

Pre-Qualification Document

Establishment of PMD National Operations Centre (Non-Consultancy Services)

National

Single Stage-Two Envelope



September 08, 2026

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INVITATION FOR PRE-QUALIFICATION

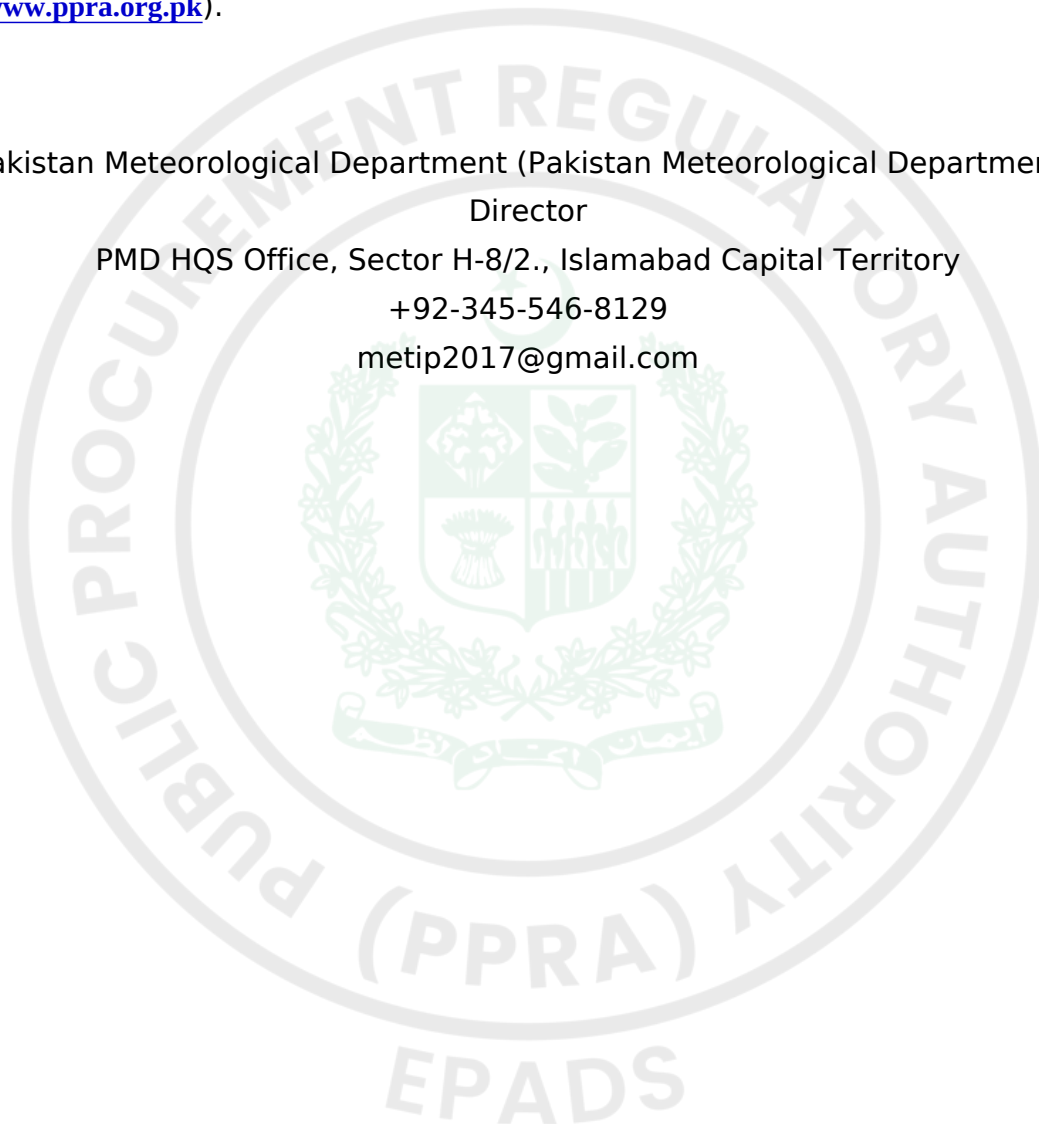
PROCUREMENT OF NON-CONSULTING SERVICES

1. The **Pakistan Meteorological Department (Pakistan Meteorological Department)** has reserved Funds for the procurement planned for FY **2026-27**. The **Pakistan Meteorological Department (Pakistan Meteorological Department)** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the "**Establishment of PMD National Operations Centre**" with the reference of "**P113449**"
2. The **Pakistan Meteorological Department (Pakistan Meteorological Department)** intends to pre-qualify service providers for Invitation to Bid(s), and sign the contract agreement(s) with the selected bidder(s) subsequent to the bidding process.
3. The objective of the intended pre-qualification is the provision of "**Establishment of PMD National Operations Centre**" through subsequent signing of contract with successful bidders, and the purpose of this Pre-qualification Notice is to provide the very basic information to enable potential applicants to decide whether or not to respond to this Pre-qualification Notice.
4. Only the pre-qualified applicants shall be entitled to participate in the procurement proceedings, and it is expected that the Invitation to Bids will be made to the Pre-qualified Applicants.
5. The pre-qualification process is open to all **National** Applicants subject to fulfilling the eligibility requirements mentioned in the respective Pre-qualification Documents. Interested Applicants may obtain further information from the Pakistan Meteorological Department (Pakistan Meteorological Department) through **EPADS v2.0** during office hours. A complete set of Pre-qualification Documents may be accessed by interested Applicants through **EPADS v2.0** at **<https://epads.gov.pk/opportunities/federal/procurements/113449>**.
6. The application, prepared in accordance with the instructions in the Pre-qualification Documents, must be submitted through **EPADS v2.0** on or before **Monday, September 28, 2026 10:30 AM**. E-applications will be opened using **EPADS v2.0** on the same day at **Monday, September 28,**

2026 11:00 AM. Manual submission of applications shall not be entertained. Those service providers who have not yet registered on the new version of **EPADS v2.0** may register themselves at <https://vendors.epads.gov.pk/>. A tutorial to explain the registration process is available at <https://www.youtube.com/watch?v=MNW6T38v7tc>.

In terms of Rule 48 of Public Procurement Rules, 2004, a Grievance Redressal Committee (GRC) is notified for the subject procurement and the notification copy is available on the procuring agency's website and on Authority's website at (www.ppra.org.pk).

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Instructions to Applicants

A. General

B. Contents of the Prequalification Documents

Sections of Prequalification Documents

1. **Scope of Application**

1.1. In connection with the “**Invitation for Prequalification**”, the Procuring Agency, as defined in Section II (Prequalification Data Sheet abbreviated as PDS), issues this set of Prequalification Documents (PD) to prospective applicants (also hereinafter referred as Applicants) interested in submitting applications (also hereinafter referred as Applications) to determine the capacity and capability of the Applicant(s) for supply of Goods and Related Services incidental thereto as specified in Section VII (Schedule of Requirements).

2. **Source of Funds**

2.1. Source of funds is same as referred in Invitation for Pre-qualification.

3. **Fraud and Corruption**

3.1. The Procuring Agency requires that the Applicants /Bidders/ Suppliers/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such agreements and contracts.

3.2. The Applicants/Bidders shall permit and shall cause their agents (whether declared or not), sub-contractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Procuring Agency to inspect all accounts, records and other documents relating to any, Application/Bid submission, Secondary Procurement process, and to have them audited by auditors appointed by the Procuring Agency.

3.3. Any communications between the Applicant and the Procuring Agency related to matters of alleged corrupt and fraudulent practices must be made in writing or in electronic forms that provide record of the content of

communication.

