshops and lesson planning.

**Practical Skills Development in STEAM Technologies:** Hands-on training in tools like all kits, 3D printers, VR Tools, IoT devices, and coding platforms.

**Pedagogical Strategies for STEAM Education:** Workshops on inquiry-based and project-based learning to foster critical thinking and creativity.

**Assessment and Monitoring Techniques:** Training on assessment methods, digital tools for tracking, and generating monitoring reports. In addition, LMS usage, student onboarding and its in-class implementation training will also be given.

**STEAM Lab Operations and Maintenance:** Instructions on lab setup, equipment handling, safety protocols, and resource management. Knowledge about the reuseable items implementation shall also be given.

### **3.4 Operations & Maintenance:**

One Year complete operations and maintenance will be responsibility of the bidder which includes:

**Consumables:** Regular replenishment of electronic components, soldering materials, printer filaments, batteries, chemicals for experiments, and other perishable items.

**Maintenance:** Routine servicing of equipment, software updates, and repair of any damaged tools or machines.

**Lab Supplies:** Stationery, safety equipment, cleaning supplies, and other daily use items.

**Internet Connection:** Will be provided by the FDE / Mo FE&PT.

### **3.5 Evidence-Based Monitoring and Result-Based Monitoring Requirements**

The bidder will submit the following reports to gauge performance:

- a. **Participation and Engagement Report:** This report would detail student attendance and involvement in STEAM lab activities, highlighting the level of engagement and identifying any trends or areas needing attention.
- b. **Project Outcomes Report:** A comprehensive report outlining the number and types of projects completed by students, including project descriptions, achievements, and any notable innovations or successes.
- c. **Skill Development Report:** This report would track the development of key skills among students, such as problem-solving, critical thinking, and technical competencies, based on assessments and observations. It would be supported by the baseline, midline and endline assessments. It should include an overview of the progress made towards achieving the project's objectives and any improvements implemented based on previous evaluations and feedback. This report would demonstrate how the bidder has responded to challenges and refined their approach.
- d. **STEAM Fellow's Performance Evaluation:** This report will include a comprehensive report on each fellow's performance in the school against the measured school-wise milestones, including input from school's Head Teacher/Principal.

### **3.6 Showcasing and steam fairs / Workshops**

The STEAM Fairs will be organized by the Federal Directorate of Education for students to showcase their projects. To engage the community, parents, local businesses, and media will be invited to attend, promoting awareness and support for STEAM education.

### **3.7 STEAM Learning Management System (LMS) Requirements**

The bidder is responsible for provisioning its own STEAM learning management system to the students which includes digital content that is aligned with the curriculum and supports the STEAM objectives. It would be an intuitive platform that is accessible to both students and teachers, with features for assignment submission, grading, and feedback. It should allow students to collaborate on projects, including discussion forums, shared documents, and project management tools. It should also track individual performance and provide cumulative progress snapshots through analytics and dashboards to monitor student progress, participation, and performance in real-time. The LMS should be integrated with STEAM Tools and have compatibility with various STEAM software, simulators and tools used in the labs, enabling seamless learning experiences.

### **3.8 Detailed Requirements for STEAM Curriculum & Projects**

Training on well-defined curriculum that spans primary, middle, and secondary levels, with age-appropriate content and activities. Emphasis on hands-on projects that integrate multiple STEAM disciplines and encourage creative problem-solving. Professional development modules to equip teachers with the skills and knowledge to deliver the STEAM curriculum effectively.



This activity will focus on delivering a comprehensive STEAM curriculum for Grades Primary, Middle and Secondary Levels as part of the project in Federal Directorate of Education (FDE) schools within the Islamabad Capital Territory (ICT).

To ensure the sustainability of the project, extensive training and ongoing support will be offered to teachers. This will include the deployment of STEAM solutions in schools and the integration of the newly developed curriculum and content. The project’s outcomes and best practices will be shared with the National Curriculum Council (NCC) under the Ministry of Federal Education and Professional Training. The project team will ensure the integration of STEAM technologies with the existing national curriculum, ensuring long-term impact and alignment with national education goals.

The bidder is expected to cover the following areas with output of real projects based on different scenarios, it wouldn’t be limited to these, the projects could be added/proposed by the vendor:

**Primary Level:** Simple projects like building basic circuits, creating art with digital tools, or developing a simple app using block-based coding:

1. Solar System Model
2. Basic Coding with Scratch
3. Simple Circuit Projects (e.g., Light-up Card)
4. Create a Musical Instrument
5. Design a Basic Web Page

**Middle Level:** Intermediate projects such as designing a robot, creating a game prototype, or conducting an experiment using different kits.

