



**MINISTRY OF DEFENCE THROUGH THE PROJECT DIRECTOR OF ITS GREENAI
PROJECT MANAGEMENT UNIT (“PROCURING AGENCY”)**

REQUEST FOR PROPOSAL

GREENAI-AAUR-GREEN CABIN/RFP02/2025

FOR

DESIGN & DEVELOPMENT OF COMPLETELY FUNCTIONAL GREEN CABIN

AS A COMPONENT OF PSDP APPROVED PROJECT TITLED

**“DEVELOPMENT OF ICT AND ARTIFICIAL INTELLIGENCE (AI) BASED
PRECISION**

**AGRICULTURE SYSTEMS UTILIZING DUAL-USE AEROSPACE TECHNOLOGIES -
GREEN-AI”**

Issue Date: 18 February, 2025

1. The procuring agency invites sealed bids from Firms, companies registered with Income Tax and Sales Tax Department for Design & Development of Completely Functional Green Cabin on **Turnkey Basis**” as specified in Request for Proposal document.
2. A complete set of bidding documents, containing detailed terms and conditions are available for the interested bidders at Project Management Unit (PMU), Project GreenAI NASTP, Alpha 03, Old Airport Road, Rawalpindi (if required). Price of bidding documents is Rs. 1000/-. To discuss the RFP, NO DEMAND CERTIFICATE All Prequalified firms are requested to attend the pre-bid meeting. No TA/DA would be admissible.
3. Bids prepared in accordance with instructions in the bidding document must reach at following address on or before **10 March, 2025 at 1100hrs**. Bids will be opened on same day **10 March, 2025 at 1130hrs** in presence of the Procuring Agency or their authorized representatives.

Project Director (GreenAI)
NASTP, Alpha 03,
Old Airport Road, Rawalpindi
Email: pd@greenai.org.pk

Date:- 18 Feb, 25

DISCLAIMER

All information provided/ clarified in this Request for Proposal (RFP) is in the best interest and faith of the parties involved. This RFP is neither an agreement nor an offer/ invitation of agreement by the procuring agency 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 the formulation of their proposals pursuant to this RFP. The information published in this document is not intended to be exhaustive. Though adequate care has been taken in the presentation of this RFP document, the assumptions, assessments, statements, and information contained in this RFP, may not be complete, accurate, adequate, or correct. Interested bidders shall, therefore, required to make their own investigations and assumptions wherever required and satisfy themselves that the RFP document is complete in all respects. Intimation of discrepancy, if any, should be given to the specified office immediately. If no intimation is received by the office till the date mentioned in the document, it shall be deemed that the RFP document is complete in all respects and parties submitting their proposals are satisfied that the RFP document is complete in all respects.

Information provided in this document or imparted to any respondent as part of RFP process is confidential to the procuring agency and shall not be used by the bidders for any other purpose, distributed to, or shared with any other person or organization.

HBL ISLAMIC BANKING اسلامی بینک		Deposit Slip Customer Copy	
Branch: _____		Date: 14/02/2025	
Account Title: Public Procurement Regulatory Authority Islamabad.			
IBAN: PK H A B B 0 0 0 4 5 4 0 0 1 3 1 0 0 7 0 1			
Currency: <input checked="" type="checkbox"/> PKR <input type="checkbox"/> USD <input type="checkbox"/> EURO <input type="checkbox"/> GBP <input type="checkbox"/> JPY <input type="checkbox"/> Others		Account Type: <input type="checkbox"/> Current <input type="checkbox"/> Savings	
Credit Card No. _____			
<input type="checkbox"/> CASH		AMOUNT	
BANK / BRANCH: HBL		CHEQUE/INSTRUMENT NO.: B619360	45,000/-
		TOTAL AMOUNT	45,000/-
Total Amount in Words: Forty five thousand only.			
Depositor's Name: M. Adnan Contact No.: 0321-5757370 Depositor's CNIC No.: AT2004524320-7 Depositor's Account No.: _____		Other Banks Cheque Deposit Branch: 5384-IBB Ghouri Town Br From Account: XXXXXX Account Name: PK17HABB0004540013100701 Amount: *****45,000.00 PKR Charges: *****0.00 Date: 2025-02-14 Teller: CL35 Time: 15.04.52.701000	
Received By: _____		Depositor's Signature: _____	
		(As per Terms & Conditions on reverse) (Not official unless validated)	
		27002043	

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BIDDING PROCESS INSTRUCTIONS

1. **Bid Reference No.** NASTP-GREENAI-UAV/RFP01/2025
2. **Procurement Agency**

Ministry of Defence through the Project Director of its GreenAI Project Management Unit.
3. **Invitation of Bid**

Procuring Agency invites sealed bids for for “Design & Development of Completely Functional Green Cabin” during financial year 2025-26 as per RFP (SRS-01 & RFP-01).
4. **Pre-bid Meeting**

To clarify any ambiguity / lack of understanding before submission of final bids, a meeting is planned for convenience of bidders on i.e. 1130 hrs on 27 February, 2025 at **NASTP Alpha-03, Old Airport Road, Rawalpindi**. Participating firms are requested to provide particulars of their reps on Ph. No. 0321-9400527 / 03244411999 at least one (01) day prior to tender opening date and the pre-bid meeting date for necessary arrangements. The bidders’ representatives should attend, at their own cost, expense and arrangement (including obtaining visas and travel documents, if required), the meeting(s) to obtain clarifications and any other information required for preparation of the Bid. Moreover, the procuring agency may organize more than one (01) pre-bid meeting.
5. **Last Date & Time of Submission of Bid:** 10 March, 2025 at 1100hrs
6. **Bid Opening Date & Time:** 10 March, 2025 at 1130hrs
7. **Bid Opening Address**

Project Management Unit (PMU), Project GreenAI, NASTP, Alpha 03, Old Airport Road, Rawalpindi.
Tel: 0321-9400527, 03244411999
Email: sm_scm@greenai.com
8. **General Instructions to Bidders**
 - (a) The bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the procuring agency, or any other costs incurred in connection with or relating to its Proposal.
 - (b) The procuring agency reserves the right to reject any or all of the bids submitted in response to this RFP document at any stage without assigning any reasons whatsoever. The procuring agency also reserves the right to withhold or withdraw the process at any stage with intimation to all who have submitted their proposals in response to this RFP.
 - (c) Any time prior to the deadline for submission of bids, the procuring agency may change / modify / amend any or all of the provisions of this RFP document without assigning any reason. All addenda / corrigenda shall form part of the RFP documents and shall be notified in writing to all prospective bidders and will be binding on them.

The prospective bidders should acknowledge receipt of any such addendum / amendment in the RFP document(s).

(d) The Bidder may modify or withdraw its Bid after the Bid submission but prior to deadline for submission of the Bids, provided that written notice of the modification or withdrawal is received by procuring agency.

(e) No Bid may be modified subsequent to the deadline for submission of the Bids.

(f) No Bid may be withdrawn in the interval between the deadline for submission of Bids and the expiry of the period of Bid validity specified by the Bidder on the Bid Form. Withdrawal of a Bid during this interval may result in forfeiture/encashment of the Bid Security.

9. Procurement Procedure

The procuring agency is adopting a '**SINGLE STAGE-TWO ENVELOPE**' bid procedure as specified in rule 36(b) of PPR 2004.

10. Language of Bid

The Bid prepared by the bidder and all correspondence and documents relating to the Bid exchanged between the Bidder and procuring agency and / or any representative of procuring agency, shall be written in English language. Any supporting printed literature furnished by the Bidder written in another language should be accompanied by an English translation of its pertinent pages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

11. Submission of Proposals

(a) Proposals are to be submitted as hard copy via post or by-hand sealed as under:

(i) The Bid shall comprise a single package containing two (02) separate envelopes. Each envelope shall contain separately the technical proposal and the financial proposal.

(ii) **Technical Proposal:** Technical proposal is to be submitted in **duplicate** in a separate sealed envelope and clearly marked "**Technical Proposal without prices**", Tender number and date of opening. The Technical Proposal Envelope shall contain: -

A. Technical Proposal as per System Requirement Specifications **Annexure 'A'**

B. Bidding Forms & **Annexure 'D' to Annexure 'F'** (Duly filled & signed by authorized signatory)

C. Bid Security in a separate sealed envelope clearly marked **Bid Security**, Tender Number.

D. Soft copy of Technical Proposal in the form of USB in a separate sealed envelope clearly marked "**Soft Copy of Technical Proposal**", Tender Number.