3.4. Procuring Agency will reject an application or bid or proposal, if it is established that the Applicant or the Bidder or Prospective Bidder was engaged in corrupt and fraudulent practices in competing for the contract.

3.5. Procuring Agency will also declare the Applicant as blacklisted in accordance with rules and predefined standard mechanism.

4. Eligible Applicants

4.1. An Applicant may be a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing JV agreement or with the intent to enter into such an agreement supported by a letter of intent.

In case of single (private or state-owned entity), it shall be liable for execution of all the provisions of the Contract Agreement.

In the case of a joint venture, all members shall be jointly and severally liable for the execution of all the provisions of the Contract Agreement (if signed b/w the Procuring Agency and the JV), in accordance with the Contract conditions that apply.

The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Prequalification process, Bidding process (in the event the prequalified JV submits a Bid) and during the period of contract agreement and contract execution (in the event the JV is awarded the Contract). Unless specified in the PDS, there is no limit on the number of members in a JV.

4.2. An Applicant may apply for Prequalification both individually, and as part of a joint venture, or participate as a subcontractor. If prequalified as a JV only, it will not be permitted to bid for the same contract as an individual entity. Bids submitted in violation of this provision will be rejected.

4.3. An Applicant and any of its affiliates (that directly or indirectly control, are controlled by or are under common control with that entity) may submit its Application for Prequalification either individually, as joint venture or as a sub-contractor among them for the same contract. However, if prequalified only one prequalified Applicant will be allowed to bid for the same contract.

All Bids submitted in violation of this provision will be rejected.

4.4. Applicants shall be considered to have a conflict of interest, if they participated as a consultant in the preparation of the design or technical specifications or have been hired or proposed to be hired by the Procuring Agency for execution of subsequent Contract Agreement. In addition, Applicants may be considered to have a conflict of interest if they have a close business or family relationship with such professional staff of the Procuring Agency (or a recipient of a part of the funds) who:

4.4.1. are directly or indirectly involved in the preparation of the Prequalification Documents or Bidding Documents or specifications of Contract and/or the Prequalification or Bid evaluation process of such Contract; or

4.4.2. would be involved in the implementation or supervision of such Agreement t, unless the conflict stemming from such relationship has been resolved throughout the Procurement Process, Bidding.

4.5. An Applicant that has been declared debarred or blacklisted shall be ineligible to be prequalified to bid for such period of time and for such type of procurement for which he has been declared debarred or blacklisted. The list of debarred firms and individuals is available at PPRA's website.

4.6. An Applicant shall provide such documentary evidence for determining the eligibility of the Applicant to the reasonable satisfaction of the Procuring Agency.

5. Eligibility (in terms of Nationality)

5.1. Applicants may be ineligible if they are nationals of ineligible countries as indicated in Section V.

B. Contents of the Prequalification Documents

6. Sections of Prequalification Documents

6.1. This set of Prequalification Documents consists of Parts 1 and 2 which comprise all the sections indicated below, and which should be read in conjunction with any Addendum issued in accordance with ITA 8.

PART 1 Prequalification Procedures PART 2 Supply Requirements

6.2. Section I - Instructions to Applicants (ITA)

6.3. Section II - Prequalification Data Sheet (PDS)

6.4. Section III - Qualification Criteria and Requirements

6.5. Section IV - Application Forms

6.6. Section V - Eligible Countries

6.7. Section VI - Fraud and Corruption

6.8. Section VII – Schedule of Requirements

6.9. The Procuring Agency accepts no responsibility for the completeness of the Prequalification documents, responses to requests for clarification, the minutes of the pre-Application meeting (if any), or Addenda to the Prequalification documents in accordance with ITA 8. In case of any discrepancies, documents issued directly through ePADS shall prevail.

6.10. The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Documents and to furnish with its Application all information or documentation as is required by the Prequalification Documents.

7. Clarification of Pre-qualification Documents and Pre-Application Meeting

7.1. An Applicant requiring any clarification of the Pre-qualification Documents shall contact the Procuring Agency in writing through ePADS as. The Procuring Agency will respond in writing through ePADS to any request for clarification provided that such request is received no later than three (03) days prior to the deadline for submission of the Applications. The Procuring Agency shall forward a copy of its response to all prospective

Applicants through ePADS who have obtained the Prequalification Documents from ePADS, including a description of the inquiry but without identifying its source. If so indicated in the PDS, the Procuring Agency shall also promptly publish its response through ePADS. Should the Procuring Agency deem it necessary to amend the Prequalification Documents as a result of a clarification, it shall do so in accordance with the provisions of ITA 16.2.

7.2. If indicated in the PDS, the Applicant's designated representative is invited at the Applicant's cost to attend a pre-Application meeting through online platform / **EPADS v2.0** as per date and time mentioned in the PDS. During this Pre-Application meeting, prospective Applicants may request clarification of the schedule of requirement, the qualification criteria or any other aspects of the Pre-qualification Documents.

7.3. Minutes of the Pre-Application meeting, if applicable, including the text of the questions asked by Applicants, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be transmitted promptly through ePADS to all prospective Applicants who have obtained the Pre-qualification Documents. Any modification to the Pre-qualification Documents that may become necessary as a result of the pre-Application meeting shall be made by the Procuring Agency exclusively through the use of an Addendum pursuant to ITA 8 and through **EPADS v2.0**. Non-attendance at the pre-Application meeting will not be a cause for disqualification of an Applicant.

8. Amendment of Prequalification Documents

8.1. At any time prior to the deadline for submission of Applications, the Procuring Agency may amend the Prequalification Documents by issuing an Addendum through **EPADS v2.0**.

8.2. Any Addendum issued shall be part of the Prequalification Document and shall be communicated in writing through ePADS to all Applicants who have obtained the Prequalification Documents from the Procuring Agency. The Procuring Agency shall promptly publish the Addendum at the Procuring Agency's web page and **EPADS v2.0**.

Provided that an Applicant who had already submitted their Applications

prior to the issuance of any such addendum shall have the right to withdraw his already submitted Application and submit the revised Application prior to the original or extended Application submission deadline through **EPADS v2.0**.

8.3. To give Applicants reasonable time to take an Addendum into account in preparing their Applications, the Procuring Agency may at its discretion, extend the deadline for the submission of Applications in accordance with ITA 16.2:

Provided that the Procuring Agency shall extend the deadline for submission of Applications, if such an addendum is issued within last three (03) days of the Application submission deadline.

C. Preparation of Applications

9. Cost of Applications

9.1. The Applicant shall bear all costs associated with the preparation and submission of its Application. The Procuring Agency will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Pre-qualification process.

10. Language of Application

10.1. The Application as well as all correspondence and documents relating to the Pre-qualification exchanged by the Applicant and the Procuring Agency, shall be written in the language specified in the PDS. Supporting documents and printed literature that are part of the Application may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the PDS, in which case, for purposes of interpretation of the Application, the translation shall govern.

11. Documents Comprising the Application

11.1. The Application shall comprise the following:

11.1.1. **Application Submission Letter**, in accordance with ITA 12.1;

11.1.2. **Eligibility**: documentary evidence establishing the Applicant's eligibility, in accordance with ITA 13.1;

11.1.3. **Qualifications**: documentary evidence establishing the Applicant's qualifications, in accordance with ITA 14; and

11.1.4. any other document required as specified in the PDS.

11.2. **Application Submission Letter**

11.2.1. The Applicant shall complete an Application Submission Letter as provided in Section IV (Application Forms). This Form must be completed without any alteration to its format.

11.3. **Documents Establishing the Eligibility of the Applicant**

11.3.1. To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Letter and Form ELI-1.1 (eligibility), included in Section IV (Application Forms).