1. Robotics Kit Challenge
2. Math-Based Treasure Hunt
3. Build a Simple Game in Scratch
4. Create a Weather Station
5. Design and Build a Bridge
6. Construct your own gaming avatar

**Secondary Level:** Advanced projects like developing an IoT solution, creating a space mission simulation, or designing a FinTech application.

1. AI-Powered Chatbot
2. Develop a Personal Budget Spreadsheet
3. Advanced Space Rocket Model
4. Create a Functional Website for a Local Business
5. Robotic Arm with Raspberry Pi picking an item using camera

Here's a comprehensive table mapping STEAM courses to the corresponding hard and soft skills:

STEAM Course	Skills	Mapped Hard Skills
<b>Mathematics</b>	Logical reasoning, Quantitative analysis, Problem solving	Proficiency in algebra, geometry, and statistics
<b>Engineering</b>	Design thinking, Building, Testing	Creating and testing structures, Problem-solving through design, Modelling the system/problem, designing a solution, and implementing.
<b>Astronomy</b>	Smartphone astrophotography	Simulators usage, modelling motion of

STEAM Course	Skills	Mapped Hard Skills
	and simulators	planets in software.
<b>IT &amp; Computer Studies</b>	Digital literacy, Making spreadsheets, Basics of encryption	Using digital tools, Data management, Understanding encryption
<b>Artificial Intelligence</b>	AI Tools	Manipulating AI tools, Data extraction and analysis
<b>Coding</b>	Programming, Debugging, Logical thinking	Writing and testing code, Computational logic, Design. Problem solving. Writing and testing code collaboratively. This should also include data structures and algorithms.
<b>Hands-on STEAM Experimentation</b>	Scientific method, Data collection and analysis	Conducting experiments, Analysing results
<b>Arduino Use</b>	Circuit design, Programming, Prototyping	Creating and programming electronic projects
<b>Robotics</b>	Mechanical design, Programming, Teamwork	Designing and programming robots, Collaborative skills, Prototyping using simulators
<b>Art &amp; Design</b>	Visual arts, Graphic design, Creativity	Creating visual and graphic designs
<b>Space Technology</b>	Basic Model Rocketry, Introduction to Satellites, Simple Orbital Concepts, CubeSats	Building rockets, Understanding satellites and orbits
<b>Game Development</b>	Simple Game Logic, Basic Interface Design	Creating game logic, Designing interfaces
<b>Internet of Things (IoT)</b>	Basic Sensor Use, Simple Microcontroller Programming, Introduction to Wireless Communication	Connecting sensors and microcontrollers, Wireless data transmission

Through the STEAM skills provided, a child will gain hard skills in programming, electronics, robotics, and digital media creation, alongside proficiency in using advanced technologies like IoT and biotechnology tools. Simultaneously, they will develop soft skills such as critical thinking, creativity, problem-solving, teamwork, and communication, essential for navigating complex challenges in the modern world.

### 3.8 Requirement for STEAM Education Hours

#### **Course Duration:**

At least 30 to 36 hours of STEAM education per enrolled student in each academic session, with flexibility based on student interest and project complexity.

#### **Group Projects:**

Students work in groups of 4 to complete STEAM project by the end of the course, applying the skills and knowledge gained throughout the year. One project by each group will be mandatory output.

**Capstone Project:** Each group presents their final project at the end of the year, demonstrating their understanding and application of STEAM concepts.

#### **4. Monitoring Mechanism:**

The Project Implementation Committee (PIC) is established to oversee the successful implementation, management, and review of the STEAM Labs initiative in Federal Directorate of Education (FDE) schools situated in Islamabad Capital Territory (ICT). The committee will ensure that the project objectives are met within the allocated time and budget while maintaining high standards of quality. The PIC will be composed of representatives from the following entities:

1. Director General FDE
2. Director Academics, FDE
3. Director Admin, FDE
4. Director Schools, FDE
5. Deputy Director (Ed-Tech), FDE
6. Mr. Akhtar Tarar, ICB, FDE

Member can be added as co-opt or changed time to time with approval of Competent Authority.

#### **The following will be TORs for the PIC:**

- i. Assess and endorse the overall project plan, including timelines, and resource allocation.
- ii. Regularly review the progress of lab setup, curriculum development, and training programs to ensure they meet project standards and timelines.
- iii. Identify and resolve any issues or obstacles that may hinder project progress, including delays, budget overruns, or quality concerns.
- iv. Ensure that all deliverables comply with the defined quality standards, including lab infrastructure, equipment, and educational content.
- v. Conduct periodic evaluations of the labs to assess their effectiveness and impact on student learning.
- vi. Oversee the collection of data on student participation, project outcomes, skill development, and teacher feedback.
- vii. Review and endorse monitoring reports and ensure that evidence-based insights are integrated into project decision-making.
- viii. Convene regular meetings to review project progress, address challenges, and make necessary adjustments.
- ix. Conduct a final review at the end of the project, documenting lessons learned, best practices, and recommendations for future initiatives.