(iii) **Financial Proposal:** It shall contain Financial Proposal Form **Annexure 'C'** filled and duly signed in a separate sealed envelope clearly marked on the face "**Financial Proposal with prices**", tender number.

- (iv) Both the “**Envelopes**” of Technical and Financial proposals should be enclosed in one cover, properly sealed, and bear the address of procuring agency with tender number and opening date.
- (b) Failure to provide any of the required information specified in the RFP document with the ‘Technical Proposal’ (Envelope 1), and in the prescribed format (where applicable), may lead to disqualification of the Bid and the affected Bidder’s ‘Financial Proposal’ (Envelope 2) will be returned unopened.
- (c) The procuring agency reserves the right to verify the letters, documents or information provided by any bidder from issuing parties and may (together with its advisers) visit and hold meetings with them which shall be facilitated by the bidder. Furthermore, failure to provide the Financial Proposal in the form required under this RFP document may also result in disqualification of the Bid.

12. Evaluation Process

- (a) The procuring agency intends to exercise the MOST ADVANTAGEOUS bid in conformance with PPR 2004.
- (b) The Bid shall comprise a single package containing two (02) separate envelopes. Each envelope shall contain separately the technical proposal and the financial proposal.
- (c) The envelopes shall be marked clearly as “TECHNICAL PROPOSAL” and “FINANCIAL PROPOSAL” in bold and legible letters to avoid confusion.
- (d) Initially, only the envelope marked “TECHNICAL PROPOSAL” shall be opened.
- (e) The envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of the procuring agency without being opened.
- (f) Procuring agency shall evaluate the technical proposal in the manner prescribed herein, without reference to the price and reject any proposal which does not conform to the specified requirements.
- (g) During the technical evaluation no amendments in the technical proposal shall be permitted.
- (h) Technical Qualification evaluation shall be based on the criteria given in **Annexure ‘B’ Evaluation Criteria**, regarding Bidder’s Technical Experience, Product Capabilities, Design Process and Solution Presentation, etc. as demonstrated in the qualification documents submitted by the Bidder.
- (j) The Bidders qualifying in each of the category as per the SRS-01 Annexure ‘A’ evaluated through Annexure ‘B’ in addition to the fulfilment of mandatory requirements, shall be considered qualified.
- (k) Financial bids of only the technically qualified bidders shall be opened and evaluated by procurement committee as per PPRA rules.
- (l) Work will be awarded to the bidder offering most advantageous bid evaluated.
- (m) Prior to the expiration of the period of bid validity, procuring agency will notify the successful bidder in writing of its intent to award the contract. The contract will be

executed subject to satisfactory discussion of the terms and conditions of the contract. The discussion shall be in accordance with PPR 2004 provisions of Pakistan.

(n) Upon the successful bidder's furnishing of performance guarantee pursuant to this RFP, procuring agency will promptly notify each unsuccessful Bidder and will discharge their respective bid security(s). The technical and financial proposals of both successful and unsuccessful bidders will be retained by the procuring agency.

(p) The bid sum as submitted and read out during financial bid opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity except that if the Bid is substantially responsive, the procuring agency shall handle only the undermentioned errors on the following basis:

(i) Bidders shall be notified of any correctable error detected in their bid during the notification of award.

(ii) Any arithmetic errors in the submitted bid arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be rectified on the following basis:

A. If there is a discrepancy between words and figures, the lowest amount, either in words or figures, shall be considered.

B. If there is discrepancy between the unit price and the total price which is obtained by multiplying the unit price and quantity, or between sub-total and the total price, the unit or sub-total price shall prevail, and the total price shall be corrected.

C. In case of discrepancy between sub-total price obtained by adding various prices in the schedule and the sub-total price indicated for that particular schedule, the sub-total obtained by addition of various arithmetically corrected prices would be considered for evaluation.

D. In case of any discrepancy in the applicable rates or calculation of applicable taxes discussed, agreed and added to the contract amount in separate lines, as needed, corrections in item and subtotal prices may be allowed as per applicable Govt. rates / rules.

E. The procuring agency shall be entitled to award the contract to the most advantageous bidder after applying permissible arithmetic / tax corrections in the bid proposal sheets. If the bidder does not accept the correction of the errors as above, his bid will be rejected.

13. Joint Venture and Consortium Participation

(a) To ensure a comprehensive and high-quality solution, bidders are permitted to form Joint Ventures (JVs) or Consortiums for this project. Interested companies may collaborate by entering into a formal agreement to jointly submit a proposal that meets the full scope of requirements.

(i) The joint proposal must be submitted under a lead (mother) company, which will serve as the primary contracting entity and assume full responsibility for project execution, compliance, and deliverables.

- (ii) Each participating entity must explicitly define its role, scope of work, and key deliverables in the proposal, ensuring clear accountability and avoiding overlaps or ambiguities.
- (iii) A legally binding Joint Venture Agreement (JVA) or Consortium Agreement must be signed by all involved parties and submitted as part of the proposal. The agreement should outline governance structure, financial commitments, liability distribution, and dispute resolution mechanisms.
- (iv) The lead company will be the single point of contact for all contractual, financial, and administrative matters, ensuring seamless project management.
- (v) The financial and technical capabilities of all partners will be jointly evaluated, and the proposal must demonstrate the combined strength and synergy of the JV or Consortium to effectively execute the project.
- (vi) Any subcontracting arrangements within the JV must also be transparently declared, with clear details of responsibilities and execution methodology.
- (vii) In case a JV proposal is submitted, failure to provide a well-defined partnership structure and accountability details may result in disqualification. The procuring agency reserves the right to conduct its audit / verification / evaluation of the JV agreement / documentation submitted in this regard.

14. **Consultancy**

A minimum of 03 consultants / part time HR is to be engaged by the bidder for the duration of contract validity. The proposed team members / part time HR / consultants would be engaged with mutual consent of both the parties with PD GreenAI as final authority. The details of the HR are to be mentioned in Form A-5

15. **Bid Security**

- (a) Bid security will be equal to **Rupees 250,000/-** and will be in the shape of pay order / demand draft in favor of Project Director GreenAI, Alpha-03, Old Airport Road, NASTP Rawalpindi. Bid security shall be attached with the technical proposal otherwise proposal will not be accepted.
- (b) Bids without required Bid security will be rejected without any right of appeal.
- (c) The bid security shall be forfeited in case of occurrence of any one of the following:
 - (i) If a bidder withdraws its bid during the period of bid validity specified in this RFP document; or
 - (ii) In the case of successful bidder, if it fails:
 - A. To furnish Performance Guarantee in accordance with the RFP document; and
 - B. To sign the contract.
- (d) Bid security of unsuccessful bidders will be returned upon the award of contract to successful bidder, and after furnishing of the Performance Guarantee.

16. Performance Guarantee

- (a) Performance Guarantee (PG) equal to **10%** of total contract amount will be submitted before signing of contract. PG will be kept against SLA/support and will only be released after completion of warranty / technical support period (1 year) as per the contract.
- (b) The Performance Guarantee shall be as Bank Guarantee Form (attached with draft contract) or CDR from any Scheduled Bank in Pakistan in favor of Project Director GreenAI, Alpha-03, Old Airport Road, NASTP Rawalpindi.
- (c) In case of cancellation of contract due to default of the supplier, the performance guarantee shall be forfeited in favor of procuring agency.
- (d) The bidder should quote its rates clearly in Pak Rupees in the Financial Proposal in both figures and words as per format attached at **Annex 'C'**.
- (e) The Bid shall remain valid for **ninety (90) calendar days** from technical bid opening date and further it may be requested to be extended by procuring agency.
- (f) A bid valid for a shorter period shall be rejected by procuring agency as non-responsive.
- (g) Price and all other terms and conditions shall be fixed and firm throughout Bid validity period.
- (h) No currency exchange rate will be applicable and bids with a condition of currency exchange rate applicability will be rejected without any right of appeal.
- (i) Bid(s) shall be inclusive of all applicable taxes, duties, charges, levies, etc.