11.4. **Documents Establishing the Qualifications of the Applicant**

11.4.1. To establish its qualifications to perform the contract(s) in accordance with Section III (**Qualification Criteria and Requirements**), the Applicant shall provide the information requested in the corresponding Information Sheets included in **Section IV (Application Forms)**.

11.4.2. Wherever an Application Form requires an Applicant to state a monetary amount, Applicants should indicate the Pak Rupee equivalent using the rate of exchange determined as follows:

11.4.2.1. for turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted).

11.4.2.2. value of single contract - Exchange rate prevailing on the date of the contract.

11.4.3. Exchange rates shall be taken from the publicly available source identified in the PDS. Any error in determining the exchange rates in the Application may be corrected by the Procuring Agency.

11.4.4. The documentary evidence of the Applicant's qualifications to conclude a contract Agreement, shall establish to the Procuring Agency's satisfaction:

11.4.4.1. that, if required in the BDS, an Applicant that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV A (Bidding Forms) to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Procuring Agency's Country;

11.4.4.2. that, if required in the BDS, in case of an Applicant not doing business within Islamic Republic of Pakistan (or the country where the procurement is being made), the Applicant is, or will be, (if awarded the call off contract) represented by an Agent in the country, equipped and able to carry out the Supplier's maintenance, repair, and spare parts stocking obligations in respect of the Goods.

D. Submission of Applications

15. Submission of the Applications through EPADS v2.0

15.1. The Bidder shall prepare and submit Bid with due diligence after carefully reading all the terms and condition before submission through ePADS in accordance with the procedures specified in the PDS.

15.2. In case the Applicant is a JV, the Application shall submit an authorized representative of the JV on behalf of the JV and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally

authorized signatories.

16. **Deadline for Submission of Applications**

16.1. Applicants shall be submitted through ePADS no later than the deadline indicated in the PDS.

16.2. If required in accordance with the provisions of ITA 8.3, the Procuring Agency will extend the deadline for the submission of Applications, in which case all rights and obligations of the Procuring Agency and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.

16.3. The deadline will be extended in the same manner as that of original Invitation for Prequalification (or the advertisement) through **EPADS v2.0**.

17. **Opening of Applications**

17.1. The Procuring Agency shall open all Applications on the date and time specified in the PDS through **EPADS v2.0**. Late Applications shall be treated in accordance with ITA 16.1.

E. Procedures for Evaluation of Applications

18. **Confidentiality**

18.1. Information relating to the Applications, their evaluation and results of the Prequalification shall not be disclosed to Applicants or any other persons not officially concerned with the Prequalification process until the notification of Prequalification results is made to all Applicants in accordance with ITA 26 through **EPADS v2.0**.

18.2. From the deadline for submission of Applications to the time of notification of the results of the Prequalification in accordance with ITA 26, any Applicant that wishes to contact the Procuring Agency on any matter related to the Prequalification process may do so only in writing through **EPADS v2.0**

19. **Clarification of Applications**

19.1. To assist in the evaluation of Applications, the Procuring Agency may, ask an Applicant for a clarification (including missing documents) of its Application, to be submitted within a stated reasonable period of time. Any request for clarification from the Procuring Agency and all clarifications from the Applicant shall be in writing through **EPADS v2.0**

19.2. If an Applicant does not provide clarifications and/or documents requested by the date and time set in the Procuring Agency's request for clarification, its Application shall be evaluated based on the information and documents available at the time of evaluation of the Application.

20. Responsiveness of Applications

20.1. The Procuring Agency may reject any Application which is not responsive to the requirements of the Prequalification Documents. In case the information furnished by the Applicant is incomplete or otherwise requires clarification as per ITA 19.1, and the Applicant fails to provide satisfactory clarification and/or missing information within prescribed time, it may result in disqualification of the Applicant.

21. Margin of Preference

21.1. Unless otherwise specified in the PDS, a margin of preference shall not apply in the Bidding process resulting from this Pre-qualification.

22. Sub-contractors

22.1. Subcontractors' qualification and experience will not be considered for evaluation of the Applicant. The Applicant on its own (without taking into account the qualification and experience of the Subcontractor) should meet the qualification criteria.

F. Evaluation of Applications and Prequalification of Applicants

23. Evaluation of Applications

23.1. The Procuring Agency shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements, to evaluate the qualifications of the Applicants, and no other methods, criteria, or requirements shall be used. The Procuring Agency reserves the right to waive minor deviations from the qualification criteria if they do not materially affect the technical capability and financial resources of an Applicant to perform the contract, however subject to the provisions of ITA 25.

23.2. Subcontractors proposed by the Applicant shall be fully qualified for their parts of the Scope of Supply of the Goods and Allied Services.

23.3. In case of multiple contracts, Applicants should indicate in their Applications the individual contract or combination of contracts in which they are interested. The Procuring Agency shall prequalify each Applicant for the maximum combination of contracts for which the Applicant has thereby indicated its interest and for which the Applicant meets the appropriate aggregate requirements. The Qualification Criteria and Requirements are mentioned in Section III.

Only the qualifications of the Applicant shall be considered. The qualifications of other related entities such as the Applicant's subsidiaries, parent entities, affiliates, subcontractors or any other firm(s) different from the Applicant shall not be taken into consideration in determining the qualifications of the Applicant.

24. Procuring Agency's Right to Accept or Reject Applications

24.1. The Procuring Agency reserves the right to accept or reject all the Applications, and to annul the Prequalification process at any time, without thereby incurring any liability to the Applicants. However, the procuring agency shall record its reasons and justifications on **EPADS v2.0**, duly approved by the Principal Accounting Officer or Head of Organization.

25. Pre-qualification of Applicants

25.1. All Applicants whose Applications substantially meet or exceed the specified qualification requirements will be prequalified by the Procuring

Agency.

25.2. An Applicant may be “conditionally prequalified,” that is, qualified subject to the Applicant submitting or correcting certain specified nonmaterial documents or deficiencies to the satisfaction of the Procuring Agency.

25.3. Applicants that are conditionally prequalified will be so informed along with the statement of the condition(s) which must be met to the satisfaction of the Procuring Agency before or at the time of submitting their Bids.

26. Notification of Prequalification

26.1. The Procuring Agency shall notify all Applicants in writing through **EPADS v2.0** indicating the names of those Applicants who have been prequalified or conditionally prequalified. In addition, those Applicants who have been disqualified will be informed separately through **EPADS v2.0**.

26.2. The procuring agency shall communicate to those suppliers or contractors who have not been pre-qualified the reasons for not pre-qualifying them through **EPADS v2.0**

27. Request for Bids

27.1. Promptly after the notification of the results of the Prequalification, the Procuring Agency will invite the Bids from all the Applicants that have been prequalified through **EPADS v2.0**.

28. Changes in Qualifications of Applicants

28.1. Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 25 and invited to bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Procuring Agency prior to the deadline for submission of Bids. Such approval shall be denied if:

28.1.1. a prequalified Applicant proposes to associate with a disqualified Applicant or in case of a disqualified joint venture, any of its members;

28.1.2. as a consequence of the change, the Applicant no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria and Requirements; or

28.1.3. in the opinion of the Procuring Agency, the change may result in a substantial reduction in competition.

