

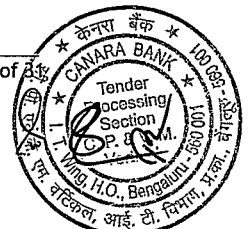
**Corrigendum 2 to GeM Bid ref. no. GEM/2023/B/3708093 dated 18/07/2023 for Selection of Service Provider for Implementing Data Lakehouse & End-to-End Analytics Solution in Canara Bank for 3 years**

It is decided to amend the following in respect of the above GeM bid:

**a. GeM bid document (Serial No. 1 & 2, Page no. 1):**

Description	Existing details	Amended details
Bid End Date/Time	18-08-2023, 15:00:00	<u>25-08-2023</u> , 15:00:00
Bid Opening Date/Time	18-08-2023, 15:30:00	<u>25-08-2023</u> , 15:30:00

Sl. No	Page No.	Section or Clause	Existing Clause	Amended Clause
b.	17	<u>SECTION C - DELIVERABLE AND SERVICE LEVEL AGREEMENTS</u>  8.PaymentTerms	Existing Payment Terms	<u>8: Amended Payment Terms</u>
c.	20	<u>SECTION C - DELIVERABLE AND SERVICE LEVEL AGREEMENTS</u>  10: Scope involved during Contract period	10.6: Only licensed copies of software shall be supplied. The selected Bidder shall grant an irrevocable subscription license to the Bank to use the software. Further, all software supplied shall be of latest version.	<u>10.6: Only licensed copies of software shall be supplied. Further, all software supplied shall be of latest version.</u>
d.	55	Annexure 2: Pre-Qualification Criteria	Annexure 2: Pre-Qualification Criteria Entire Annexure	<u>Amended Annexure -2 Prequalification Criteria attached to this corrigendum</u>
e.	78	Annexure 10: Technical Evaluation Criteria	Existing Annexure 10: Technical Evaluation Criteria	<u>Amended Annexure 10: Technical Evaluation Criteria, Section A and Section C attached to this corrigendum</u>
f.	96	Annexure 17: Bill of Material	Existing Annexure 17: Bill of Material	<u>Amended Annexure 17: Bill of Material</u>
g.	NA	<u>Appendix H:</u>	New Clause	<u>Tripartite Agreement</u>

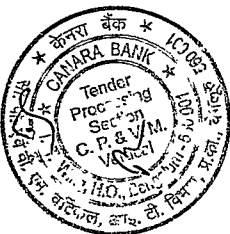


All the other instructions and terms & conditions of the above GeM bid shall remain unchanged.

Please take note of the above amendments while submitting your response to the subject GeM bid.

Date: 16/08/2023  
Place: Bangalore

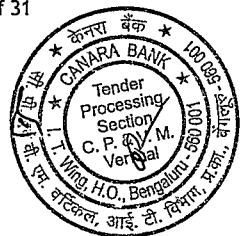
  
General Manager  

## 8. Amended Payment Terms

8.1. The following terms of payment shall be applicable to this contract and will be released after submission of performance security and execution of Contract Agreement:

Sl. No.	Stages	% of Payment	Payment Terms
<b>A. Subscription License Cost</b>			
1.	Subscription License cost for the 1 <sup>st</sup> year (as per Table-A of Bill-of-Material) for each environment (DC, DRC & UAT)	75%	On delivery, installation and on acceptance / signoff by the bank.
		10%	After implementing two (2) use case (out of listed seven use cases) and on acceptance / signoff by the bank.
		10%	After implementing three (3) more use cases (out of listed seven use cases) and on acceptance / signoff by the bank.
		5%	After implementing rest two (2) use cases (out of listed seven use cases) and on acceptance / signoff by the bank.
2.	Subscription License cost for the 2 <sup>nd</sup> and 3 <sup>rd</sup> year (as per Table-A of Bill-of-Material)	100%	Annually in advance for the respective years and on submission of Invoice and recommendation by the Bank on production of relevant documents.
3.	Training from OEM and bidder	Ongoing hourly basis	Payment will be done on hourly basis and on Acceptance/Sign off by the Bank.
4.	One-time implementation cost of the Solution	33%	After Successful implementation in UAT as per scope of work and acceptance/Sign off by the Bank on production of relevant documents.
		33%	After Successful implementation in DR as per scope of work and acceptance/Sign off by the Bank on production of relevant documents.
		34%	After Successful implementation in DC and Go-live and on acceptance/Sign off by the Bank on production of relevant documents.
5.	Cost of implementation of use cases as per clause 1.5 of Annexure-9 (Scope of Work)	25%	After Successful implementation of two use case as defined by the Bank and acceptance / signoff by the bank.
		50%	After Successful implementation of next three use case as defined by the Bank and acceptance / signoff by the bank.