17. Payment Procedure

- (a) Milestone based payment disbursement procedure will be adopted as per milestones annexure "K".
- (b) Acceptance criteria against milestones will be finalized as per specifications and made part of the contract document. All payments will be subject to acceptance of milestones against the acceptance criteria which is made part of the final contract.
- (c) Bidder is to present a Sales Tax invoice (where applicable) / numbered bill upon completion of each milestone for disbursement of the amount agreed upon for the completed milestone as per the final contract.
- (d) All taxes applicable on the amount of bill will be deducted at source.
- (e) Crossed cheques of applicable amount (in the favor of the respective bidder) will be issued from Project Director (**GreenAI Project**).
- (f) Bank charges incidental to the withdrawal of payment shall be borne by the Supplier.

Table 1. Schedule of Payment*

18. Delivery/Completion Period

(a) All components of the tender shall be delivered within twelve (12) months time after effective date of signing of Letter(s) of Acceptance (LoAs).

(b) Delivery period may be extended in case of events beyond the reasonable control of Bidder. Bidder shall inform in writing to procuring agency of any such event and may request for extension in delivery period.

19. Litigation

In case of any dispute only Court of Jurisdiction at Islamabad Pakistan will have the Jurisdiction to decide the matter.

20. Force Majeure

(a) "Force Majeure" means an exceptional event or circumstance, which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party.

(b) The developing agency / firm / vendor shall, within fifteen (15) days of its commencement, notify the Procuring Agency of any such event, act or circumstance which is relied upon by the Supplier for its inability to comply with its obligation. The Purchaser shall have the right to conduct investigations to satisfy itself about the genuineness of the "Force Majeure" event, act or circumstance. Non-availability of raw material for the manufacture of the Goods or export permit for the export of the Goods from the country of its origin shall not constitute "Force Majeure."

(c) If by reason of "Force Majeure" the Goods are not delivered by the due date, then the Delivery Period may be extended appropriately for the purpose, provided the said Goods shall be ready to be delivered within one (1) month of the stipulated delivery date. If the said Goods are not ready to be delivered after the lapse of one (1) month as aforementioned, then the Purchaser shall have the right to cancel the Contract by informing the Supplier of the cancellation in writing. This, however, will not apply to consignments of Goods already accepted and delivered according to the terms of the Contract. The Supplier shall not be entitled to any compensation whatsoever as a result of this cancellation.

21. Arbitration

All matters of dispute or difference, except regarding rejection of stores / Services by the inspector and or cancellation of the contract by the Purchaser arising out of this contract between the parties hereto, shall be settled by mutual agreement, failing which they shall refer for Arbitration to Project Director Green AI who will be the sole arbitrator of the disputed matter and two representatives, one to be nominated by each party, will assist PD Green AI for decision. The award/decision of PD Green AI (The Sole Arbitrator) will be final and binding on all parties such as Supplier, Purchaser and related party (if any).

22. Risk Purchase

In the event of failure on the part of the developing agency to comply with the contractual obligations, the contract is liable to be cancelled at his risk and expense of Successful bidder.

23. Application of Official Secret Act 1923

All matters connected with this in query and subsequent actions arising there after fall

within the scope of the Pakistan Official Secret Act 1923 which forbids providing contractual information to un- authorized/ un-concerned person/ organization. It is therefore, requested to ensure complete secrecy regarding documents and stores concerned with the inquiry to limit the number of employees having accesses to this information.

24. Withdrawal of Offer

If the bidder withdraws its bid or backs out from providing items won by the bidder within validity period at any stage of contract finalization, procuring agency may place such bidder under embargo for a period of twelve months, which may extend up to eighteen months and forfeiture of Bid Security or Performance Guarantee, as applicable.

25. Disqualifications

Proposals will be liable to be rejected if any deviation is found from the instructions as laid down in the bid document i.e.

- (a) Technical bid is submitted without the required bid security.
- (b) Proposals are found conditional or incomplete in any respect.
- (c) Multiple rates are quoted against one item.
- (d) Bids are received after specified date and time.
- (e) Mandatory requirements of Evaluation Criteria are not fulfilled.
- (f) Mandatory Technical Requirements are not properly adhered to.
- (g) Any inferior product/specifications than the specifications provided in SRS-01 document.

26. Authority to Sign Documents

Proposal must be accompanied by Letter of Authorization to sign the Tender on behalf of the Bidder. Bidder must prove that the person who signs this Tender is fully authorized to bind his establishment / company.

27. Grievances Redressal Committee (GRC)

(a) After submission of bid and prior to award of the contract, any bidder feeling aggrieved by any act of procuring agency may lodge a written complaint concerning his grievances to GRC constituted under Rule 48 of PPRA within 07 days of announcement of the technical evaluation report and 05 days after issuance of final evaluation report.

(b) GRC will immediately initiate the investigative action and decide the complaint within ten days of its receipt. The decision of GRC shall be intimated to the complainant / aggrieved bidder. The decision of the GRC shall be binding upon all the parties.

28. Bidding Clarifications

(a) In case any clarification is required regarding RFP, bidder may contact on following address till one week prior to the deadline for submission of tenders.

Technical Clarification: 0333-5261488/ 0321-5562788

Bidding Procedure: 0321-9400527/ 03244411999

A prospective bidder requiring any clarification of the RFP documents which is essential to enable the prospective bidder to submit its Bid, may notify the

procuring agency in writing through on email address of the Project Director GreenAI mentioned below.

(b) The procuring agency may reach out to the prospective bidders for additional information or clarification during the submission, evaluation, and discussion periods.

29. Rights Reserved

Procuring Agency reserves the right to accept or reject any proposal and to annul the procurement process and reject all proposals at any time prior to contract award as per rule 33 of PPR 2004 without there by incurring any liability to the affected Bidder.



Project Director (GreenAI)
NASTP, Alpha 05,
Nur Khan Base, Old Airport Road,
Rawalpindi
Email: pd@greenai.org.pk

Date:- 18 February, 2025

SRS-01

SYSTEM REQUIREMENT SPECIFICATION

FOR

AS A COMPONENT OF PSDP APPROVED PROJECT TITLED “DEVELOPMENT OF ICT AND ARTIFICIAL INTELLIGENCE (AI) BASED PRECISION

1. Introduction: The proposed GreenAI project solves the agriculture inefficiency problem in Pakistan by creating a GreenAI ecosystem, which is a comprehensive P-Ag solution for multi-scale indoor and outdoor farming. GreenAI takes a multi-pronged approach towards Precision Agriculture, installing GreenCabin (GCs) for small urban farming system and large scaled commercial farming. State-of-the-art irrigation system, automated sensing system and data processing software shall provide easy to use, end-to-end solutions in conjunction with automated workflows that will provide high yield and safe food for consumers without requiring any technical expertise in GC operation. GreenAI based GC shall make use of fully autonomous irrigation and climate controls to mitigate crop stresses due to local environment. They shall provide farmers not only insights about their crop's health, water stress and disease conditions that cannot be detected through the naked eye but also high yield and season free crop production.

2. Thus, this effort endeavors to develop Green Cabin Technologies (GC) capable of conducting GC based P-Ag operations.

3. Project Description: This project focuses on design & development of GC for multi crop production in controlled environment, and training of technical staff for managing GC operations round the year. The GC will be fully autonomous and will require minimum user intervention. The user will be able to produce all kind of fruits and vegetables round the year under controlled environment. Such GCs will be capable of producing various fruits and vegetables and other herbal and floriculture material round the year. This GC will enable efficient crop production, high yield and off season vegetables and fruits for ensuring food safety and security in the country as well as globally. In addition, all the hardware and software systems necessary to support whole GC are also requested. The requirements described in this RFP are tailored to various GCs for multiple operations of various field sizes. Developers may submit proposals for the development of a new GC for use in agriculture, which meets the specifications described in this RFP. The proposed GC may be in any stage of development from design to production. There will be close work with the selected Bidder to monitor, advise and foster the development, testing and certification of the proposed GC while remaining a separate entity, legally and financially, from the developer. The selected developer will be offered a contract for early adoption and large-scale purchase upon provision of GC that meets the requirements. This RFP is open to the public.