28.2. Any such change should be submitted to the Procuring Agency before the date of "Invitation to Bids".

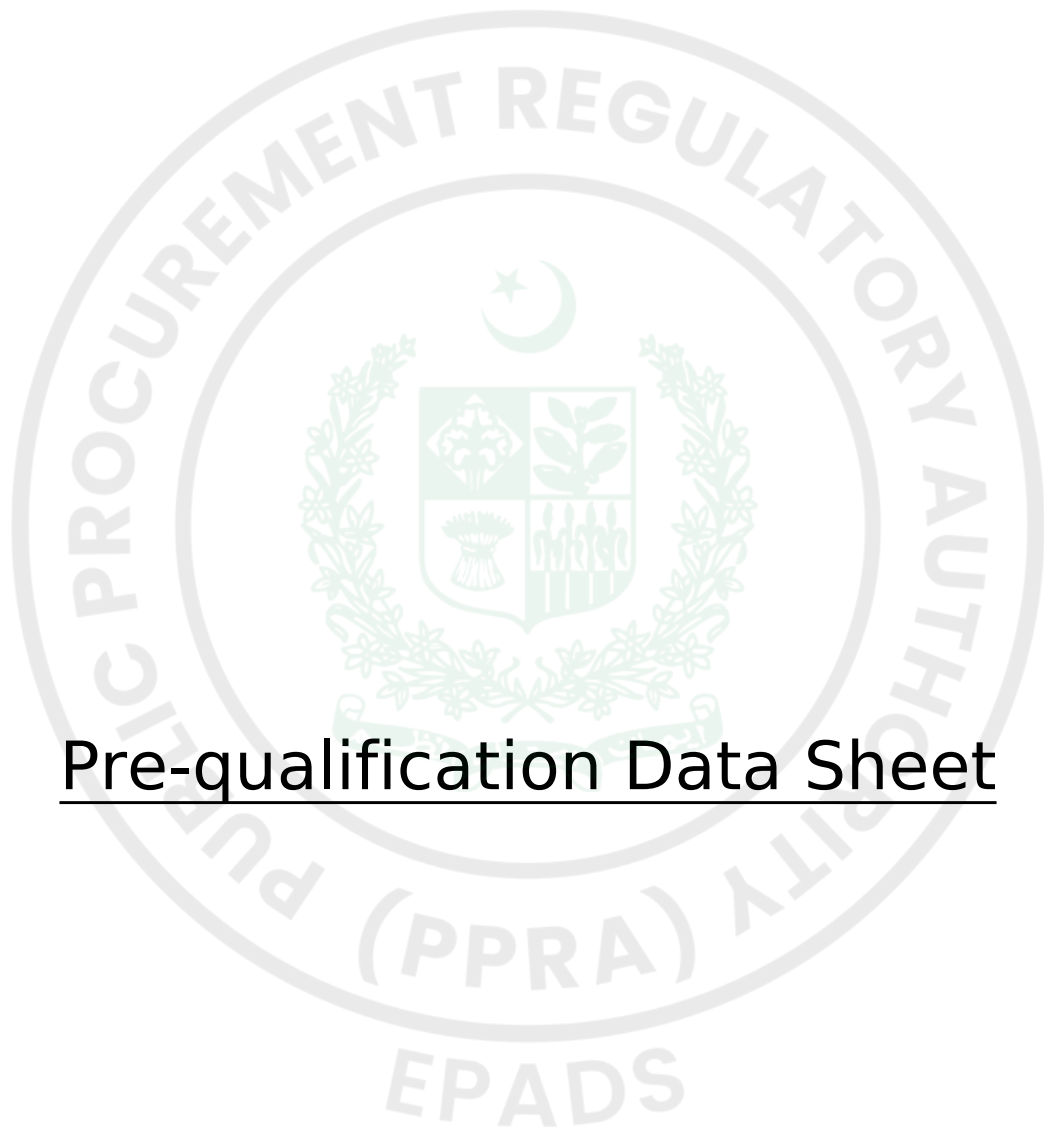
29. Redressal of Grievances

29.1. Procuring agency shall constitute a Grievance Redressal Committee (GRC) and proceed in accordance with the procedure and mechanism defined under Rule-48 of Public Procurement Rules, 2004.

29.2. The GRC shall not have any of the members of Procurement Evaluation Committee. The committee must have one subject specialist depending on the nature of the procurement.

30. Mechanism of Blacklisting

30.1. The procuring agency shall initiate blacklisting or debarment proceedings against any bidder, supplier or contractor in accordance with the mechanism prescribed under Rule-19 of Public Procurement Rules, 2004 read with "Mechanism for Blacklisting Regulations, 2024".



Pre-qualification Data Sheet

Prequalification Data Sheet (PDS)

The following specific data for the Prequalification of Applicants shall complement, supplement, or amend the provisions in the Instructions to Applicants (ITA). Whenever there is a conflict, the provisions herein shall prevail over those in ITA.

PDS Clause No

ITA No

Amendments of, and Supplements to, Clauses in the Instructions to Applicants

A. General

PDS Clause No 1

ITA No 1.1

Identification Number of the Invitation for Prequalification: **P113449**

The Procuring Agency is: **Pakistan Meteorological Department (Pakistan Meteorological Department)**

List of Service Contracts:

See section services and Lots

PDS Clause No 2

ITA No 2.1

The name of Procuring Agency is: **Pakistan Meteorological Department (Pakistan Meteorological Department)**

The name of Project / Procurement is: **Establishment of PMD National Operations Centre**

PDS Clause No 3

ITA No 4.2

Maximum number of members in a Joint Venture (JV): **Nil**

PDS Clause No 4

ITA No 4.5

A list of debarred firms and individuals is available on PPRA website: **<https://ppra.gov.pk>**

B. Contents of the Prequalification Document

PDS Clause No 5

ITA No 7.1

For clarification, the Applicant shall seek clarifications through: **EPADS v2.0**

PDS Clause No 6

ITA No 7.1 & 8.2

Information related to Prequalification shall be published on: **EPADS v2.0**

PDS Clause No 7

ITA No 7.2

Pre-Application Meeting: **Clarification Date: Friday, September 25, 2026**

C. Preparation of Applications

PDS Clause No 8

ITA No 10.1

This Prequalification Document has been issued in the language: **English**

PDS Clause No 9

ITA No 11.1(d)

Additional documents to be submitted through EPADS v2.0:

No

PDS Clause No 10

ITA No 14.2

Source for determining exchange rates: **Not Applicable**

D. Submission of Applications

PDS Clause No 11

ITA No 16.1

Deadline for Application Submission:

Day: **Monday**

Date: **Monday, September 28, 2026**

Time: **10:30 AM**

PDS Clause No 12

ITA No 17.1

Opening of Applications shall be conducted through: **EPADS v2.0**

Day: **Monday**

Date: **Monday, September 28, 2026**

Time: **11:00 AM**

Virtual participation link: **<https://vendors.epads.gov.pk/>**

E. Procedures for Evaluation of Applications

PDS Clause No 13

ITA No 21.1

Margin of Domestic Preference: **Not Applicable**

(Applicable only if authorized in Procurement Plan)

PDS Clause No 14

ITA No 29.1

Prequalification-related complaints / grievances shall be submitted in writing through: **EPADS v2.0**

A complaint may challenge:

- The terms of the Prequalification Documents
- The Procuring Agency's decision not to prequalify an Applicant

Eligibility & Qualification Criteria

Bidder's Type	Required Registration
Individual / Individual Consultant	NADRA CITIZENSHIP (CNIC/NICOP)
Sole Proprietorship	FBR (NTN)
Partnership Firm	FBR (GSTN)
Company (Private Limited)	
Company (Public Limited)	
Company (Holding Company)	
Company (Limited by Guarantee)	
State Owned Enterprise (Private Limited)	
State Owned Enterprise (Public Limited)	

Evaluation Criteria

Quality Based Selection (QBS)

Weightage (Without Financial Criteria)