		25%	After Successful implementation of remaining two use case as defined by the Bank and acceptance / signoff by the bank.
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- 8.2. Bank will release the payment on completion of each phase/ module and on production of relevant documents/invoices. Please note that Originals of invoices (plus One Copy) reflecting GST, GSTIN, State Code, HSN Code, State Name, Taxes & Duties, Proof of delivery duly signed by Bank officials of the respective Branch/office should be submitted while claiming payment in respect of orders placed.
- 8.3. The bank shall finalize the Sign-off and Acceptance format mutually agreed by the selected Bidder. The selected Bidder shall strictly follow the mutually agreed format and submit the same while claiming payment.
- 8.4. Bank will not pay any amount in advance unless otherwise specified in this RFP.
- 8.5. Payment shall be released within 30 days from submission of relevant documents as per RFP terms.
- 8.6. The Bank shall finalize the installation and acceptance format mutually agreed by the selected bidder. The selected bidder shall strictly follow the mutually agreed format and submit the same for each location wise while claiming installation and acceptance payment.
- 8.7. The payments will be released through NEFT/RTGS after deducting the applicable LD/Penalty, TDS if any, by Head Office at Bengaluru and the selected Bidder has to provide necessary Bank Details like Account No., Bank's Name with Branch, IFSC Code etc.

Annexure-2  
Pre-Qualification Criteria

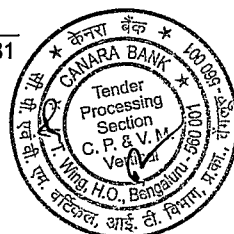
[On Firm's / Company's letter head]

**SUB: RFP for Selection of Service Provider for Implementing Data Lakehouse & End-to-End Analytics Solution in Canara Bank for 3 years**

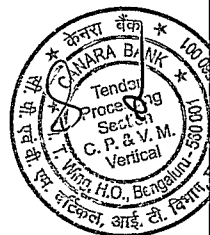
**Ref: GEM/2023/B/3708093 dated 18/07/2023.**

We have carefully gone through the contents of the above referred RFP along with replies to pre-bid queries & amendment, if any and furnish the following information relating to Qualification Criteria.

Sl. No.	Qualification Criteria	Documents to be submitted In compliance with Qualification Criteria	Bidders Response
1.	Signing of Pre-Contract Integrity Pact	The Bidder should submit signed Pre-Contract Integrity Pact on Non-Judicial Stamp Paper of Rs.200/- or more (as per respective state Stamp Act) as per Appendix-F.	
2.	The Bidder (including OEM and OSD/OSO, if any) should either be Class-I or Class-II local supplier as defined in Public Procurement (Preference to Make in India) Revised Order (English) dated 16/09/2020.	Certificate of local content to be submitted as per Annexure-5 as applicable.	
3.	Any Bidder (including OEM and OSD/OSO, if any) from a country which shares a land border with India will be eligible to bid, only if the Bidder (including OEM and OSD/OSO) are registered with the Competent Authority. Bidder (entity) from a country which shares a land border with India means: a. An entity incorporated, established or registered in such a country; or b. A subsidiary of an entity incorporated, established or registered in such a country; or c. An entity substantially controlled through entities incorporated, established or registered in such a country; or d. An entity whose beneficial owner is situated in such a country; or	A declaration stating "We have read the clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India. We further certify that we and our OEM are not from such a country or if from such a country, has been registered with Competent Authority. We hereby certify that we and our OEM fulfils all requirements in this regard and are eligible to be considered" to be submitted in Company's letter head.  [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]	



