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-QUALIFIACTION 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 12th of October, 2026 by 10.30 Hrs. through PPRA EPADS (2.0).
Time and place of opening of sealed proposals	On 12th of October, 2026 by 11.00 Hrs. at 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***

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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.

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.