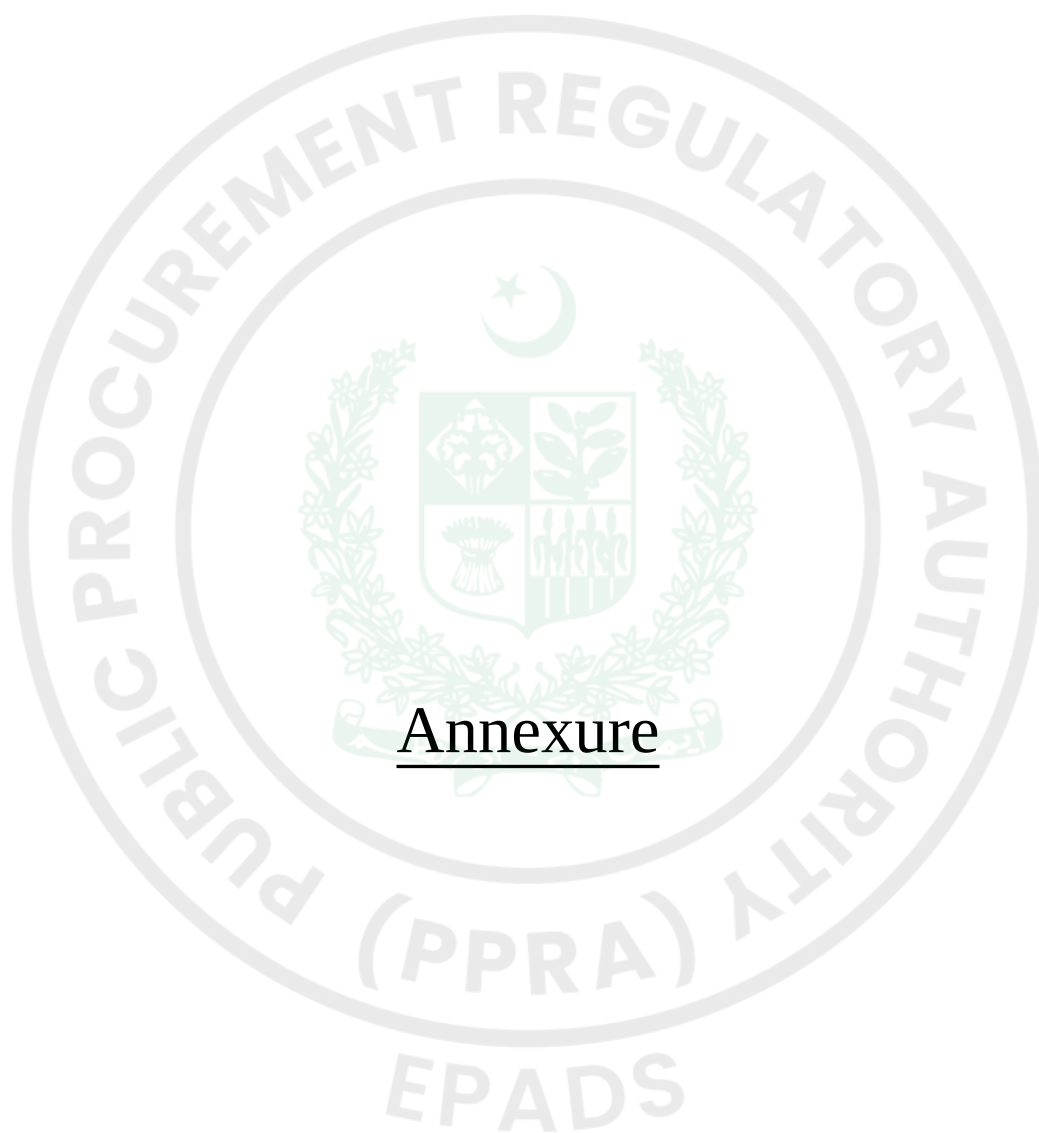
Technical Evaluation %
100

Technical Marks	100
Passing Marks	60

Technical Evaluation Criteria	
Financial capacity (Quantitative)(Doc Required)	15
>500 million (15)	
>=100 million (10)	
<100 million (1)	
Similar Projects (Quantitative)(Doc Required)	15
>=5 projects (15)	
>=2 projects (5)	
<2 (1)	
Scientific Data visualization (Quantitative)(Doc Required)	5
>=1 years (5)	
<1 year (1)	

Overall solution and implementation strategy along with all required designs and documents (Quantitative)(Doc Required) Compliance (35) Partial Compliance (15) Non Compliance (1)	35
Survey Report (Quantitative)(Doc Required) Compliance (15) Partial Compliance (5) Non Compliance (1)	15
Implementation Capability (Quantitative)(Doc Required) Compliance (15) Partial Compliance (5) Non Compliance (1)	15





Annexure

Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

Objective:

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

Procurement Strategy:

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Background and Purpose** (page number: 44)

Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.
- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Scope of Pre-Qualification** (page number: 56)

Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed

integration method.

Visual Walls, paraphernalia and interior outfits/design:

Site and Facility Baseline:

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available dashboards/interfaces will be shared to the vendor if required.

Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.
-------------	---

Mandatory Site Survey Outputs:

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Vendor Responsibility** (page number: 68)

Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation

Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.

PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Operator Workstations, Control PCs and Computing** (page number: 80)

Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.
- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.

- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Central Cooling / HVAC and Environmental Management** (page number: 92)

Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Fire Safety, Physical Security and Access Control** (page number: 104)

Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.

Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Video Conferencing, Meeting Facility** (page number: 116)

Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.

- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Furniture and Interior Fit-Out for hall and Lobbies of 03 floors** (page number: 128)

Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

Information (Read-Only)

See Form Under Additional Forms and Documents: **Operations Center Management Software and Control** (page number: 140)

Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.

Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.
Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Dashboards, Common Operating Picture** (page number: 152)

Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.

3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million >= 100M < 100M	15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. >=5 projects >=2 <2	15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. >=1 years < 1 years	5 0

Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines.	35
	Compliance	15
	Partial-Compliance	0
	No-compliance	
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	15
	Compliance	5
	Partial	0
	Non-compliance	
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof.	15
	Compliance	5
	Partial-Compliance	0
	No-compliance	
	Passing Marks 60/100	

Information (Read-Only)

See Form Under Additional Forms and Documents: **Solution Submission and evaluation criteria** (page number: 164)

Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

Information (Read-Only)

See Form Under Additional Forms and Documents: **Mandatory Forms to be Submitted by the Bidder** (page number: 176)



Procurement Forms

Past Experience and Completed Contracts

See Form Under Additional Forms and Documents: **Past Experience and Completed Contracts** (page number: 188)

Average Annual Turnover

See Form Under Additional Forms and Documents: **Average Annual Turnover** (page number: 189)







Additional Forms and Documents

PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

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Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
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Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

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Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

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Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
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Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

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- Dashboards Layouts
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- Valid documents in case of joint venture or consortium.
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- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

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PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

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Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

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TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
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- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
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Muhammad Hussam Khan
Deputy Chief Admin Officer
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It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
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2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
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- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
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- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
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No. I&P/PMD/NOC/26-27

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- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

1. For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - i) Name of Firm alongwith postal address, phone and fax number.
 - ii) Experience Record.
 - iii) Current works in progress.
 - iv) Financial position/ capabilities: -
 - a) Bank Statement of last two years
 - b) No. and amount of bank guarantees already given.
 - c) Credit/ loan limit with any bank
2. The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
3. Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
4. The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
5. The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

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Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
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Total LED display area	Approximately 800 sq. ft. across the three walls.
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Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
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3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
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- Installation/access/logistics plan;
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- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
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- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
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3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

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- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
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- Drought monitoring and indices
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- Air-quality/environmental information where available
- Incident/ticket/maintenance status
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- Ultra HD videos, live streaming.