	e. An Indian (or other) agent of such an entity; or f. A natural person who is a citizen of such a country; or g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.		
4.	The Bidder should be a partnership firm registered under LLP Act, 2008/Indian Partnership Act, 1932 or Company in India as per Indian Companies Act, 1956 or Indian Companies Act, 2013 and should have been in operation for a period of at least five years as on RFP date	Copy of Certificate of LLP registration. (OR) Copy of Certificate of Incorporation and Certificate of Commencement of business in case of Public Limited Company (OR) Certificate of Incorporation in case of Private Limited Company, issued by the Registrar of Companies.	
5.	The bidder or OEM should have implemented the proposed / similar solution in one or more Scheduled Commercial Banks in India /Financial Regulatory bodies in India / Foreign Banks /Central Government & PSU/ Financial Institutions/ Multinational Corporation during the last 5 years from the date of RFP and the implementation should have relevance to Banking Scenarios and of similar complexity.	The bidder should submit Satisfactory performance certificate from clients/ copies of purchase order/work order/ reference letter from the clients to this effect.	
6.	The Bidder should have average annual turnover of Rs.100.00 Crores in the last three financial years (i.e., 2019-20, 2020-21 and 2021-22). This must be the individual company turnover and not of any group of companies.	Bidder has to submit audited Balance Sheet copies for last 3 Years i.e., 2019-20, 2020-21 and 2021-22 along with certificate from the Company's Chartered Accountant to this effect with Unique Document Identification Number.	
7.	The Bidder should have positive Net Worth as on 31/03/2022.	The Bidder should submit certificate from the Company's Chartered Accountant with UDIN to this effect.	
8.	The bidder should be in core business in the areas of Big data and Analytics / AI/ML for a minimum period of 3 years (As on	The Bidder should submit Letter of confirmation from the bidder about the company profile. And	



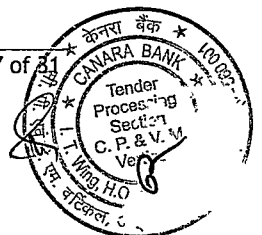


	date of RFP release) and having minimum 50 SME resources on their rolls who are experienced across areas like Analytics, Data Sciences and Data Warehouse / Data Lakehouse implementation.	A list of SME resources on the company rolls along with experience and qualification details on bidder's letter head duly signed by the authorized signatory of the bidder.	
9.	The Bidder shall have local / liaison office in Bengaluru to liaison for various activities.	The Bidder has to furnish their details like contact details with postal address, no. of personnel etc., besides Local Contact Person Name, Address, Phone No, Mobile No, Email etc., in Annexure-8.	
10.	Bidders should not be under debarment/blacklist period for breach of contract/fraud/corrupt practices by any Scheduled Commercial Bank/ Public Sector Undertaking / State or Central Government or their agencies/ departments on the date of submission of bid for this RFP.	The Bidder should submit self-declaration on the Company's letter head to this effect.	

We confirm that the information furnished above is true and correct. We also note that, if there are any inconsistencies in the information furnished above, the bid is liable for rejection. All documentary evidence / certificates confirming compliance to Qualification Criteria should be part of the RFP.