The PIC will report directly to the Secretary, Ministry of Federal Education & Professional Training. Project Manager will maintain detailed records of all decisions, meetings, and project documentation. The PIC will be active throughout the duration of the STEAM Labs project,

including the three-year operational period. The committee will be dissolved upon the successful completion of the project and submission of the final project report.

## 5. Schedule of Payments:

The firm will receive funds as per following schedule:

S#	Description	Schedule	Amount
1.	Mobilization charges against mobilization Bank Advance Guarantee	At the time of signing the contract	15%
2.	Training	Training of STEAM / TECH Fellows	30%
3.	Labs Establishment	Setup of Labs with All Equipment & Kits	45%
4.	Final Payment (Operations & Maintenance) 1 Year	M&E Reports, 1 Year Consumables & Lab Equipment Supplies. Refresher trainings, LMS (1 Years), Complete Operations & Training.	10%

## 6. Bill of Quantities

### Per Lab Setup (Classroom)

S/N	Item	Description	Quantity
1	<b>Infrastructure Development</b>	STEAM Thematic Walls Posters with Plastic Emulsion Paint, PVC Ceiling, Wall to Wall Carpet Tiles, Windows & Doors Sanding & Paint with Repairs, 3 x Branding Acrylic Boards, Electricity Repairs & Lighting, 6 Wooden Cabinets 2.5 D x 4 H X 4 L. 4' High, 2.5' Deep and 8 Feet Long Side Shelves. Side display tables. Electrification, Lighting, Beautification. 10 x Student Tables (4 x 6 Table Made with MDF to be shared with group of 4 Students. (Sample to be approved by the committee)). 40x Student Wooden Chairs (Wooden Chairs matched with Lab Theme (Sample to be approved by the committee)).	R-SQFT
2	<b>Digital Screen 55"</b>	Screen Size: 55", 4K UHD (or higher), 3840x2160 resolution, 60Hz refresh rate, Bluetooth 4.0/5.0, Wi-Fi 2.4GHz/5GHz, 2x HDMI, 2 x USB 2.0, MediaTek 9611 or Quad A55 or up to 1.5GHz or, Mali G52 MP2 or higher Processor, 2GB RAM, 16GB Storage, Android TV™ 11 or Higher OS, Remote control with batteries, Wall Mount Brackets, HDMI Cabel (3 M) & Installation Included.	1
3	<b>Computer</b>	Core i3 10th Gen or Higher, 16GB 250GB SSD 18.5" or Higher, Connected one screen through HDMI. Equivalent All in One Computer or Laptop with 15.6" display will also be acceptable solution.	11

4	<b>STEAM Kits</b>	10 x Electronics Kits 8 x Arduino Starter Kits 6 x IoT Box 10 x Robotics Kits 1 x Space Tech Kit Game Development Platform (Open Source) Arts & Design Software for Full Class Mathematics Tools LMS, Simulators, Software 3 x Hardware Toolkits 10 x Recyclable and Eco-Friendly Materials	As Specified
5	<b>3D Printer</b>	Simple Interface: Touchscreen with intuitive controls. Pre-configured Settings: Preset printing modes. Enclosed Build Area: Fully enclosed for safety. Non-Heated Bed: Safe print surface. Low-Temperature Filament: Compatible with PLA filament. Build Volume: 150 x 150 x 150 mm. Layer Resolution: 100-300 microns. Filament Type: PLA, 1.75 mm diameter. Printing Speed: 40-100 mm/s. Connectivity: USB, SD card, optional Wi-Fi. Bundled Software: Beginner-friendly slicing software. File Formats: STL, OBJ, G-code. Removable Build Plate: Flexible for easy print removal. Auto Bed Leveling: Automatic calibration. Low Noise Operation: Quiet printing. Compact Design: Small footprint. Power Recovery: Resume printing after power outage.	1
6	<b>VR Box</b>	Headset: 184 mm x 160 mm x 98 mm, 515g. Controllers: 126mm x 67mm x 43 mm, 126g (per controller, including the required single AA battery); Around 30 hours of usage from one AA battery. Display: 2 x LCD RGB, 2064x2208px per eye resolution, 120Hz native refresh rate (support for 72Hz, 90Hz and 120Hz modes); Pancake lenses with around 96-degree vertical field of view and 110-degree horizontal; adjustable IPD - continuous slider between 58-70mm. Suitable for users with IPD between 53-75mm. Chipset and memory: Qualcomm Snapdragon XR2 Gen 2 (4 nm), Adreno 740; 128GB 8GB RAM. Tracking: Head and hand tracking through integrated Oculus Insight technology (inside-out tracking), Hand tracking. Headset Battery: Around 4000 mAh (19.44 Wh) lithium-ion (2 to 3 hours of use on a single charge); 18W charging (around 2 hours for a full charge). Audio: Built-in stereo speakers and microphone, 3.5mm audio jack, support for 3D audio. Connectivity: Wi-Fi b/g/n/ac(5)/ax(6E) with 6GHz support and 160Mhz channels; Bluetooth 5.2 LE; Type-C USB port, with USB Host support; 3.5mm audio jack. OS and software: Oculus Mobile, based on Android, uses proprietary Oculus store for apps and games; Supports playing PC VR games through Oculus link and third-party wireless solutions	1