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The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
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Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

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Requirement	Minimum evidence / condition	Marks Distribution
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Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

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1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
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- Implementation Schedule, deliverables with complete timelines and Gantt chart
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- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
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PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
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PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



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PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

1. For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - i) Name of Firm alongwith postal address, phone and fax number.
 - ii) Experience Record.
 - iii) Current works in progress.
 - iv) Financial position/ capabilities: -
 - a) Bank Statement of last two years
 - b) No. and amount of bank guarantees already given.
 - c) Credit/ loan limit with any bank
2. The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
3. Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
4. The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
5. The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
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- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

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Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
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- Flood and flash-flood situation awareness through GIS Maps
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- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
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- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
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System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

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Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

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1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
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- Organization and Financial Capacity
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- Implementation Schedule, deliverables with complete timelines and Gantt chart
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PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Muhammad Hussam Khan
Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

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PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

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September, 2026



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Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

Schedule for collection, submission and opening of pre-qualification documents / proposals is as under:

Collection and submission of documents (free of cost through the concerned websites)	Till 28 th of September, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 28 th of September, 2026 by 11.00 Hrs. at R&D Hall PMD Headquarters, H-8/2 Islamabad.

TERMS & CONDITIONS:

- For pre-qualification, parties having experience, capability and resources as per enclosed documents may apply alongwith following information and documents.
 - Name of Firm alongwith postal address, phone and fax number.
 - Experience Record.
 - Current works in progress.
 - Financial position/ capabilities: -
 - Bank Statement of last two years
 - No. and amount of bank guarantees already given.
 - Credit/ loan limit with any bank
- The relevant documents may be obtained from the websites i.e. <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- Bidding Process shall be conducted through **Single Stage Two Envelope Bidding Procedure**
- The bid received within stipulated date and time, will be opened by the committee on the same day (as mentioned above), in the presence of the bidders or their authorized representatives.
- The procuring agency reserves the right to accept or reject any or all proposal(s) in accordance with rule 33 of PPRA Rules 2004 (as amended time to time)

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

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1. Background and Purpose

Pakistan Meteorological Department (PMD) intends to establish a PMD National Operation Center (PMDNOC) at its main office in Islamabad to provide a centralized, resilient and highly visual operational environment for monitoring meteorological, hydrological, geophysical data and information, supporting early warning, situational awareness, decision support, incident management and coordination. The Centre is intended to bring together data from distributed instruments and systems and present it through a common operating picture.

It includes centralized control room, secure data repository, real-time monitoring, incident/ticket management, large-format displays, customized dashboards, analytics, training, support, redundancy, interoperability and integration of weather stations, radars, lightning, seismic, gauging, satellite/NWP, floods, GLOF, cyclones and other information sources as core elements to be visualized on three-sided visual walls. The prequalification document consolidates those recurring requirements while making the specification vendor-neutral and suitable for competitive evaluation.

1.1 Objective

The objective of the pre-qualification is to identify and shortlist firms, consortiums or joint ventures that have the capability to design, supply, integrate, install, configure, develop, test, commission, train and support a complete PMDNOC solution, including physical infrastructure, LED/video-wall system, controllers/Software for ICT/AV, data integration, repository, dashboards, analytics, incident management and associated support services.

1.2 Procurement Strategy

- The pre-qualification stage shall focus on technical capability, relevant experience, proposed architecture, integration approach, implementation capability and resource strength.
- No manufacturer, brand, software platform or technology stack is mandatory unless explicitly stated as a minimum interoperability requirement.
- Proposed solutions shall be modular, open, scalable, secure, maintainable and capable of integrating with existing PMD systems and future systems.
- Vendors shall clearly distinguish third-party dependencies and recurring licenses if any.
- Vendor shall specify the components which are currently available in the existing infrastructure to avoid any duplication or waste of resources.
- Vendors are required to perform mandatory survey of the existing facilities and infrastructure before submitting the final solution. Relevant committee shall facilitate the process.

2. Scope of Pre-Qualification

The prequalification submission shall demonstrate capability across all of the following areas:

- Operational concept, requirements engineering and detailed solution design.
- Operation center interior fit-out including operator consoles and meeting/briefing furniture.
- Three-sided indoor fine-pitch LED visualization system. It must include cabinets/modules, frames, controllers, processors, cabling, power distribution, management software and spares.
- Detailed theme based design and enhancement of corridors/lobbies of three floors of the office.
- Visualization/control workstations and operator PCs with professional graphics capability.
- Video conferencing and collaboration facilities. Must include AI cameras, microphones, speakers, DSP/echo cancellation, displays and content sharing.
- Monitoring of UPS, PDU, STS/ATS where required, environmental monitoring, fire detection/suppression and access control.

- Central cooling/HVAC for the Operations Centre and associated technical areas, including redundancy and equipment heat-load calculations.
- Need of any data ingestion and integration from meteorological, hydrological, geophysical, satellite, radar, sensor, model, GIS and other authorized sources.
- Data transformation, normalization, validation, quality control, metadata, time synchronization, unit conversion, spatial referencing, de-duplication and archival where required.
- Interactive dashboards, common operating picture, alerts, analytics, incident management, ticketing and reporting.
- API, ETL/ELT and interoperability services if required any.
- Access and propose the operational/ELT team along with responsibilities for the sustainability of the solution.
- High availability, backup, disaster recovery, access control and monitoring.
- Implementation, integration testing, commissioning, training, documentation, warranty and after-sales support.

2.1 Vendor Responsibility

The vendor shall be responsible for end-to-end system engineering and shall not limit its proposal to supply of screens or hardware. PMD expects a turnkey solution with clearly defined interfaces, required operational/ELT team, responsibilities, dependencies, assumptions, quantities, and implementation sequence. Where a requirement depends on a third-party system, the vendor shall state the dependency and proposed integration method.

3. Visual Walls, paraphernalia and interior outfits/design

3.1 Site and Facility Baseline

The video-wall system shall be an integrated visualization platform. The following baseline shall be used for concept design. The vendor shall conduct a mandatory site survey before finalizing its solution and make it part of the submission. Validate all measurements, structural conditions, power availability, HVAC routes, cable paths, ceiling height, access routes, seating space, existing services and integration gaps.

Item	Baseline requirement / information
Front wall	Straight wall, 38 ft wide x 11 ft high; intended for primary LED display.
Left wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Right wall	Straight wall, 32 ft wide x 11 ft high; intended for supporting operational views.
Total LED display area	Approximately 800 sq. ft. across the three walls.
Structural beams	Two existing structural beams are present at approximately 10 ft and 20ft from the front wall. Exact location, size, level and clearances shall be verified on site.
Wall geometry	Fourth wall (entrance door) may also be considered for visualization and can be included in the design.
Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

PRE-QUALIFICATION FOR THE ESTABLISHMENT OF PMD
NATIONAL OPERATIONS CENTRE



No. I&P/PMD/NOC/26-27

Pakistan Meteorological Department

Sector H-8/2,

Islamabad,

September, 2026



Tel: +92-51-9250286
Fax: +92-51-9250368

PRE-QUALIFICATION NOTICE THROUGH PPRA E-PADS 2.0

Pakistan Meteorological Department invites the applications for pre-qualification of firms registered with sales tax/ income tax departments and are on Active Tax Payer List (ATL) of FBR for the following work during the financial year 2026-27 under PPRA rules detail is as under.