Date:  
Place:

Signature with seal  
Name:  
Designation :





Annexure-10  
Technical Evaluation Criteria

SUB: RFP for Selection of Service Provider for Implementing Data Lakehouse & End-to-End Analytics Solution in Canara Bank for 3 years

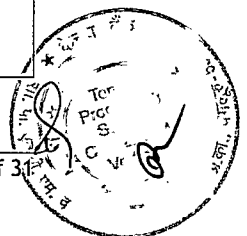
Ref: GEM/2023/B/3708093 dated 18/07/2023

Bank will evaluate the Technical proposals of all eligible Bidders based on the documents submitted for the below mentioned criteria:

Bidder's should mandatory comply below Technical Experience Criteria to be eligible under Technical Evaluation:

**Section A - Bidder's compliance to Technical Experience Criteria:**

Sl. No.	Qualification Criteria	Documents to be submitted In compliance with Qualification Criteria	Qualified/Not Qualified
1.	The bidder or OEM should have implemented the proposed / similar solution in one or more Scheduled Commercial Banks in India/Financial Regulatory bodies in India /Foreign Banks/ Central Government & PSU/ Financial Institutions/ Multinational Corporation during the last 5 years and the implementation should have relevance to Banking Scenarios and of similar complexity with data size of not less than 200 TB on-premises.	Copies of Work order / PO and Completion certificate / Sign off duly mentioning the size of the solution to be submitted for data lake/lake house implementation.	
2.	The bidder should have implemented at least 4 out of below 12 AI/ML use cases with Big Data components, including data integration, self-service Business Intelligence solutions, Advanced Analytical models etc. in one or more Scheduled Commercial Banks in India /Financial Regulatory bodies in India / Foreign Banks / Central Government & PSU/ Financial Institutions/ Multinational Corporation during the last 5 years and the implementation should have relevance to Banking Scenarios and of similar complexity.  <ul style="list-style-type: none"><li>▪ Predict Customer Attrition</li><li>▪ Next Best Offer (NBO) / Next Best Action (NBA)</li></ul>	Copies of Work order / PO and Completion certificate/ Sign off duly mentioning the Machine Learning/AI based use case implementation.	

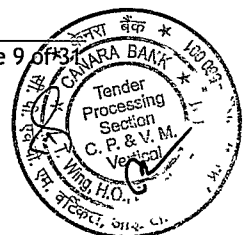




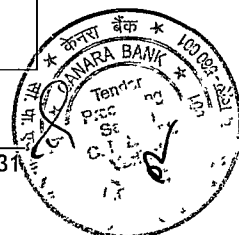
	<ul style="list-style-type: none"> <li>▪ Cross-sell/Up-sell</li> <li>▪ Hyper Personalization</li> <li>▪ Risk Analytics - Credit/underwriting Decision Making</li> <li>▪ Fraud Detection &amp; Prevention</li> <li>▪ Automated Market/Peer Analysis</li> <li>▪ Customer Behavior Analytics</li> <li>▪ Real time / streaming data analytics</li> <li>▪ NLP (Natural Language Processing)</li> <li>▪ Social Media Analytics</li> <li>▪ Document Processing/Computer Vision</li> </ul>		
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Section B - Bidder's compliance to Functional and Technical Requirements is given below:

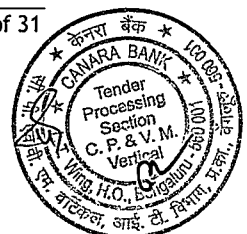
Sl. No.	Description	Fully complied	Partially Complied	Not complied
<b>Functional Requirements</b>				
1.	The proposed solution should have a unified, horizontally scalable, central, parallel processing Data Lakehouse for storage and processing.			
2.	The proposed solution should be deployed on Bank's premises. However, the solution should be capable of seamless migration to cloud on demand. The solution components should have an on-premise and on-cloud version, and a single unified governance and monitoring capability for both on-premises set-up as well as multi-cloud environment.			
3.	The proposed solution should support hybrid architecture which enables flexibility to host the platform either on-premise or on public/private/ hybrid cloud at any point of time as required by the Bank to leverage advanced infrastructure technologies like containerization, microservices, server less computing and data mesh capabilities. Bidder should provide option to switch over to cloud at any point of time within the existing license cost quoted with all the latest features. Bank can use cloud environment with the existing licenses whenever required. Also, for this migration (on-premise to cloud), the required			