### Generic Requirements (Full Project)

6	Operations & Maintenance	One Year O&M Cost (As outlines above at 3.4).	Complete Assignment
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### Quantities Variation and Repeat Order :

- 15 % Repeat Order and Amendment Modification in terms of Scope and Cost will be covered through the Contract Management

### 7. General Terms & Conditions:

- One Year O&M costs are included in the bidding price to ensure proper implementation and success of the project. Bidders are required to provide a comprehensive warranty for all equipment and offer ongoing technical support and maintenance services for the duration of the project.
- All equipment, software, and materials provided must meet the specified technical standards and safety regulations outlined in the project documentation.
- Bidders must commit to delivering all components of the project, including installation, training, and operational readiness, within the agreed-upon timeline.
- The payments will be made upon completion of the project. The Completion report will be submitted by the bidder and endorsed by the nominated inspection committee.
- Bidder will be required to complete Labs establishment with 3 Months (90 Days) including trainings and deployment.
- Number of labs will be added / dropped within availability of the budget.

## Price Schedule

### Forms Supplier Bid Form

<b>From:</b>	<i>[Insert Supplier's name]</i>
<b>Supplier's Representative:</b>	<i>[Insert name of Supplier's Representative]</i>
<b>Title/Position:</b>	<i>[Insert Representatives title or position]</i>
<b>Address:</b>	<i>[Insert Supplier's address]</i>
<b>Email:</b>	<i>[Insert Supplier's email address]</i>

<b>To:</b>	<b>Procurement Specialist</b>
<b>Purchaser's Representative:</b>	
<b>Title/Position:</b>	
<b>Address:</b>	
<b>RFP/ BIDS Ref No.:</b>	
<b>Date of BID:</b>	

Dear *[insert name of Purchaser's Representative]*:

#### SUBMISSION OF PROPOSAL/BIDS

##### 1. Conformity and no reservations

In response to the above-named RFP, we offer to supply the Services, as per this Proposal and in conformity with the RFP. We confirm that we have examined and have no reservations to the RFP.

##### 2. Proposal Price

The Price Schedule is as under *[insert the total price of the offer in words and figures, indicating the various amounts and the respective currencies]*.

S/N	Item	Description	Units	Quantity	Price
1	<b>Infrastructure Development</b>	As specified	R-SQFT	500SQFT	
2	<b>Digital Screen 55"</b>	As specified	Nos	1	
3	<b>Computer</b>	As specified	Nos	11	
4	<b>STEAM Kits</b> 10 x Electronics Kits, 6 x IoT Box, 10 x Robotics Kits, 1 x Space Tech Kit, Game Development Platform (Open Source), Arts & Design Software for Full Class, Mathematics Tools. LMS, Simulators, Software, 3 x Hardware Toolkits, 10 x Recyclable and Eco-	As specified	Nos.	Complete Sets	

	Friendly Materials				
<b>5</b>	<b>3D Printer</b>	As specified	Nos.	1	
<b>6</b>	<b>VR Box</b>	As specified	Nos.	1	
Per Lab PRICE					
O&M Cost (for Supplies & Repair)					
Total Price					
GST					
Total Price Per Lab Incl. Taxes					
07 Labs Total Price Incl All Taxes					

### 3. Proposal Validity

Our Proposal shall be valid until the 90 days in the RFP, and it shall remain binding upon us and may be accepted at any time before it expires.

### 4. Not Bound to Accept

We understand that you reserve the right to

- a. accept or reject all Proposals and are not bound to accept the lowest evaluated cost Proposal, or any other Proposal that you may receive, and
- b. Annul the RFP process at any time prior to the award of the Purchase Order without incurring any liability to Suppliers.