4. Scope of Project: The project aims to indigenize the design & development of GC for various crops production round the year. The Bidder shall provide fully automated greenhouse capable of producing various crops round the year. The GC will consist of GCs, GCS for quality production of crops, Software Package and Technical Support Package(s). Training of technical staff is required in the following domains:

- (a) Green Cabin Operations

- (b) GC efficiency
- (c) GC Maintenance

5. Technical Requirements of GC

Technical requirements of GC are described in the subsequent sections:

a) **Mandatory Requirements:** This section enlists the mandatory requirements that **MUST** be fulfilled by the bidder in their design and development of GC. All proposed greenhouses should consider all aspects of the requirements in Table 1 (Annexure – A). The procuring agency will have the rights to disqualify the bidders not meeting the eligibility and mandatory criteria, and if decided so by the procuring agency, their bids will not be considered for further evaluation. Adequate description & supporting materials shall be provided on how the Bidder's design fulfill these requirements. Proposals failing to meet any mandatory requirement or furnishing adequate details as required will not be considered for Technical Evaluation.

b) **Originality of Product:**

(a) The GC proposed under this RFP must be an original design/product of the bidder, with all major sub-systems designed in-house and production ready design documents delivered to the purchaser.

(b) The Bidder cannot outsource sub-let design or development of the GC to another entity under the contract awarded through this RFP.

6. **Sensors Integration:** The list and technical specifications of all the sensors will be finalized by GreenAI Team at the time of execution of contract. The developer shall ensure the integration of provided sensors with GC after due coordination with pertinent teams of GreenAI project.

7. **Project Tracking Mechanism:** The bidder shall possess adequate project management system and information regarding work in pipeline, milestones achieved, work in progress and future tasks must be updated at online project tracking tool (Trello, Redmine etc.).

8. **Detailed Specifications of GC:** As per Table 1 of Annexure 'A'.

GREEN CABIN DETAILED SPECIFICATION

A completely functional Greencabin of the size of atleast 01 Acre on 'Turnkey basis' is required to be built at Pir Mehar Ali Shah Attock Campus, Attock with following but not limited to these specifications with all necessary systems as specified in this RFP, for production of diversified fruits, vegetables, spatiality crops, herbs and flowers in 'fully controlled environment' round the year.

Name of Items	Specifications	
Green cabin 01 Acre Size	<p>1. Greencabin Structure. The green cabin skeleton is all produced by stereotyped molds and galvanized material. The connection of the skeleton is connected by galvanized bolts and self-tapping screws. The shape of the skeleton and the material specifications have been carefullycalculated. The wall thickness of various profiles is considered in addition to the strength and the rust and corrosion effects.</p> <p>2. Material specification for structure of Greencabin (The maximum height of green cabin will be between 20 to 25 feet and width and length will be determined during survey): Column = 80 x 40 x 2.5; End column = 50 x 30 x 1.5; Gutter S1.8 * 500; Cross beam Φ32 x 1.5; Arch Φ32 x 1.5; PurlinΦ25 x 1.5; Inner diagonal brace Φ25 x 1.5;</p> <p>3. Standard as per international standard (from GB/T5237-93), Rubber seal. Connection parts: galvanized Fitting: Bolts, nuts, washers, self-tapping screws.</p> <p>4. Commercial Multi-Span Plastic Film for covering the Greencabin will be of thickness between 200-250 microns</p>	
	Embedded parts	Specifications
	Main column HDG(hot-galvanizing)	100mm*50mm*2.0mm
	Hot Dipped Galvanized (HDG) Vice column:	50mm*50mm*2.0mm
	HDG Span truss=metaphysical	50mm*50mm*2.0mm*500m
	HDG Side Wall beam	50mm*50mm*2.0mm
	"A" type beam =Hot-dip galvanizingtube	30mm*50mm*2mm
	HDG Outwards window column	100*50*2mm
	Rain gutter	3.0mm
	<p>Technical specifications</p> <ol style="list-style-type: none"> 1. Greencabin ventilation cooling design 2. Greencabin Structure Design Load 3. Greencabin Engineering Terminology 4. Design Specification for Greencabin Control System 	

5. Technical Specifications for Design, Construction and Acceptance of Greencabin Foundations
6. Compulsory provisions of engineering construction standards
7. Regulations on Construction Safety Production Management
8. The Environmental Protection Law of the Islamic Republic of Pakistan
9. Code for Acceptance of Construction Quality of Concrete Structures
10. Code for Acceptance of Construction Quality of Masonry Engineering
11. Code for Acceptance of Construction Quality of Building Water Supply and Drainage and Heating Engineering
12. Code for Acceptance of Construction Quality of Building Electrical Installation Engineering
13. Standards for Safety of Building Construction Inspection
14. Safety Technical Specifications for Temporary Electricity Use at Construction Sites
15. Safety Technical Specifications for Construction Work at High Heights
16. Technical data
 - Wind resistance minimum 0.55KN/m²
 - Constant load minimum 0.19KN/PFM
17. Rain drainage 190mm / h with rain water storage capability.
18. Internal sunshade system. Internal and external Screening Sheet (grey color 50% light penetration) on complete structure be installed with necessary material pipes and allied accessories.
19. White aluminum foil shading net, motor transmission accessories
External sunshade to meet lux requirement value of 25000 during sunshine hours. frame, black shading net, motor transmission accessories
20. Please note that the vendor will be responsible to prepare the necessary concrete foundation required to install the green cabin pillars etc. The base floor of the greencabin of 01 Acre will be elevated by 1.5 ft above the ground level. The entire floor of 01 Acre of Greencabin will be of compressed soil to be covered by Mulch Sheet (Double sided black & white sheet) for entire cabin area. Base columns will be constructed per design of Green cabin to properly hold the columns. Greencabin structure will be mounted on the base columns as per design requirements. **The vendor will be responsible for proper design and careful installation of Greencabin structure and all components.**

<p>Drip Irrigation, Intelligent fertilization system, RO Plant, Mistig system</p>	<p>Smart drip irrigation system</p> <p>1. Smart drip irrigation system integrated with soil moisture sensor system will be installed to give water to the plants according to the plants water requirement. The vendor is responsible for proper and careful designing and installation of the Smart Drip Irrigation and integration with intelligent fertilization machine components and integrate with central control system. Bidder should attach design calculation with proposal.</p> <p>Intelligent fertilization system</p> <p>2. Intelligent fertilizer machine is used for mixing ratio of water soluble fertilizer to realize intelligent and scientific irrigation. It comes with pH/EC test Automatic water soluble fertilizer with three mixing drums of 2000 Litre capacity each.(Link with Serial No 14).</p> <p>Misting system</p> <p>3. Misting system in all Greencabin with 10-100 micron mist size and pump for maintaining pressure of 800 to 1200psi. It must have its own water tank of 1000 Gallons capacity.</p> <p>4. RO Plant (2000 liters /Hour with Food Grade Dosage and 20000 literstorage Tank)</p> <p>5. Ambient Air: 1-45 °C</p> <p>6. Water Temperature: 1-45 °C</p> <p>7. Irrigation Pipe to be designed according to irrigation requirements and standards</p> <p>8. Quantity 10000 Pressurized Emitters with 1-2 BAR pressure with flow rate of 0.5- 1 GPH.</p> <p>9. Rain Drip sticks 10000 units</p> <p>10. Plastic tubing 2mm (10000 meter)</p> <p>11. Gutter Trays as per length of the gutter without any joint</p> <p>12. Irrigation pump as per design</p> <p>13. Drainage Pump as per design (Submersible pump Single phase, 2hp)</p> <p>14. Tanks for Recipe (3 No. Tough Plastic with Non-Corrosive coating,acid resistant, wide open mouth with lids) 2000 liter Capacity each.</p>
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<p>Electrical Fixture and sensor network</p>	<p>Electrical panel for controlling of all the component of Greencabin as per following details.</p> <ol style="list-style-type: none"> 1. The system includes electrical control box, covered steel cable trough, cable and accessories, for complete electrical systems of the Greencabin. 2. The electric control box is placed in the green cabin to facilitate the installation, commissioning and maintenance of equipment in the green cabin. 3. Install waterproof and splash-proof sockets for electricity use in the control room and Greencabin. 4. The inner conductor wire is made of moisture-proof insulation with cooper core. 5. Grounding system of copper wire with maximum five Ohms resistance to be installed for all electrical appliances in the Green cabin. 6. The vendor is responsible for proper and careful design and installation of the Electrical systems, sensor network along with associated cabling and all its components and then integrate it with central control system. Bidder is to attach electrical wiring diagram with proposal.
<p>Cooling system</p>	<ol style="list-style-type: none"> 1. Cooling system along with its exhaust fans, cooling pads, water storage and circulation system is required to be designed which ensure the green cabin temperature @23-28 degree centigrade during summer season. Calculations for cooling system design including cooling fans, cooling pads and water storage requirements are to be submitted with the technical proposal. Additionally, water circulation system and pump requirements which ensures complete wetting of the cooling pads are also required to be calculated and submitted along with the technical proposal. 2. Cooling Pads and Fans Frame: Aluminum profile inside with excellent hydrophobic system with dedicated aluminum upper and lower frame, built-excellent hydrophobic system. Service life span up to twenty years under the well maintained condition. Please place the drainage box in a suitable location in the green cabin.50 meter running length of frame. Cooling pads are to be covered externally with insect net built with pipe frames on back at a distance of atleast tow feet to avoid insect entry. 3. Performance characteristics:- <ol style="list-style-type: none"> (a) Uses the new material and the spatial crossing linking technology, high absorb ability, high water resistant, anti-mildew and long service life. (b) Large evaporation area, cooling efficiency as high as 80%. (c) The product involves surface active agent, absorb water naturally, fast speed of pervasion, lasting effectiveness. A piece of