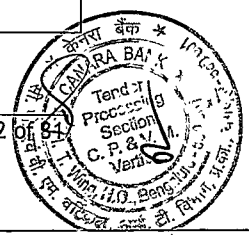
Sl. No.	Description	Fully complied	Partially Complied	Not complied
	resources shall be provided by the bidder at similar cost as proposed for on-premise setup.			
4.	The proposed solution should support open source software frameworks and components.			
5.	The proposed solution should bundle and offer all the features / technology components through a unified user interface with a single user login.			
6.	The proposed solution should seamlessly integrate with Bank's existing source systems like Data Warehouse, CBS, Non-CBS applications etc. The solution should also seamlessly integrate with Bank's business applications such as, but not limited to, Operational CRM, Analytical CRM, Digital Lending Platform, Lead Management System, Loan Origination System etc. with provision for bi-directional flow of data.			
7.	The proposed solution should have capability to ingest data in real-time from systems like Grievance Redressal systems, Call Centre etc., with no manual intervention. It should be capable of performing in-memory processing and should be equipped with tools to perform analytics on real-time data in real-time / near real-time.			
8.	The proposed solution should provide workbench / IDE for development, testing and productionizing of analytical and AI/ML models and use cases. The platform should be capable of handling structured / semi-structured/ unstructured data			
9.	The proposed solution should have enhanced analytical capabilities through easy-to-use GUI-based business intelligence tools to empower user departments and reduce TAT of data requests.			
10.	The proposed solution should provide deployment of AI/ML models at scale on an enterprise environment.			
11.	The proposed solution should provide CI/CD/CT (Continuous Integration, Continuous Delivery & Continuous Training) for the models. It should have capability for robust feedback process from business applications to continually train and improve the models in place.			
12.	The proposed solution should serve the models as batch, message queuing as well as real-time endpoints in the form of APIs / microservices that can be consumed for automated			



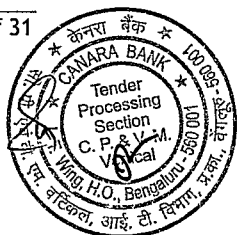
Sl. No.	Description	Fully complied	Partially Complied	Not complied
	provisioning, reporting, tracking and management.			
13.	The proposed solution should allow integration with DevOps/ MLOps / ModelOps tools and SDK automation with existing BI tools.			
14.	The proposed solution should be an excellent Digital Data Platform with real time data processing and transfer to data layers and then to app/ consumption layers.			
15.	The proposed solution should have integrated data management, metadata-driven data governance and security framework.			
16.	The proposed solution should provide secured open data initiatives and platform to enable community innovation through sandbox environment.			
17.	The proposed solution should support federated learning or collaborative learning initiatives.			
18.	The proposed solution should support compression of data. It should be possible to perform both fast compression and severe compression based on data processing needs.			
19.	The proposed solution should comply to all information and cyber security governance guidelines of the Bank as well as regulatory bodies.			
20.	The proposed solution should have an architecture that supports DC / DR, backup and archival as per the policies of the Bank.			
21.	The bidder should deploy highly skilled resources who will be well integrated with internal teams to enhance impact and facilitate adoption of best practices.			
22.	The bidder should deploy resources on-site for implementation of AI/ML use cases for fulfilment of business requirements.			
23.	The bidder should provide structured and detailed training program and hand holding to the Bank's resources.			
24.	The bidder should prepare all necessary documentation for the project and provide knowledge transfer to Bank resources.			
25.	The bidder should present their future roadmap on Analytics with respect to the Banking industry, including enhancements / new features planned to be introduced in the proposed platform.			
<b>Technical Requirements</b>				



