

17. Evaluation Criteria

The evaluation shall follow the Single Stage, Two Envelope Bidding procedure in accordance with Rule 36(b) of the Public Procurement Rules 2004. Technical and financial proposals shall be submitted simultaneously in separate sealed envelopes. The Technical Envelope shall be opened and evaluated first; the Financial Envelope shall remain sealed and shall be opened only for bidders securing a minimum of 70% of the total technical score. The contract will be awarded on a turnkey basis to the bidder with the highest Combined Evaluation Score as per the following criteria:

- a. Technical Component (TC) = Total technical evaluation score
- b. Financial Component (FC) = (Lowest Bid / Respective Bid) * 100
- c. Combined Evaluation Score = (TC * 70%) + (FC * 30%)

Technical Evaluation (Total: 100 Marks, 70% Required to Pass)

A. Technical Solution (65 Marks)

Criteria	Description	Marks	Documents Required
Solution Cohesiveness & Enterprise Support	Vendor shall demonstrate an integrated, enterprise-supported infrastructure solution covering all required hardware and infrastructure software components (Section 6), using the minimum number of distinct products necessary to avoid unnecessary architectural complexity. Where multiple components serve overlapping functions, the Vendor shall justify why a single consolidated component was not used instead.	0-8	End-to-end infrastructure architecture diagram showing all proposed hardware/software components and integration points; enterprise support agreement or OEM partnership evidence for each proposed component.
Solution Architecture ELT/Data Integration	Data integration and ingestion covering source connectivity that covers schema enforcement, CDC methodology, and data quality controls. Assessed on completeness of source-to-target mapping approach and robustness of the proposed ingestion methodology.	0-5	Network and connectivity architecture diagram, infrastructure design document, and source system connectivity matrix.
Solution Architecture MPP Enterprise Data	Enterprise Data Warehouse engine covering parallel query processing, workload management, and query optimization capability, in line with	0-7	Design of the compute and storage infrastructure supporting the MPP Enterprise Data

Warehouse (Database Engine)	Section 5.7. Assessed on architectural soundness and alignment with sizing requirements in Section 6.		Warehouse, covering node sizing, cluster architecture, and storage performance characteristics, in line with Section 6
Solution Architecture Object Storage/ Lakehouse	Object storage and Lakehouse layer covering medallion architecture (bronze/silver/gold), open table format support, and native object storage connectivity from the MPP engine. Assessed on architectural completeness and open-format compliance, also covering capacity planning, redundancy, and performance characteristics, in line with Section 6.	0-5	Design of the storage infrastructure layer covering capacity planning, redundancy, performance characteristics, and connectivity architecture to support object storage workloads, in line with Section 6
Solution Architecture Compute Cluster/AI-ML Platform	Distributed compute cluster supporting AI/ML workloads and micro-batch/stream processing, covering compute-storage separation and workload isolation from the MPP engine. Assessed on scalability and workload isolation approach.	0-5	Compute cluster architecture diagram and AI/ML platform design.
BI Tools for Analytics	The Vendor shall specify the proposed BI/semantic layer tool and describe its integration with other platform components (e.g., MPP Enterprise Data Warehouse, Lakehouse, Data Governance and Catalog). Assessed on completeness of the proposed self-service and reporting architecture, and the robustness of tool selection and cross-tool integration	0-6	BI/semantic layer architecture diagram and tool selection justification.
Real-Time/ Streaming Data Ingestion	Compute layer (real-time streaming compute clusters) covering node architecture, workload isolation, and alignment with sizing requirements in Section 6.	0-5	Streaming compute architecture diagram, node/cluster sizing document, and evidence of infrastructure throughput/latency benchmarks for comparable deployments.
HTAP/Multi-Model	The proposed Solution Architecture shall demonstrate native multi-	0-7	HTAP/multi-model architecture diagram, and