	<p>water can diffuse in 4-5 seconds. Height of absorb water: 60-70 mm/5 seconds, 200mm/1.5 hours, can achieve international standard.</p> <p>(d) No allergenic substances, environment-friendly, safety, conservation, affordable</p> <p>Water circulation system The vendor is responsible for proper designing and careful installation of the cooling system and all components and integrate with central control system. Bidder must attach design calculation of cooling system with proposal. Moreover, It will also support reuse of drain water with the use of an EC recirculation control, or to mix various water sources</p>
<p>Heating system</p>	<p>Heating system is required which should ensure the green cabin temperature @15-20 degree centigrade during winter season. Electric Warm Fans along with conveying ducts/ heating distribution system or any other advanced systems for this purpose is required to be designed and submitted in the proposal.</p>
<p>Intelligent Control system</p>	<ol style="list-style-type: none"> 1. PLC (or advanced system) based intelligent and user friendly compact system is required which integrate all systems including but not limited to climate control, irrigation, Fertigation, Lux and all other systems control of the Greencabin. It should also include dual display on mobile/laptop and computer system. The system should also have back up to restore all data which can be utilized for further analysis. The data and control must be equipped with minimum 3 sensor sets (specifically used in Hydroponics), of EU or American origin, of each including temperature, humidity, precipitation, moisture, media temperature, NPK, EC, pH at all stages and steps including stock solution, irrigation solution, media and drain, CO2 etc. with duplicate display of Microsoft surface pro 7 or latest version. All data must be displayed at Greencabin control room and Control Room at PMAS AAUR with minimum 65 inch LCD. 2. Intelligent control system consist of following elements: 3. Weather Station: <p>A weather station is essential for monitoring outdoor environmental conditions. It collects data on parameters such as:</p> <p>Temperature: Ambient air temperature.</p> <p>Humidity: Relative humidity (moisture content in the air).</p> <p>Light: Intensity of sunlight.</p> <p>Radiation: Solar radiation levels.</p> <p>Wind Speed: How fast the wind is blowing.</p> <p>Wind Direction: The compass direction from which the wind is coming.</p> <p>Rainfall: Precipitation amount.</p> <p>This data helps you make informed decisions for outdoor activities, agriculture, and safety.</p>

4. **Indoor Environment Sensor:**

Indoor sensors focus on maintaining optimal conditions within a controlled environment (like a greenhouse). They typically measure:

NPK Levels: Nutrient levels (Nitrogen, Phosphorus, Potassium) for plant health.

pH: Soil or water acidity/alkalinity.

EC (Electrical Conductivity): Indicates nutrient concentration in water.

Humidity: Relative moisture in the air.

CO2 Levels: Carbon dioxide concentration.

Water Temperature: Temperature of water (important for hydroponics).

Light (Lux): Illuminance level.

Indoor Temperature: Ambient air temperature.

Placing sensors at minimum 3 points in the greenhouse ensures accurate monitoring.

5. **Greenhouse Control Software/Intelligent cabinet:**

This software automates, manages and transmits data of various greenhouse systems to cloud of GreenAI:

Shading System: Automatic adjusts shading to control light exposure.

Cooling System: Automatic regulates temperature by managing ventilation, fans, and cooling pads.

Irrigation System: Automatic schedule the irrigation according to water requirement.

Heating System: Automatic regulates heating in winter by observing outdoor and indoor temperature of green cabin.

Sunlight System(lux): Controls natural light entry.

Data Collection: Automatically records environmental data (temperature, humidity, etc.). Generates reports and graphs of data for further analysis.

Remote Monitoring: Allows you to remotely monitor the greenhouse from a mobile device or computer.

The vendor is responsible for proper and careful installation of the sensors and all components and integrate with central control system for realizing intelligent system.

Note: Bidder must also submit technical and financial proposal of Hoogen Doorn Intelligent Control System version IIVO or latest compatible with this Greencabin System.

<p style="text-align: center;">UV-C System for Airborne Pathogen Control</p>	<p>UV-C System for Green Cabin UV-C Light System for Airborne Pathogen Control in a 1-Acre Hydroponic Greenhouse</p> <p>Using UV-C (Ultraviolet-C) light is an effective method to eliminate airborne pathogens, mold, and bacteria in an enclosed hydroponic greenhouse. The right specifications ensure optimal coverage, safety, and efficiency without harming plants or humans.</p> <hr/> <p>6. UV-C Light Specifications (For 1-Acre Greencabin)</p> <p>(a) Wavelength & Intensity</p> <p>(i) UV-C Wavelength: 253.7 nm (Most effective for pathogen destruction).</p> <p>(ii) Minimum Intensity: >10,000 µW/cm² (at source) for effective disinfection.</p> <p>(b) Total UV-C Power Required</p> <p>(i) Air Disinfection Requirement: 0.2–0.4 W per cubic meter.</p> <p>(ii) Greenhouse Volume (Approx.):</p> <ul style="list-style-type: none"> ○ Area: 1 acre (43,560 sq. ft.). ○ Height: 20 ft average. ○ Total Volume: 871,200 cubic feet (~24,670 cubic meters). ○ Total UV-C Power Needed: 5,000 - 10,000 W (5-10 kW) for full air circulation disinfection. <p>(c) Recommended UV-C Fixtures: To ensure even distribution and complete pathogen elimination, use of fixed Ceiling fixtures are recommended of 150-200 W per unit with installation of 25-30 units.</p> <p>(d) UV-C Exposure Time & Safety: Recommended Exposure Time is of 15-30 minutes per section (if used at night). It must have Automated Scheduling with operation during non-working hours to avoid exposure risks. It must have Shielding by use of reflective surfaces (e.g., aluminum-coated panels) to enhance UV-C efficiency.</p>
<p style="text-align: center;">Fan circulation system</p>	<p>Fan circulating system is required to be designed to improve uniformity of temperature, humidity, CO2 concentration etc. It must include size and quantity of fans to achieve improved uniformity.</p>
<p style="text-align: center;">Lighting system</p>	<p>LED grow lights of 500-650 nanometer wavelength (or advanced options) along with wavelength controller are required to be designed and installed, in order to improve photosynthesis to 18 hours a day. PAR Meter is also to be provided along with the Grow Lights. Calculation for number of Grow lights is to be submitted in the technical proposal.</p>