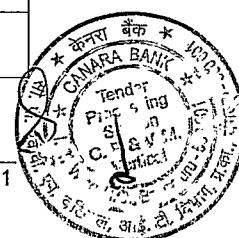
Sl. No.	Description	Fully complied	Partially Complied	Not complied
26.	The proposed solution should be built on on-premises hardware, taking into account not only the Bank's current data and processing needs but also the Bank's growing number of sources, semi-structured data and unstructured data.			
27.	The proposed solution should have a cost effective way to acquire, store, combine and enhance huge volume of structured, semi-structured and unstructured internal and external data.			
28.	The proposed solution architecture should consist of the following layers - <ul style="list-style-type: none"> <li>• Data Sources Layer</li> <li>• Data Ingestion Layer</li> <li>• Data Storage &amp; Transformation Layer</li> <li>• Analytics Layer</li> <li>• Data Consumption Layer</li> </ul>			
<b>Data Ingestion</b>				
29.	Data should be ingested from source layer to the Data Lakehouse using industry standard tools / utilities.			
30.	The ingestion tool should have capability of high-throughput, low-latency and error-free ingestion of all types of data formats from internal or external sources viz. structured, semi-structured and unstructured data.			
31.	It should support ingestion of data in batches, incremental additions, streaming (like Kafka/Spark etc.) and real-time feeds.			
32.	The ingestion tool should have a built-in query optimization feature.			
33.	Ability to perform intelligent aggregation on clickstream data before ingesting to data lake house.			
34.	It should support data ingestion via CDC, ETL, Message Broker, SFTP/MFT, Web API, etc. There should be no limitation on the type, format and size of data ingested. Data may include flat files, excel, log, feeds, audio, video, image, RDBMS, all datatypes supported by RDBMS, unstructured text data, etc. from file servers / file transfer APIs.			
35.	Data sanity checks, validations and reconciliation of data should be available as part of the data ingestion solution in order to support universally acknowledged policies, such as masking personally identifiable information or using canonical data representations, as well			



Sl. No.	Description	Fully complied	Partially Complied	Not complied
	monitoring the inbound data flow for completeness, consistency and accuracy.			
36.	The tool(s) used for data ingest and capture should be easy to use, simple, intuitive point and click utilities that support creating / modifying and scheduling data pipeline jobs.			
37.	It should also be possible to monitor ingestion pipelines to ensure that data is not becoming corroded over time. An alerting, reporting and monitoring utility about the ingest pipelines should be available as part of the solution.			
38.	Trigger mechanisms in identifying schema changes at source and packaging data in formats for quick retrieval should be available in the solution.			
39.	The tool(s) of choice should be able to provide audit logs for data validation and tracking data lineage.			
<b>Data Storage and Transformation</b>				
40.	Store reliably, efficiently and optimally irrespective of the data type (structured data, flat files, extracts, logs, xml / JSON / BSON type data, text, images, audio, video, sensor data, GIS data etc.).			
41.	Support RDBMS and non-RDBMS structures with ACID support for a true Data Lakehouse capability.			
42.	Manage storage replication.			
43.	Support columnar storage for optimal performance.			
44.	Support data compression. It should be possible to perform both fast compression and efficient compression based on data processing needs.			
45.	Compatible to perform processing operations on whole dataset as well as individual records or individual groups.			
46.	Horizontally scalable.			
47.	Robust to handle multiple concurrent access by processing engines / end users.			
48.	Support sophisticated data profiling, cleansing, and enrichment capability before loading data.			
49.	Support the capabilities for data quality checks to discover outliers and inconsistencies in the incoming data.			
50.	Support with adequate tools and approaches for de-duplication and cleansing data in semi-automatic and automatic ways.			