### On behalf of the Supplier:

Name of the person duly authorized to sign the Proposal on behalf of the Supplier: [insert complete name of person duly authorized to sign the Proposal]

Title of the person signing the Proposal: [insert complete title of the person signing the Proposal]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] day of [insert month], [insert year]



## **INSTRUCTION TO BIDDERS FOR LEGAL IMPLICATIONS ARISING OUT OF CONTRACT:**

Firms securing technical evaluation criteria will be shortlisted against relevant category/lot and hence referred to as 'Responsive Bids' as qualified bids with technical marks . The advantageous bidder will be awarded the contract.

1. The evaluation shall be on the basis of bidder responsiveness to the Terms of criteria technical score sheet and compliance. A proposal shall be rejected at this stage if it does not respond to important aspects.
2. The Department will notify the bidding organization/ firm of the rejection of their technical proposal indicating that their financial proposal if any will be returned unopened after completing the selection process.
3. The Department will notify in writing to the organization/ firm(s) that passed the minimum technical score, and indicate the date, time and address for opening the financial proposal. The opening date shall not be sooner than 5 calendar days after the notification date. The notification may be sent through telephone call or email at address given for official correspondence.
4. On opening the financial proposal i.e., in the presence of the bidding firm(s) representatives who wish to attend, the Department will announce the names of the firm(s), their technical scores, and the amounts of their financial proposals.

### **i. Financial Evaluation**

Financial Proposals of the technically qualified bidders only would be opened and evaluated / compared on the following basis:

1. The financial proposals shall first be checked for any error of computation and arithmetic errors will be corrected.
2. If a bidder does not accept the correction of errors, its bid will be rejected, and its bid security may be forfeited.
3. Items and Services that are required but have been left out or are necessary to correct minor deviations of the proposal will be added to the total proposal price using costs taken from the highest prices from other responsive proposals for the same item and Services, or in the absence of such information, the cost will be estimated at prevailing list prices.
4. To evaluation / comparison of bids, total lump sum cost with all applicable taxes will be considered.

- b. Most advantageous bid will be accepted for contract award.

**Department Right to Accept or Reject any or All Bids**

1. Department reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the effected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for Department action.
2. Department may terminate the Contract at any time by giving written notice to the bidder, if the bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation, provided such termination will not prejudice or affect any right of action or remedy, which has, accrued or will accrue thereafter to Department.
3. If the bidder is unable to fulfill its obligations as mentioned in the work plan and withdraws from the project, Department shall terminate the contract by issuing a written notice and shall not be responsible to pay off any liability incurred towards the bidder and forfeit the security deposit (bid bond amount).

**c. Award Criteria**

1. Department will award the contract to the advantageous bidder, whose proposal has been determined to be substantially responsive.
2. Department will notify by fax/letter by courier, the successful bidder of its intent to enter a contract. The contract shall be executed only after all necessary management approvals have been obtained.

**d. Change of Scope**

At any time prior to the deadline for submission of bids, Department may, for any reason whether at its own initiative or in response to a clarification requested by a prospective Bidder, amend the Tender. Amendments will be provided in the form of Addenda to the Tender and will be sent in writing by courier, cable, facsimile, or electronic mail to all prospective Bidders that have received the Tender Document and will be binding on them. Bidders are required to immediately acknowledge receipt of any such addenda, and it will be assumed that the amendments contained in such addenda will have been taken into account by the Bidder in its bid.

In order to afford prospective bidders reasonable time in which to take the amendment into account in preparing their bids, Department may, at its own discretion, extend the deadline for submission of bids, in which case Department will notify all the bidders.

#### **e. Liquidated Damages on Late Performance**

If at any time during performance of the Contract, the bidder encounters conditions impeding timely delivery of required items/services, the Bidder shall promptly notify Department in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Firm's notice, Department shall evaluate the situation and may at its own discretion, except for cases of Force Majeure, extend the Firm's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

Liquidated damages will be deducted from contract price as per following schedule.

- a) 1<sup>st</sup> 50 days beyond agreed delivery time — 0.2% per day of the total contract value
- b) 2<sup>nd</sup> 50 days beyond agreed delivery time — 0.4% per day of the total contract value.

Delay beyond 100 days will result in termination of the contract by DEPARTMENT. Forfeiture of Performance Guarantee and claim additional Risks & Costs to the extent of getting the work completed by alternate vendors.

#### **f. Fraud & Corruption**

The Department requires that the procuring entities as well as bidders, suppliers, and contractors and their sub-contractors under the Department contracts, shall adhere to the highest standard of ethics during the procurement and execution of such contracts. In this context, the Purchaser; (a) defines, for the purposes of this provision, the terms set forth below as follows:

- a) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
- b) "Fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.
- c) "Coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.
- d) "Collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing

improperly the actions of another party.