<p>Head House / Store</p>	<ol style="list-style-type: none"> 01 room of the size of 20 X 10 Meter size along with internal partitioning (as per requirement) would be required for staff/ storage/ control/ packing/office etc. 03 community shower/ bathrooms with tiles, accessories and complete sanitary fittings are also to be provided. 02 Eye washer stations are also required to be installed along the designated locations. Offices and control room is to have air conditioning units with cooling & heating. Main entrance to this room is to have double entry door system and must be equipped with wash basin and sanitary protocols. Atleast 05 fire extinguishers of 25 lb capacity are required for meeting emergency. 																
<p>Green House Machinery</p>	<ol style="list-style-type: none"> 03 Carts (hydraulic, automatic, adjustable with height of 20 ft) 15 Sulfur Heaters with 15 Air Circulating Fan (Power 100W Max) Glass wire for hanging 8000 plants Mulch Sheet (Double sided black & white sheet) for entire cabin area 01 Lifter electric 1.5 tones 05 Trolley (harvesting cart) 20000 Clips for Plant Support 04 each pH, EC, Soil Moisture, digital meters of EU standard with following specifications: <ul style="list-style-type: none"> EC Meter Specifications: <ul style="list-style-type: none"> Conductive range 0.00 to 19.9 ms/cm Conductivity resolution 0.01ms/cm Accuracy ± 2% FS pH Meter Specifications: <ul style="list-style-type: none"> pH Range 0.00 to 14.00 pH Resolution - 0.01 pH Accuracy ±0.1 pH Auto calibration Seed Storage Refrigerator It must have following specs: <table border="0" data-bbox="402 1501 1307 1978"> <thead> <tr> <th>Specification</th> <th>Recommended Range</th> </tr> </thead> <tbody> <tr> <td>Temperature Range</td> <td>0°C - 10°C (32°F - 50°F)</td> </tr> <tr> <td>Humidity Control</td> <td>25% - 40% RH</td> </tr> <tr> <td>Capacity</td> <td>100 - 500 liters (based on storage needs)</td> </tr> <tr> <td>Shelving System</td> <td>Adjustable stainless steel racks</td> </tr> <tr> <td>Cooling Type</td> <td>Compressor-based with digital control</td> </tr> <tr> <td>Defrost System</td> <td>Auto-defrost with condensation control</td> </tr> <tr> <td>Power Supply</td> <td>110V/220V, Energy-efficient (≤ 300W)</td> </tr> </tbody> </table> 	Specification	Recommended Range	Temperature Range	0°C - 10°C (32°F - 50°F)	Humidity Control	25% - 40% RH	Capacity	100 - 500 liters (based on storage needs)	Shelving System	Adjustable stainless steel racks	Cooling Type	Compressor-based with digital control	Defrost System	Auto-defrost with condensation control	Power Supply	110V/220V, Energy-efficient (≤ 300W)
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	<p>Backup System Connected with installed Generator</p> <p>Door Type Double-sealed, insulated, glass/solid door</p> <p>Monitoring System IoT-enabled temp & humidity sensors with alerts</p>
Security/Safety system.	CCTV Cameras for internal Greencabin , control rooms and exit point with 30 days back up and display in control room with remote monitoring.
Power and Solar system	Bidder must design solar system with hybrid inverter to meet power requirements of Greencabin and adjacent rooms/offices and control room during day time. Moreover, 02 Hour battery back-up shall be provided for offices and control rooms for night time operations. Moreover, power from close by WAPDA Electricity Pole is also to be included in the technical and financial proposals including provision of transformer (if any). Moreover, Green Meter and other wires for WAPDA power must also be included in the technical and financial proposal.
Generators	Generator of sufficient power/ wattage to power greencabin and adjacent offices/ control rooms shall also be included in the technical & financial proposal.
Top ventilation system	Automatic Top and both sides ventilation systems covered with insect net Main Accessories: plastic-film reeling motor ,plastic-film shaft, plastic-film-fastening profile, telescopic arms, etc Cooling pad film rolling system. 40 mesh insect net. Electric motor 100watt Voltage 220V,50HZ Planting stands.(According to design) Crop hanging system. .(According to design) Growing media slab of coco peat.(According to requirement of design green cabin)
Internet connection	Very high speed Internet connectivity is required for intelligent control system and transmission of data to other locations for observations /controlling reasons.

PREPARATION OF PROPOSAL

1. The Bidder will submit its Financial Proposal in the form as provided in **Annexure – C**. The Financial Proposal Envelope shall consist of one (1) original copy and two (2) hard copies. The original and two (2) hard copies of the Financial Proposal are required to have the signature of a duly authorized person of the Bidder with the Bidder’s seal/ stamp.

2. Any Bid received by the procuring agency after the Deadline for Submission of Bids shall be rejected and returned unopened to the Bidder. Delays in the mail/courier, delays of person in transit, or delivery of a Bid to the wrong office shall not be accepted as an excuse for failure to deliver a Bid at the proper place and time. It shall be the Bidder's responsibility to determine the way timely delivery of its Bid will be accomplished either in person, by messenger or by mail/ courier.

(LETTER OF PROPOSAL)

[On Letterhead paper of the Bidder including full postal address, telephone no., fax no., e-mail address etc.]

Dated _____

Project Director GreenAI
NASTP Alpha 05,
Old Airport Road, Rawalpindi

Email: pd@greenai.org.pk

Dear Sir,

1. Reference is made to the tender Enquiry No. _____.
2. Attached to this letter are documents listed below defining:
 - (a) The principal place of business.
 - (b) Duly filled-in all Proposal Forms along with required supporting documents and all other documents required to be submitted along with proposal.
3. We agree to abide by this Bid for a period of 90 days after the date fixed for technical proposal opening, or as extended, as per instructions given in RFP and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. We have submitted the Bid Security for an amount provided for in the RFP which is part of our Bid, issued in accordance with the provisions of the RFP, along with our technical proposal.
5. If our Bid is accepted, we will submit the Performance Guarantee for the required sum on the form as provided for in the RFP issued in accordance with the provisions of the RFP.
6. The procuring agency reserves the right to annul the procurement process. Further, procuring agency may reject all bids or proposal at any time prior to award of contract without incurring any liability to the affected bidders or any obligation to inform the affected bidders of the justification for procuring agency' action.
7. The procuring agency and its authorized representatives may contact the following persons for further information, if needed:-

Contact 1	Tel:
Contact 2	Tel:

8. This Proposal is made with the full understanding that:
- (a) Bids will be subject to verification of all information submitted for Request for Proposal at the time of bidding.
 - (b) The procuring agency reserves the right to amend the scope and value of any Contract under this project.
9. The undersigned declare that the statements made, and the information provided in the duly completed Proposal are complete, true, and correct in every detail.

Stamp & Signatures

(In capacity of)

Duly authorized to sign bid for and on behalf of

WITNESS:

Signature

Address _____

BIDDER INFORMATION

Company Name	
Company Owner	
Company Registration	
Company Registration Date	
Company Address	
Workshop Address (if applicable)	
Phone Number	
Email Address	
Company Website (URL)	

Focal Person Details:

Full Name	
Position/Title	
City	
Phone Number	
Email Address	
Other Contact Info	

(Name)
(Designation)

EVALUATION CRITERIA

1. The technical evaluation committee appointed by the Project Director GreenAI shall carry out its evaluation for the received proposals, applying the evaluation criteria mentioned hereunder.

Mandatory requirements

2. All mandatory requirements / documents mentioned and demanded vide this RFP by the procuring agency are to be submitted. Moreover, the bidder is to fill all the forms and meet other proposal preparation requirements as given in **Annexure ‘A’** i.e. System Requirements Specifications. Procuring Agency reserves the right to disqualify a bidder in case if any desired documents / forms or data is found incomplete / missing.

Detailed Requirements

3. Only the complete proposals submitted as per requirements of the bidding documents outlined in this RFP would be considered for evaluation. The detailed evaluation will be carried individually for each of the categories mentioned in the undermentioned table for compliance: -

Category	Evaluation Criteria	Remarks
Technical Compliance	Adherence to technical specifications, system design, and requirements as outlined in the SRS, Annexure ‘A’ of this RFP.	Mandatory Compliance with each of the provided specifications.
Experience & Past Projects	Proven track record in designing and implementing smart irrigation systems. Must have completed at least 02 Projects of similar nature within past 03 years.	Documented references and case studies must be submitted with the Technical Proposal. Each of the submitted document / project details / case study / certificate would be duly verified by the Procuring Agency.
Component Quality	Quality of proposed materials, equipment, and accessories.	Must meet international and accepted industry standards.
Automation & Integration	Level of automation, remote operation capability, and IoT integration.	Must comply with each of the requirement / specification. Compatibility with existing infrastructure.