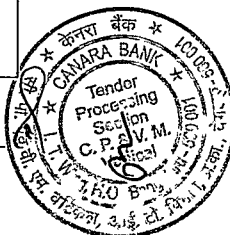


Sl. No.	Description	Fully complied	Partially Complied	Not complied
51.	Support the capability to define, monitor and publish Data Quality metrics (e.g., tolerances, thresholds, duplications, null sets padding / meaningless spaces, all / no capitals, string length) on defined intervals.			
52.	Data transformations should be triggered in parallel. The Lakehouse should be primed to run multiple transformation jobs in parallel.			
53.	The tool(s) used for data transformation should be aligned to data sources and types / formats of data residing on Data Lakehouse / Data Warehouse.			
54.	Provide a robust change management framework to track versioning, change history with date and user information, track migration of code from development to production, security.			
55.	Provide a unified interface to ensure seamless data access to the users and reports between Data Warehouse and Data Lakehouse.			
56.	Industry standard metadata management is required on Data Lakehouse to prevent it from becoming a data swamp.			
57.	Provide metadata-driven Data governance, security, administration and access management.			
<b>Analytics Layer</b>				
58.	The solution/platform should have support to best in class machine learning and analytics frameworks that run on scalable architectures.			
59.	Should provide tools in analytics layer for data extraction and preparation			
60.	Should provide tools in analytics layer for data pre-processing			
61.	Should provide tools in analytics layer for experimentation and model building			
62.	Model evaluation, deployment, feedback, re-calibration, data visualization etc., at scale.			
63.	The proposed solution should be integrated to existing and future versions Business Intelligence tools like Power BI / OBIEE (Present Version of Power BI: 2.117.286.0, Present Version of OBIEE: 12.2.1.4).			
64.	The proposed solution should have capability of co-development by sharing analytics notebooks and experiments replicable across users / teams performing similar analysis.			
65.	The proposed solution should cover the below scope of activities (indicative) -			



Canara Bank, IT Wing, HO - Corrigendum 2 to GeM Bid ref. no. GEM/2023/B/3708093 dated 18/07/2023

Sl. No.	Description	Fully complied	Partially Complied	Not complied
80.	Support automated model documentation feature with less to no manual intervention.			
81.	Support ethical AI / Responsible AI feature.			
82.	The proposed solution should offer Auto AI/ML capabilities for at-least below broad category of algorithms - <ul style="list-style-type: none"> <li>Regression</li> <li>Classification</li> <li>Unsupervised learning</li> <li>Forecasting</li> </ul>			
83.	The proposed solution should offer built-in package management for the open-source packages / libraries (e.g. Python libraries).			
84.	Seamlessly promote models from development to deployment space with a click of a button.			
85.	Auto generate standard API endpoints / code snippets for model serving.			
86.	Deploy models/workflows as industry standard web service.			
87.	Platform should have capability to convert piece of code into a job and ability to schedule, manage and monitor the job.			
88.	Seamless movement of model from UAT, DEV, Production based on model performance.			
89.	Ability to auto-build and publish detailed model reports and insights.			
90.	Centralized model monitoring and management console.			
91.	Model repository / catalogue to maintain model versions.			
92.	Ability to detect, alert and mitigate data drift, model drift, concept drift and prediction bias in the deployed models.			
93.	Ability to generate model decision explainability (both local & global interpretability).			
94.	Ability to monitor and set thresholds for model accuracy and generate alerts.			
95.	Ability to track model lineage for audit purpose.			
96.	Ability to lock/secure the models in production, restrict access to models in Dev, UAT and Prod based on user role.			
<b>Downstream applications/ Data consumption</b>				
97.	Should support bulk data and targeted data extracts via statistical tools and AP interfaces.			
98.	Should have capability to easily connect with any downstream applications currently used at the Bank.			





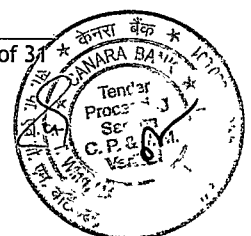
Sl. No.	Description	Fully complied	Partially Complied	Not complied
99.	Should support bi-directional flow of data from Operational CRM/downstream application to Analytical CRM.			
100.	The above layers constitute a unified data pipeline and the orchestration of functions is managed by an underlying platform.			
	<b>GRAND TOTAL - 200 Marks</b>			

Note for Section A, marks will be awarded against each point as follows:

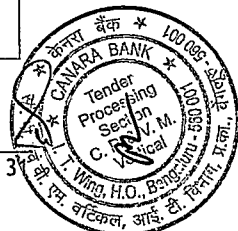
- Fully complied = 2 Marks
- Partially complied = 1 Marks
- Not complied = 0 Marks