- e) "Obstructive practice" means:
- i. deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
  - ii. Acts intended to materially impede the exercise of the Department. Inspection and audit rights provided for under sub clause (a) below.
  - iii. will reject bid(s) if it determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question.
  - iv. Will sanction a firm or individual, including declaring ineligible, for a stated period of time, to be awarded a department. financed contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, a Department financed contract.

The Bidder shall not carry out or cause to carry out the following acts with an intention to influence the implementation of the procurement process or the procurement agreement:

- a) give or propose improper inducement directly or indirectly,
- b) distortion or misrepresentation of facts,
- c) engaging in corrupt or fraudulent practice or involving in such act,
- d) interference in participation of other competing bidders,
- e) coercion or threatening directly or indirectly to cause harm to the person or the property of any person to be involved in the procurement proceedings,
- f) collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Purchaser the benefit of open competitive bid price,
- g) Contacting the Purchaser with an intention to influence the Purchaser with regards to the bids or interference of any kind in examination and evaluation of the bids during the period from the time of opening of the bids until the notification of award of contract.

## ARBITRATIONS:

### AS PER LEGAL CONTRACT LAW AND CONTRACT ACT

PPRA on the recommendation of the Purchaser may blacklist a Bidder for a period of one (1) to three (3) years for its conduct including the following grounds and seriousness of the act committed by the bidder:

- a) if convicted by a court of law in a criminal offence which disqualifies the Bidder from participating in the contract,
- b) if it is established that the contract agreement signed by the Bidder was based on false or misrepresentation of Bidder's qualification information,

A bidder declared blacklisted and ineligible by IT Department and PPRA, shall be ineligible to bid for a contract during the period determined by these stakeholders. The Supplier shall permit SLC to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by Department, if so required by the PPRA.

## General Information Form

All individual firms and/or each partner of a Joint Venture that are bidding must complete the information in this form. Nationality information should be provided for all owners or Bidders that are partnerships or individually owned firms.

Where the Bidder proposes to form a JV, the following information should also be supplied for the JV Partner(s), together with the information in Forms 4.5-4.15. Joint Ventures must also fill out Form 4.5.2a. on **stamp paper**.

1.	Name of firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	Telex
5.	Place of incorporation / registration	Year of incorporation / registration

Nationality of owners'		
Name	Nationality	
2.		
3.		
4.		
5.		
To be completed by all owners of partnerships or individually owned firms		

This information may not be available from the Intensive Training Company.

**4.1 General Information Systems Experience Record**

Name of Bidder or partner of a Joint Venture:
---

All individual firms and all partners of a Joint Venture must complete the information in this form with regard to the management of Information Systems contracts generally. The information supplied should be the annual turnover of the Bidder (or each member of a Joint Venture), in terms of the amounts billed to clients for each year for work in progress or completed, converted to U.S. dollars at the rate of exchange at the end of the period reported. The annual periods should be calendar years, with partial accounting for the year up to the date of submission of applications. This form may be included for Subcontractors only if the Invitation to Bid clauses explicitly permit experience and resources of (certain) Subcontractors to contribute to the Bidder's qualifications.

JV and / OR sub-contractor permitted experience.

The above concept can be modified evaluation factors and responsibilities and open up more space for smaller player to big players. We need to focus on creating a situation that practically big players pay more pivotal role of training and promising of backend technical support for next two years but have less risk in joining hands with domestic or smaller players due to stringent legal framework of the origins.

A brief note on each contract should be appended, describing the nature of the Information System, duration and amount of contract, managerial arrangements, purchaser, and other relevant details.

Use a separate page for each partner of a Joint Venture, and number these pages.

Bidders should not enclose testimonials, certificates, and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.

Annual turnover data (applicable activities only)	
Year'	Turnover
1.	
2.	
3.	
4.	
5.	
Commencing with the partial year up to the date of submission of bids	

#### 4.6 Bidding Firm's Project References

[Relevant services carried out in the past that best illustrate qualifications]

Assignment Name		Country	
Name of Client:		Total No. of delivery Locations	
		(List may be attached)	
Industry			
Address:			
Start Date (Month/Year)		Approx. Value of Contract (in currency):	
Completion Date (Month/Year)			
Items/Services Supplied			Quantity
Narrative Description of Project:			

#### 4.7 Joint Venture Summary (Stamp Paper)

Names of all partners of a Joint Venture

1. Partner in charge

2. Partner

3. Partner

4. Partner

5. Partner

1. Etc.

Total value of annual turnover, in terms of Information System billed to clients;