Training & Support	Training plan, duration, and after-sales technical support	Min. 1-year support and on-site training as required.
Warranty & Maintenance	Warranty duration and preventive maintenance plan	Min. 1-year warranty with service, maintenance and all related manuals as required.
Project Timeline	Realistic and efficient completion timeline	Completion of the entire project milestones as per the time schedule with minimum downtime for system deployment.
Sustainability Aspects	Solar integration, energy efficiency, and environmental impact.	Complete proposal with worked out wiring diagrams, proposed power distribution, load distribution and execution plan with all the concerned agencies must be submitted and would be evaluated. Green energy solutions preferred

4. **Solution Presentations.** Proposed Solution would be evaluated by a panel of experts nominated by Project Director GreenAI. The presentation would be held during the evaluation phase after opening of technical proposals, schedule would be announced by procuring agency after / on the opening date of technical bids. The presentation is to cover brief profile / experience of company in relevant domains, understanding of the project based on SRS, and capability of the firm to undertake such projects including prior experience. Furthermore, the Presentation should briefly elaborate the complete solution offered by the bidder along with technical specifications and status of compliance with the requirements mentioned in SRS and evaluation criteria. The presentation sessions are **mandatory and must be made exactly in accordance with the submitted technical proposal**. The hardcopy of the presentation is to be submitted during the presentation session and would be considered part of the technical proposal.

FINANCIAL PROPOSAL FORM

1. TENDER INQUIRY No:
2. Time and Date of Opening :

(1)	(2)	(3)	(4)	(5)	(6)	(7)
S No	Item / Component	Description / Specifications	Cost in Fig	Sales Tax in Fig	Total Price in Fig	Total Price in Words

Grand Total _____ Rs.
In Words _____

(NAME)

(DESIGNATION)

Notes:

1. Please add additional rows to mention unique cost elements not listed in the table.
2. All sub-modules and services, as applicable to the relevant category, must be quoted separately.
3. Taxes on Services like training, HR salaries / consultancy, Cloud services etc are to be quoted as per GoP rules.
4. Each cost element would be treated independently (as a separate service). The procuring agency reserves the right to drop any service out of the package offered (along with its cost element) and alternatively provide that to the successful bidder or decide not to use that at all (for example: Cloud hosting services, Data purchase service/cost etc).

* Please fill "Annexure C(I)" for recording details of resource wise HR consultancies / part time HR only. **(May not be permanent members of the Bidding Company)**

Annexure “C-1”

**DETAILS OF THE CONSULTANCIES’ COST FOR PART TIME EMPLOYEES /
CONSULTANTS**

Note: The table is to be filled for all consultants / part-time employees proposed to be hired for the project.

Name	Position	Duration (months)	Rate (PKR) / month	Unit (number of hours/month)	Total Amount
Consultants (Part Time)					
Soil Expert				60	
Software				60	
Engr xxx				60	
xxx					
xxx					
Grand Total					

Grand Total _____ **Rs.**

In Words _____

(Name)

(Designation)

**UNDERTAKING
(Fill in and Return)**

To

**Project Director (Green AI)
Project Management Unit
Rawalpindi**

Dear Sir,

I/We hereby submit our bid to supply “Design & Development of 01 Acre Greencabin on Turnkey Basis” detailed in the SRS as you may specify in the contract at the prices given in Annex “C” and further agree that this bid will remain valid up to 90 days from the date of bid opening and will not be withdrawn or altered in terms of rates quoted and the condition stated therein on or before this date.

I/We understood the instructions to Tenders and condition of contract as laid down in tender document and thoroughly examine specification / drawing and / or patterns quoted in the Schedule to Tender and am/are fully aware to the nature of the goods required and my/our offer is to supply goods strictly in accordance with the requirements.

Witness’s Signature:

Name:
N.I.C No.
Address:
Date:

Signature of Bidder:

Name:
N.I.C No.
Capacity in which Signing:
Address:
Date:
Tel: Telex/Fax

**NON-DISCLOSURE AGREEMENT (NDA) OF
CONFIDENTIAL INFORMATION**

Except as required to further the relationship between the procuring agency and M/s_or as expressly authorized in writing on behalf of procuring agency, M/s_____, its **shareholders/partners, directors, advisors, officers, and employees** shall not disclose, provide or share directly or indirectly by any mean (verbal, writing, social media), any Confidential Information (partial or complete) during the period of his/her relationship with the procuring agency or any time after the termination of such relationship.

Signed

Signed

Bidder

Bidder

Dated:

Dated:

**CERTIFICATE FOR CORRECTNESS OF
DATA / DOCUMENTS / INFORMATION**

(Date:.....)

It is certified that the data/ documents/ information submitted in our Proposal is absolutely correct to best of our knowledge and we accept full responsibility for its accuracy.

We understand that any false or incorrect data/ documents/ information may result in disqualification of our bid at any stage of procurement process.

Signature of Authorized Representative: _____

Name/Designation of Authorized Representative: _____

Designation of Authorized Representative: _____

**FORM OF COMPLETION CERTIFICATE
(FOR SUPPLY OF TECHNICAL SUPPORT SERVICES)**

MILESTONE ACCEPTANCE CERTIFICATE

It is certified that [_____] has successfully completed, concluded / delivered stores / services as per **milestone No** [_____] of [_____].

The stores [_____] / services [_____] and (S.No. to be mentioned) have been checked according to the acceptance criteria and found all items / services satisfactory and completed in all aspects.

Signature & Stamp of issuance Authority _____

Name _____

Dated _____

PERFORMANCE GUARANTEE FORM

(On Pakistan Judicial Stamp Paper of Rs.100 or as suitable to the amount of BG)

To: _____

_____ [Address]

- **Type of Guarantee:** Performance Guarantee
- **Guarantee No.:** _____
- **Name and Address of Guarantor:** _____
- **Place of Issue of Guarantee:** _____
- **Guarantee Amount and Currency:** _____ [in numbers]
_____ [in words] (the "Guaranteed Amount")
- **Form of Presentation of Guarantee:** _____
- **Place of Presentation of Guarantee:** _____
- **Date of Issue of Guarantee:** _____
- **Guarantee Valid up to:** _____ [Expiry Date]
- **Name and Address of Supplier on whose behalf Guarantee is issued:**

- **Reference Contract No.:** _____ dated _____
- **Name and Address of Beneficiary:** _____

THIS PERFORMANCE GUARANTEE is executed at _____ on this ____ day of _____ 2022 by:

_____ [Name of the issuing Bank] having our registered office at _____ and issuing branch office at _____ (the "Guarantor", which expression shall mean and include its successors, executors, administrators, and permitted assigns);

On the request and on behalf of _____ [Name of Supplier] (the "Supplier" which expression shall mean and include its successors, executors, administrators, and permitted assigns);

In favor of _____ ("THE PURCHASER") (the "Beneficiary", which expression shall mean and include its successors, executors, administrators and assigns).

WHEREAS:

- A. The Beneficiary and the Supplier have entered into a Contract for the supply of GC and Services dated _____ (the "Contract").

B. In consideration of the Beneficiary entering into the Contract with the Supplier, the Guarantor, at the request and on behalf of the Supplier, hereby furnishes this irrevocable, unconditional, without recourse, on demand bank guarantee (the "**Performance Guarantee**") in favor of the Beneficiary in order to secure the performance of the Supplier's obligations under the Contract (the "**Guaranteed Obligations**").