Processing Capability	model processing capability, supporting both Online Transaction Processing (OLTP) and Online Analytical Processing (OLAP) within a single unified engine, combined with genuine Hybrid Transactional and Analytical Processing (HTAP), rather than federation of separate specialized systems. Assessed on evidence of native (non-federated) HTAP capability and alignment with the mixed transactional/analytical profile		vendor-published benchmark or reference deployment evidence demonstrating concurrent OLTP/OLAP processing without ETL-driven replication.
Data Governance and Security	Demonstrated approach to RBAC, field-level encryption, dynamic data masking, PII protection, audit logging, and latest DAMA-DMBOK alignment across all platform layers. Catalog layer covering metadata management, business glossary, data lineage, and catalog integration across all platform layers. Assessed on completeness of the proposed governance architecture	0-8	security controls note referencing encryption protocols, access control design
High Availability, Backup & Disaster Recovery	High-availability and redundancy mechanisms across compute, storage, and network components, combined with infrastructure-level backup and disaster recovery architecture, including storage replication, backup encryption, DR site connectivity, and RTO/RPO alignment, per Section 10 (HA, Backup & Disaster Recovery).	0-5	HA/redundancy design, DR architecture diagram, backup/replication design document, and RTO/RPO commitment note.
Vendor Presentation and Solution Walkthrough	Vendor shall present the proposed infrastructure solution covering architecture, installation and commissioning approach, and infrastructure readiness handover plan before the evaluation committee	0-4	Presentation delivered in person before the evaluation committee.

Note: For each criterion above, the Vendor shall provide documented justification covering suitability, scalability, licensing model, and vendor/community support maturity for the proposed tool/technology, consistent with FBR's on-premises.

B. Hardware Specifications and Delivery (15 Marks)

Criteria	Description	Marks	Documents Required
Hardware Specifications for Entire Solution	Proposed hardware shall meet or exceed all reference sizing specifications defined in Section 6, covering compute nodes, storage appliances, networking, and supporting infrastructure across Production and Development/Test environments. Assessed on specification compliance, redundancy design, and scalability provisions.	0-10	Detailed BOQ with per-component technical datasheets, sizing justification document, and five-year capacity expansion plan.
Delivery and Commissioning Commitment	Vendor shall provide a binding hardware delivery and commissioning schedule consistent with the timeline defined in Section 7.4 (Implementation Timelines and Milestones). Assessed on delivery lead time commitment, installation plan, and risk mitigation for procurement delays.	0-5	Signed hardware delivery schedule, OEM supply chain confirmation, and contingency plan for delivery risks.

C. Historical Experience (15 Marks)

Criteria	Description	Max Marks	Marking	Documents Required
Experience in Enterprise Hardware & Infrastructure Deployment	Demonstrated experience delivering large-scale, on-premises hardware and infrastructure (compute, storage, and networking) for enterprise analytics platforms, data warehouses, or equivalent large-scale analytical environments, over the past seven years. Minimum of two (2) referenced projects with a contract value of USD 1,000,000 or above (or PKR equivalent), each live in production for a	10	2.5 marks per project, minimum 2 projects	Signed contract or agreement, hardware delivery/commissioning certificate, or infrastructure completion report referencing scope and scale.

	minimum of twelve (12) months.			
Experience in Enterprise Software Licensing & Infrastructure Commissioning	Demonstrated experience in supplying, licensing, and commissioning enterprise software and infrastructure components (e.g., analytical database/data warehouse platforms, object storage, compute clusters) across large-scale on-premises analytics environments, with evidence of infrastructure scale comparable to the CDH scope	5	1 mark per project, minimum 2 projects	Architecture/commissioning diagrams, license procurement documentation, or client attestations confirming infrastructure scale and commissioning scope.

D. Company Profile (05 Marks)

Criteria	Description	Max Marks	Marking	Documents Required
Local Presence	Vendor shall demonstrate sustained local presence in Pakistan with on-ground offices and technical staff across infrastructure, hardware support, and software licensing functions, sufficient to support infrastructure commissioning, warranty service, and post-acceptance operational support.	5	0-5 marks based on adequacy, relevance, and depth of local technical capacity.	HR certificate or affidavit confirming technical staff strength with domain-wise distribution. Lease agreement, utility bills, or incorporation certificate evidencing operating presence in Pakistan.