Annual turnover data (applicable activities only; PKR)					
Partner	Year 1	Year 2	Year 3	Year 4	Year 5
1. Partner in charge					
2. Partner					
3. Partner					
4. Partner					
5. Partner					
6. Etc.					
Totals					



#### **4.8 Particular Systems rollout Experience Record**

Name of Bidder or partner of a Joint Venture

On separate pages, using the format of Form 4.5, the Bidder is requested to list contracts of a similar nature, complexity, and requiring similar information technology and methodologies to the contract or contracts for which these Bidding Documents are issued, and which the Bidder has undertaken during the period. Each partner of a Joint Venture should separately provide details of its own relevant contracts. The contract value should be based on the payment currencies of the contracts converted into U.S. dollars, at the date of substantial completion, or for ongoing contracts at the time of award.

#### 4.9 Details of Contracts of Similar Nature and Complexity

Name of Bidder or partner of a Joint Venture:

Use a separate sheet for each contract.

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of Purchaser	
3.	Purchaser address	
4.	Nature of Information Systems and special features relevant to the contract for which the Bidding Documents are issued	
5.	Contract role (check one)  Prime Supplier  Management  Contractor  Subcontractor  Partner in a Joint Venture	
6.	Amount of the total contract/subcontract/partner share (in specified currencies at completion, or at date of award for current contracts)	
	Currency	Currency                      Currency
7.	Equivalent amount PKR	
	Total contract: PKR,              Subcontract: PKR,              Partner share: PKR;	
8.	Date of award/completion	
9.	Contract was completed    months ahead/behind original schedule (if behind, provide Explanation).	
10.	Contract                      was                      equivalent    under/over    original (if completed                      contract amount                      over, provide explanation).	
11.	Special contractual/technical requirements.	
12.	Indicate the approximate percent of total contract value (and PKR amount) of Information System undertaken by subcontract, if any, and the nature of such Information System.	



#### 4.11 Summary Sheet: Current Contract Commitments / Work in Progress

NOT APPLICABLE

Name of Bidder or partner of a Joint Venture:
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Bidders and each partner to a Joint Venture bid should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Name of contract	Purchaser, contact address/tel./fax	Value of outstanding Information System (current PKR equivalent)	Estimated completion date	Average monthly invoicing over last six months (PKR/month)
1.				
2.				
3.				
4.				
5.				
etc.				

#### 4.12 Financial Capabilities

Name of Bidder or partner of a Joint Venture:
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Bidders, including each partner of a Joint Venture, shall provide financial information to demonstrate that they meet the requirements stated in the Evaluation Criteria. Each Bidder or partner of a Joint Venture shall complete this form. If necessary, separate sheets shall be used to provide complete banker information. A copy of the audited balance sheets shall be attached.

Autonomous subdivisions of parent conglomerate businesses shall submit financial information related only to the particular activities of the subdivision.

Banker	Name of banker	
	Address of banker	
	Telephone	Contact name and title
	Fax	Telex

Summarize actual assets and liabilities in U.S. dollar equivalent (at the rates of exchange current at the end of each year) for the previous five calendar years. Based upon known commitments, summarize projected assets and liabilities in U.S. dollar equivalent for the next two calendar years, unless the withholding of such information by stock market listed public companies can be substantiated by the Bidder.

Financial information in PKR	Actual: Previous five years			Projected: Next two years	
	3	2	1	1	2
1. Total assets					
2. Current assets					
3. Total liabilities					
4. Current liabilities					
Revenue					
5. Profits before taxes					
6. Profits after taxes					

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts.

Source of financing	Amount
1.	
2.	
3.	
4.	

Attach audited financial statements — including, as a minimum, profit and loss account, balance sheet, and explanatory notes.

If audits are not required by the laws of Bidders' countries of origin, partnerships and firms owned by individuals may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns.

#### 4.13 Candidate Summary

Name of Bidder:
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Position		Candidate	
		Prime	Alternate
Candidate information	Name of candidate	Date of birth	
	Professional qualifications		
Present employment	Name of Employer		
	Address of Employer		
	Telephone	Contact (manager / personnel officer)	
	Fax	Telex	
	Job title of candidate	Years with present Employer	



#### **4.16 DECLARATION on OATH**

*[Name of the Seller/Supplier]* hereby solemnly declares its intention not to obtain or induce the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business practices.

Without limiting the generality of the foregoing, *[the Seller/Supplier]* represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, Vendor, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

*[the Seller/Supplier]* certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

*[the Seller/Supplier]* accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, *[the Seller/Supplier]* agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by *[the Seller/Suppliers]* as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation. or benefit in whatsoever form from GOP.