NOW, THEREFORE, this Performance Guarantee witnesseth:

1. In the event that the Supplier defaults in, delays, or fails, to perform the Guaranteed Obligations, of which events the Beneficiary shall be the sole arbiter, the Guarantor shall, on the Beneficiary's first written demand, pay to the Beneficiary the entire sum of, or any portion of, the Guaranteed Amount as specified in the Beneficiary's written demand within three (3) days of the receipt of the written demand (the "**Due Date**"). Such first written demand of the Beneficiary shall only state that the Supplier has defaulted in, or delayed, or failed, to perform the Guaranteed Obligation stated in the written demand under and in accordance with the terms of the Contract.
2. The Guarantor hereby binds itself unconditionally and irrevocably, and undertakes and guarantees to pay the Guaranteed Amount, as primary obligor and not merely as surety, on first written demand of the Beneficiary, without protest or demur and without reference, notice or recourse to the Supplier or any other person, and hereby expressly waives all rights to deny its obligation to the Beneficiary irrespective of any dispute, difference or disagreement between the Supplier and the Beneficiary or contest by any other party or person.
3. At any time during the validity of this Performance Guarantee, the Beneficiary may, at its sole discretion and decision, demand payment of the entire Guaranteed Amount, or any portion thereof, from the Guarantor. The decision of the Beneficiary as to the Supplier's default, delay, or failure in performing the Guaranteed Obligations shall be final and binding on the Guarantor, which shall not be questioned by the Guarantor in any manner whatsoever.
4. This Performance Guarantee shall remain in full force and be effective for a period up to _____ and the Guarantor's obligations under this Performance Guarantee shall be for payment of the Guaranteed Amount or part thereof as may be demanded by the Beneficiary from time to time.
5. The Beneficiary may, if and when and in such manner as the Beneficiary in its sole discretion deems appropriate, grant time or other indulgence to or accept or make any composition or arrangement with the Supplier and/or vary, renew, discharge, realize, release, enforce or deal with any other securities, guarantees, obligations, decrees, contracts, or agreements, now or hereafter made or held by the Beneficiary, and such acts shall not affect in any way whatsoever the Beneficiary's rights under this Performance Guarantee, and shall not affect in any way whatsoever the Guarantor's liability hereunder, or discharge the Guarantor from its obligations under this Performance Guarantee.
6. The Guarantor's obligations as set out in this Performance Guarantee shall be continuing

obligations and shall not be modified or impaired upon the happening, from time to time, without the Guarantor's assent or otherwise, of any act or omission, or any circumstances or events which would otherwise discharge, impact or otherwise affect any of Guarantor's obligations contained in this Performance Guarantee.

7. Demands under this Performance Guarantee may be made from time to time in accordance with its terms. Partial payments of the Guaranteed Amount shall not discharge this Performance Guarantee and this Guarantee shall remain in full force and effect in accordance with its terms for the difference from time to time between the aggregate total of the partial payments made and the Guaranteed Amount.
8. No delay or failure to exercise any right or remedy under this Performance Guarantee by the Beneficiary shall constitute a waiver of such right or remedy. No single or partial exercise of any right or remedy shall preclude any other or further exercise thereof or of any other right or remedy. No waiver by the Beneficiary shall be valid unless made in writing.
9. No set-off, counter claim, reduction, or diminution of any obligation that the Guarantor has or may have against the Beneficiary shall be available to it against the Beneficiary in connection with any of its obligations to the Beneficiary under this Performance Guarantee. The Guarantor shall make all payments under this Performance Guarantee in _____ [*indicate currency*] and in full, without set-off or counterclaim and free and clear of any deductions or withholdings in immediately available, freely transferable, cleared funds for value on the Due Date to the Beneficiary, provided that if the Guarantor is required to make any deduction or withholding from such payments under applicable law, it shall pay to the Beneficiary such additional amount necessary to ensure that the Beneficiary receives an amount equal to the amount which it would have received had no such deduction or withholding been made. In the event under the laws of Pakistan the payment of the Guaranteed Amount in a currency other than Pakistan Rupees is prohibited or becomes unlawful, or the due execution, validity, enforceability or performance of the obligations of the Guarantor hereunder is questioned by any Court, the State Bank of Pakistan or other competent authority or agency with jurisdiction over the Guarantor on the grounds of the Guaranteed Amount being denominated in a foreign currency, this Performance Guarantee shall secure and shall be deemed always to have secured the Guaranteed Amount in equivalent Pakistan Rupees calculated at the official exchange rate specified by the State Bank of Pakistan for _____ [*indicate currency*] prevalent on the date of payment of the whole or part of the Guaranteed Amount as demanded by the Beneficiary may in such event be made by the Guarantor in Pakistan Rupees.
10. The Guarantor hereby declares and confirms that under its constitution and applicable laws and regulations, it has the necessary power and authority, and has obtained all necessary authorizations, approvals and consents thereunder to enter into, execute, deliver and perform the obligations it has undertaken under this Performance Guarantee, which obligations are valid and legally binding on and enforceable against the Guarantor under the Laws of Pakistan. Further, that the signatories to this Performance Guarantee are the Guarantor's duly authorized officers.
11. This Performance Guarantee shall be governed by the laws of Pakistan.

12. This Performance Guarantee shall expire at the official closing of the counters of the Guarantor, _____ [name of the Branch], _____ [city], on _____ [expiry date] (the "**Expiry Date**"). The Guarantor's obligations under this Performance Guarantee are limited to payment of claims lodged in writing and presented at the counters of the Guarantor at _____ [name of the Branch] _____ [city], on or before the Expiry Date. Except for demands made by the Beneficiary under this Performance Guarantee on or before the Expiry Date, the Guarantor shall stand fully discharged and released from any and all obligations, claims and liabilities under this Performance Guarantee whether or not this instrument of Performance Guarantee is returned to the Guarantor.

[To be signed by the authorized signatory of the Bank, Dated and Stamped with the Bank's Stamp]

For and on behalf of the Guarantor: _____

[Signatures, Names and Designations of Bank Officers]

1. 2.
.....
.....

[Also to be witnessed by two adult male witnesses, specifying in each case, the full name, National Identity Card number, and address]

Witness:

1. 2.
.....
.....

**TIME SCHEDULE
GREEN CABIN TECHNOLOGIES (GC) AND TECHNICAL SUPPORT SERVICES**

[Client to insert]

SCHEDULE OF PAYMENT

S. No	Conditions	Payment to be made
1.	Signing of Contract Mobilization Advance: After Receipt of Bank Guarantee / CDR amounting equal to the mobilization advance amount agreed by the parties (up to 20%) from a Scheduled Bank of Pakistan in prescribed format	Up to 20%
2.	Delivery, Installation and Acceptance of all the systems / subsystems / components / parts and services as per the details mentioned in the RFP as well as those offered by the Bidder in its Technical and Financial Proposals Over And Above The Requirements of RFP.	40%
3.	Integration, testing and successful demonstration of the complete system to the Acceptance Team nominated by the PD GreenAI. Bank Guarantee against Mob Advance (if any) shall be returned with a total payment of 70% against the contract value.	10% (Total 70%)
4.	One month continuous and successful operations of complete Greencabin. The operations of the Greencabin are to be conducted by the Tech Team of the bidder with all administrative arrangements being responsibility of the bidder. The operations would be monitored and demonstrated to the Tech Team of the procuring agency.	20%
5.	Delivery and acceptance of: <ul style="list-style-type: none"> • Final design documents, manuals and drawings as per component 7 of the SRS (Technical Requirements) (Min 05 hard copies) • Complete software package / programs / codes • Project completion report • Training of technical staff • Acceptance / completion certificate issued by the user 	10%

* **Note:** Partial payments against each milestone may be processed by the successful bidder depending upon the requirements and after approval of the procuring agency.

DECLARATION OF INTEGRITY

_____ the Supplier hereby 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 practice.

Without limiting the generality of the foregoing, the 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, consultant, 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 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 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 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 any amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [the Supplier/Supplier] 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.

Signature [_____]
Name [_____]
Status in the Firm [_____]
Dated [_____]

NO DEMAND CERTIFICATE

I (a) _____
Late (b) _____
To the (c) _____

Is hereby acknowledge to have received payment in full from the Purchaser for all articles supplies and services rendered by me in connection with _____ dated _____ for the supply of

(d) _____
and certify that I have no further claims whatsoever against Purchaser in connection with, or arising out of, said contract which remain unadjusted.

Signature of Contractor, defacing
a stamp if executed in Pakistan
Dated: _____

Signature of Two Witnesses (e)

(i) _____

(ii) _____