Sr. No.	Name of Work
01	Pre-Qualification for the Establishment of PMD National Operations Centre

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Digital Standees	Identify the need of digital standees and propose the suitable size and placement locations.
Existing building services	Vendor to verify electrical incomer, distribution boards, HVAC, earthing, cable trays, ceiling services, fire alarm, network connectivity and access routes during site survey.
Display/Visualization sources	Vendor to review and submit a plan for the existing and proposed dashboards/interfaces, for theme based visualizations. All the available

	dashboards/interfaces will be shared to the vendor if required.
Integration	Vendor to thoroughly review the existing services, data acquisition, ELT and identify the gaps to be filled by proposed strategy.

3.2 Mandatory Site Survey Outputs

- Dimensioned as-built room plan and elevations;
- Marked location of both structural beams and any obstructions, provide the plan to accommodate each available space;
- Propose electrical load/capacity assessment and single-line diagram where available;
- HVAC assessment and heat-load basis along with fire safety solution;
- Network/cabling routes and available backbone;
- Power, earthing/bonding assessment;
- Installation/access/logistics plan;
- List of assumptions, constraints and recommended civil modifications.
- Seating arrangements, Controller/Control Workstation placement and operator desks
- Lobbies/corridors theme/design.

3.3 Video-Wall Frame and Structural Works

- Provide engineered steel/aluminum mounting framework with precision leveling and alignment.
- Frame shall account for the two existing structural beams approximately 10 ft from the front wall and all site-specific obstructions; bidder shall submit structural drawings after site survey.
- Provide anti-vibration provisions where required, safe load transfer and appropriate wall/floor anchoring.
- Provide concealed/organized power and signal cable management.
- Provide front/rear maintenance strategy and safe access without disturbing adjacent operational stations.
- All metallic structures shall be properly bonded/grounded.
- Provide drawings, load calculations and method.

3.4 Video Wall Content/Visualization Use Cases

Few of the use cases are listed below for understanding and review of the existing systems in order to propose a robust solution.

- National weather overview/common operating picture
- Live radar mosaics and individual radar products
- Satellite imagery and loops
- AWS/observatory status and telemetry, Lightning detection
- Forecast maps and bulletins
- NWP/NWM/model outputs, Rainfall/snowfall/temperature/wind/cloud-cover layers
- Flood and flash-flood situation awareness through GIS Maps
- Heatwave monitoring and warnings
- Drought monitoring and indices
- GLOF early warning system
- Multi-Hazard early warning system
- Agricultural/agrometeorological conditions, spatial maps
- Seismic/geophysical events and map overlays
- Hydrological/gauging/river information
- Air-quality/environmental information where available
- Incident/ticket/maintenance status
- IT dashboards, security, centralized monitoring
- Data/system health and connectivity status
- Video conferencing
- Executive briefing/management presentation

- Ultra HD videos, live streaming.

3.5 Operator Workstations, Control PCs and Computing

The bidder shall propose a workstation architecture appropriate for continuous visualization and operational applications. Quantities may be optimized after the site survey, but the bidder shall provide a complete baseline configuration and proposed number of operator/supervisor positions.

Component	Minimum requirement / design intent
Operator workstations	Commercial/enterprise-grade systems suitable for 24/7 operational use; minimum Core i5/i7 or equivalent current-generation
Graphics	Professional GPU suitable for multi-display and GIS/video visualization; bidder shall state GPU model and supported display count/resolution.
Monitors	Minimum 24-inch IPS/LED, QHD preferred for operator desks; bidder may propose larger/multi-monitor layouts.
Supervisor	Higher specification workstation with multi-screen capability and access to control/management tools.
Control workstation	Dedicated video-wall control workstation with dual displays and hardware/software redundancy as appropriate.
Application/visualization servers	Bidder to propose sizing based on concurrent users, display loads, source count, refresh rate, dashboard complexity and growth for at least five years.
Virtualization	Preferred for management/application workloads where appropriate; bidder shall explain availability and recovery approach.
Operating system	OS with valid life time licenses if required any.

3.6 Electrical Power, backup, UPS, Distribution and Earthing

Subsystem	Requirement / bidder response
Dedicated electrical distribution	Separate circuits/DBs for LED walls, AV/control equipment, operator workstations, IT/racks, HVAC/control equipment and meeting-room AV as appropriate.
UPS	Online UPS for critical controllers, network, servers, control PCs and other designated loads; bidder to calculate load.
Power redundancy	Dual power feeds where required; redundant PSUs for critical equipment; STS/ATS where needed for single-corded equipment or transfer between sources.
PDUs	Intelligent/rack PDUs where racks are provided; local monitoring and protection.
Surge protection	Type-appropriate surge protection coordinated across distribution levels.
Earthing/bonding	Dedicated equipment bonding and grounding integrated with building earthing; rack and metallic structure bonding; test and certify continuity.
Generator interface	Supply of generator as per power requirements. Connection/interface to standby generator and automatic transfer arrangement where available.
Emergency shutdown	Clearly identified emergency power-off/shutdown strategy for AV/operations systems, coordinated with life-safety requirements.
Monitoring	Power meters/monitoring for critical loads and environmental equipment.

3.7 Central Cooling / HVAC and Environmental Management

The vendor shall provide a proper heat-load study for the hall and associated technical spaces, considering LED display consumption, workstations, racks, AV equipment, occupancy etc. The proposed system shall be capable of continuous operation.

- Central/precision cooling suitable for the actual heat load, with energy-efficient control, along with standby redundant cooling option.
- Temperature and humidity monitoring with alarm thresholds.
- Independent thermostat/control zones where required.
- Low-noise operation appropriate for an operations environment.
- Air distribution shall avoid direct discharge onto LED modules, operator workstations or sensitive equipment.
- Consideration of fresh air/ventilation and indoor air quality.

- Automatic restart after power restoration and integration with UPS/generator strategy as appropriate.
- Vendor shall provide cooling-load calculations, equipment schedules and control diagrams.

3.8 Fire Safety, Physical Security and Access Control

- Addressable fire alarm system with smoke/heat detection as appropriate.
- Fire detection integrated with HVAC shutdown and alarm annunciation where required.
- Appropriate clean-agent suppression for server/network/critical electronic areas if such areas are included in the project; portable CO2 extinguishers for electrical/electronic areas as appropriate.
- Emergency lighting, illuminated exits signs.
- Controlled access for Operations Center and restricted IT areas; RFID plus biometric capability for critical areas may be proposed.
- CCTV coverage of entrances, critical equipment and operational areas.
- Visitor management and access logging.
- Water-leak detection in/near critical IT spaces.
- Integration of life-safety alarms with the control system where safe and permitted.

3.9. Video Conferencing, Meeting Facility

Component	Minimum expectation
Main conferencing system	Enterprise-grade system supporting major conferencing platforms and standards; integrated with video walls system.
Camera	Professional AI camera with auto-framing/presenter tracking option, adequate optical zoom and hall coverage.
Microphones	Ceiling/table microphone array with echo cancellation and beamforming; sufficient pickup coverage for the proposed seating.
Speakers	Professional room audio with DSP, echo cancellation and acoustic tuning.
Content sharing	Wired and secure wireless/BYOD content sharing, subject to cybersecurity policy.
Main display/interactive board	Large interactive display/board for meetings, presentations and annotation; bidder shall propose size based on room layout.
Control	Touch/physical room-control interface for camera, volume, source and meeting functions.
Recording/streaming	Optional, subject to PMD policy and storage requirements; bidder shall identify licensing/capacity implications.