#### 4.17 GENERAL DECLARATION

(To be filled/signed/stamped by the prospective bidder i.e. Principal and by the Local Agent on their Letter Head)

The Prospective Bidder will have to certify that:

- Their Firm / Company / Local Agent with current or any other title & style has not been involved or Mitigating in any manner or kind of litigation with Department
- Wrong declaration to above fact will be liable to legal proceedings including but not limited to confiscation of Bid Bond / Performance Bond & Blacklisting of Firm (the Principal) and also Local Agent

Sign / Name: \_\_\_\_\_

Principal's Name / Address: \_\_\_\_\_

Designation: \_\_\_\_\_

Date: \_\_\_\_\_

Stamp: \_\_\_\_\_

Sign / Name: \_\_\_\_\_

Local agents Name / Address: \_\_\_\_\_

## 5 BID SECURITY DOCUMENTS

### 4.1 BID SECURITY (BANK GUARANTEE)

[insert: **Bank's Name, and Address of Issuing Branch or Office**] **Beneficiary:** [insert: **Name and Address of Purchaser**]

Date: [insert: date]

BID GUARANTEE No.: [insert: **Bid Guarantee Number**]

We have been informed that [insert: name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated [insert: bid date] (hereinafter called "the Bid") for the execution of [insert: name of contract] under Invitation for Bids No. [insert: IFB number].

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee, and that the bid guarantee automatically covers any alternative bids included in the Bid, if the Bidder is permitted to offer alternatives and does so.

At the request of the Bidder, we [insert: name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [insert: amount in figures] ([insert: amount in words]) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- a) has withdrawn the Bid (or any parts of it) during the period of bid validity specified by the Bidder in the Bid Submission Form or any extension of the period of bid validity which the Bidder subsequently agreed to; or
- b) having been notified of the acceptance of the Bid by you during the period of bid validity, (i) failed or refused to execute the Contract Agreement, or (ii) failed or refused to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bid's validity.

Consequently, any demand for payment under this guarantee must be received by us at

the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees,  
ICC Publication No. 458.

[Signature(s)]

{Note to Bidders: Instructions on amount and currency can be found in the Section  
2.13. Joint Ventures need to also ensure that their Bank Guarantee meets the  
requirements for Joint ventures as provided in the same section.}

#### 4.2 Performance SECURITY 10% (Performance Bank Guarantees BOND)

Issuing

Authority: Date

of Issuance:

Date of Expiry:

Claim Lodgment Date:

WHEREAS [Name and Address of the Contractor] (hereinafter called "the Contractor") has agreed to supply the Services and render the Services against Tender Name (hereinafter called "the Contract") for the Contract Value of PKR (in figures \_\_)(in words \_\_\_\_\_)

AND WHEREAS it has been stipulated in the Tender Document that the successful Contractor shall furnish Performance Security, within ten (10) working days of the receipt of the Acceptance Letter from the Client, in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document to the Client, for a sum equivalent to Rs. (to 10% of the one (01) year contract value, on a yearly basis, with an undertaking to renew the Bank Guarantee before the end of each year, one month before the expiry period of the submitted bank guarantee) valid from the date of issue until all obligations have been fulfilled in accordance with the Contract; AND WHEREAS [Name of the Bank] having registered office at [Address of the Bank] (hereinafter called "the Guarantor") has agreed to give the Contractor a Guarantee;

THEREFORE, the Guarantor hereby affirms to bind himself, his successors and his assigns to the Client, for the sum of PKR (in figures \_\_\_\_\_) (in words \_\_\_\_\_) and undertakes to pay to the Client, upon receipt of his written demand(s), any sum(s) as specified by him, not exceeding the above limit in aggregate, without cavil / argument and without the Client having to substantiate / prove or to show grounds / reasons for such claim(s), on the occurrence of any / all of the following conditions:

1. If the Contractor commits a default under the Contract.
2. If the Contractor fails to fulfill any of the obligations under the contract.
3. If the Contractor violates any of the provisions of the Contract.

Provided that the Client shall specify the occurred condition(s) owing to which the said sum is due to him. Provided further that any demand(s) / claim(s) from the Client shall reach the Guarantor within thirty working days after the expiry of the Guarantee.

This guarantee shall remain valid up to \_\_\_\_\_ or all obligations have been fulfilled in accordance with the Contract, whichever is earlier. Date this \_\_\_\_\_ day of 20

GUARANTOR

Signature\_\_\_\_\_

CNIC # \_\_\_\_\_

Name\_\_\_\_\_

Designation\_\_\_\_\_

Address \_\_\_\_\_

[Note for Bidders: Instructions on amount and currency can be found in the Section 2.US. Joint Ventures need to also ensure that their Bid Bond meets the requirements for Joint Ventures as provided in the same section.]

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