3.10 Furniture and Interior Fit-Out for hall and Lobbies of 03 floors

- Ergonomic 24/7 operator consoles designed for multiple monitors, cable management and sit/stand capability where feasible.
- High-back ergonomic operator chairs suitable for continuous shift work.
- Supervisor/incident-commander console(s) with enhanced visibility and controls.
- Meeting/briefing table and ergonomic chairs sized for the proposed configuration; bidder shall propose capacity and layout. Multipurpose portable hexagonal meeting table
- Visitor/observer seating as appropriate.
- Anti-glare treatment and lighting coordinated with LED display performance.
- Raised floor or cable-tray strategy where justified; vendor to assess existing floor/building conditions.
- Concealed cable management and safe floor crossings.
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor). Design may include portraits and drawing based on climate, weather and geophysical spatial maps.
- Solution for the external outfit adjacent to operation center hall.
- Branding/signage as approved by PMD.

3.11 Operations Center Management Software and Control

- Centralized user management and role-based access.
- Dashboard/layout presets for normal, severe weather and emergency modes as appropriate to cover all the possible use cases, few are mentioned in 3.4.
- One-command or scheduled recall of display layouts.
- Source monitoring and display health monitoring.
- Ability to display web applications, GIS, Ultra HD video streams, images, documents and data visualizations subject to security controls.
- Alarm/notification integration.
- Audit trail of operator actions and configuration changes.
- Remote administration from authorized management stations.
- Health status for controllers, processors, displays and source computers.
- Backup/export of system configuration and rapid restoration capability (Disaster recovery).

4. Dashboards, Common Operating Picture

The bidder shall provide a proposed dashboard catalogue and at least few representative wireframes/mockups. Few core layouts are highlighted below. Vendor is responsible to explore and finalize the dashboards, during survey, to include in the proposal.

Dashboard / module	Minimum functional expectations
National Situation Awareness	Pakistan map, current conditions, major warnings, key observations, forecast summary, critical alerts and status of major networks.
Forecast Dashboard	Temperature, rainfall, snow, wind, cloud cover, visibility and other forecast layers; time stepping and map overlays.
Radar Dashboard	Multi-radar mosaic, individual radar selection, loops, derived products, radar health and timestamp.
Satellite Dashboard	Current imagery, loops, channels/products, overlays and time controls.
AWS / Observatories Health	GIS status, online/offline/disabled, last update, missing data, sensor anomalies, trends and drill-down, GLOF alerts.
Lightning Dashboard	Real-time lightning map, density/strike information, time animation and configurable thresholds.
Seismic / Geophysical Dashboard	Events map, event details, magnitude/depth, station status and event history.
Hydrology / Flood Dashboard	Gauges, river levels, discharge, rainfall, threshold status, flood extent/products where available and trend plots.
Heatwave Dashboard	Temperature/heat index, thresholds, duration, spatial exposure, alerts and trends.
Drought Dashboard	SPI/SPEI/VHI/soil moisture/precipitation-deficit or equivalent indicators where data are available; spatial/time analysis.
Agriculture Dashboard	Agromet conditions, crop/weather indicators, soil moisture and weather risk overlays where data exist.
Landslide / Mountain Hazard	Rainfall accumulation, slope/hazard layers, warning thresholds and affected-area views where data are available.
NWP / Model Dashboard	Model runs, variables, time steps, comparison and selected derived products.
Climate Dashboard	Historical trends, extremes, normals, anomaly analysis, station comparisons and maps.
Incident / Ticket Dashboard	Open incidents, severity, ownership, SLA, ageing, response time and escalation.
System/Infrastructure Health	Server/network/application availability, data pipeline status, storage, CPU/memory, latency and critical service alarms.
Executive Dashboard	High-level KPIs, national warnings, critical incidents, system health and summary analytics.

Alert Dissemination Dashboard	Active alerts, issuance history, acknowledgment, distribution channel and delivery status.
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5. Solution Submission and evaluation criteria

Each bidder shall submit a conceptual but sufficiently detailed solution showing how it will deliver the complete, operational and sustainable solution.

5.1 Minimum Eligibility and Pre-Qualification Requirements

Only the vendors fulfilling following conditions will be eligible for being evaluated under quantifiable bid evaluation criteria.

1. Valid registration/incorporation in Pakistan, preferably with entities like SECP
2. Valid NTN and applicable sales tax/professional tax registration; no material unresolved tax default.
3. Declaration that the firm is not blacklisted, suspended or debarred by a competent public authority.

Requirement	Minimum evidence / condition	Marks Distribution
Financial capacity	Last three years bank statements. (Last 3 Year average). Physical addresses of office along with UAN. > 500Million ≥ 100M < 100M	 15 10 0
Similar projects	Completed projects, Control room, operation centers, Visualization walls and dashboard of complex nature. Documented proof is required Contacts of completed clients are may be acquired. ≥5 projects ≥2 <2	 15 5 0
Scientific data visualization	Demonstrated experience incorporating environmental, scientific, geospatial, sensor, and telemetry dashboards. ≥1 years < 1 years	 5 0
Overall solution and implementation strategy along with all required designs and documents	Complete in all aspects a sustainable solution covering all required components, specifications (Make, model no), including the required designs in JPG, MPEG, CAD etc. PMD may ask for the presentation if required. Provide deliverables with clear timelines. Compliance Partial-Compliance No-compliance	 35 15 0
Survey report	A thorough survey and understanding of all the requirements. Comprehensive report covering all the dimensions and design.	

	Compliance Partial Non-compliance	15 5 0
Implementation capability	Provide details (number of) fulltime, part time or contract based resource, CVs are required. Explicitly specify the Joint-Venture /consortium if any along with documented proof. Compliance Partial-Compliance No-compliance	15 5 0
	Passing Marks 60/100	



1. 5.2 Mandatory Forms to be Submitted by the Bidder

- Letter of Application / Bidder Information
- Similar Project Experience
- Client References and Completion Evidence
- Organization and Financial Capacity
- Proposed Project Team and CV Summary
- Survey report along with proposed designs (JPG, MPEG etc)
- Complete theme based design/renovation of the Lobbies (DG building ground floor, R&D wing ground and first floor).
- High-Level System Architecture
- Detailed specs (Make, Model) of all the proposed components (Para#3) along with complete solution.
- Dashboards Layouts
- Implementation Schedule, deliverables with complete timelines and Gantt chart
- Testing, Commissioning and Acceptance Approach
- Warranty, SLA and Support Commitment
- Assumptions, Dependencies and Deviations
- Manufacturer / Technology Authorizations
- Litigation / Blacklisting / Conflict of Interest Declaration
- Valid documents in case of joint venture or consortium.
- Major ongoing projects with document proof.
- Confirmation of Site Survey and Understanding of Physical Constraints

2. 6. Important Clarifications

- This document is for prequalification and solution concept evaluation
- Exact equipment quantities may increase or decrease at the time of final procurement.
- The bidder may propose alternative technologies that meet or exceed the stated outcome and minimum requirements.
- Development of layouts/themes is the responsibility of the vendor.
- Dashboard/data requirements shall be validated with PMD stakeholders.
- This document does not include the data integration, analytics, and dashboards development at this stage. Any gaps/need identified during survey can be proposed.

Past Experience / Contracts

Contracts over <i>[insert amount]</i> during the last three years:				
Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination



Average Annual Turnover (Annual Sales Value)

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

IFP No. and title: *[insert IFP number and title]*

Page *[insert page number]* of *[insert total number]* pages

Annual Turnover Data			
Year	Amount Currency	Exchange rate* (If applicable)	PKR equivalent
<i>[indicate calendar year]</i>	<i>[insert amount and indicate currency]</i>		
		Average Annual Turnover **	

* Refer ITA for date and source of exchange rate.

** Total PKR equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, ITA.