Section C - Bidder's capability including proven relevant experience and capabilities of identified professionals for the project" is given below:

Sl. No.	Evaluation Criteria	Artifacts / Purchase order / Remarks	References	Max. Marks	Marks Obtained
1	<p>Details of Institutions where the proposed / similar solution has been implemented -</p> <ul style="list-style-type: none"> <li>• Sector: <ul style="list-style-type: none"> <li>○ Scheduled Commercial Banks in India / Regulatory Bodies in India: 5 marks</li> <li>○ Foreign Banks: 4 marks</li> <li>○ Other Entities: 2 marks</li> </ul> </li> <li>• Location: <ul style="list-style-type: none"> <li>○ India: 5 marks</li> <li>○ Outside India: 3 marks</li> </ul> </li> <li>• No. of branches (in case of Banks) <ul style="list-style-type: none"> <li>○ 2001 or more branches / Regulatory bodies in India: 3 marks</li> <li>○ 1001 to 2000 branches: 2 marks</li> <li>○ Upto 1000 branches / Other Entities: 1 mark</li> </ul> </li> </ul>	<p>Copies of Work order / PO and Completion certificate/ Sign off duly mentioning the details in the last five (05) years to verify the same.</p>	2	26	



2	Stage of implementation - • Completed: 10 marks • Under implementation: 5 marks	Copies of Work order / PO and Completion certificate/ Sign off duly mentioning the details in the last five (05) years to verify the same.	2	20	
3	Size of implementation (By Bidder or OEM) - • 501TB or more: 6 marks • 201TB to 500TB: 4 marks • 100 TB to 200 TB: 2 marks		2	12	
4	Nature of project - • Implementation & Support: 7 marks • Only implementation: 5 mark		2	14	
5	Type of Bidder - • Authorized partner of both OEM (OEM of Data platform & Analytics platform): 6 marks • Authorized partner of one OEM (OEM of Data platform or Analytics platform): 4 marks • Not Authorized partner of OEM: 2 marks	Authorization Letter from the respective OEMs	-	6	
6	No. of use cases implemented in one or more Scheduled Commercial Banks in India /Financial Regulatory bodies in India / Foreign Banks -  • More than 10: 6 marks • 7 to 10: 5 marks • 4 to 6: 2 marks  Use cases implemented in any other industries/entities will be given 2 marks	Copies of Work order / PO and Completion certificate/ Sign off duly mentioning the details in the last five (05) years to verify the same.  Reference letter from customer along with customer contact details are required.	2	12	
7	Customer site visit / Video Conference : 5 marks		2	10	
8	Project Team and their CVs				
	Role	With relevant	With Certification (Marks)	Min. No. of Resources	Max. Marks



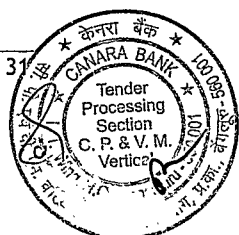
		Experience (Marks)				
8.1	Project Manager	3	2	1	5	
8.2	Solution Architect	3	2	1	5	
8.3	Business Analyst	3	2	2	10	
8.4	Data Engineer	3	2	2	10	
8.5	Data Scientist	3	2	2	10	
8.6	Big Data Engineer	3	2	1	5	
8.7	Platform Admin	3	2	1	5	
9	Total				50	
10	GRAND TOTAL (				150	
	Marks after Normalization				50	

Section D - Understanding Bank's requirement and proposed solution architecture" is given below:

Sl. No.	Evaluation Criteria	Max. Marks	Marks Obtained
<b>Effectiveness of Technical Presentation to Bid Evaluation Committee, in terms of</b>			
1.	Ability of proposed solution to align with Bank's existing technology stack and environment. Completeness and robustness of proposed solution architecture.	10	
2.	Understanding Bank's requirement	5	
3.	Effective coverage of technical aspects	5	
4.	Presentation of 2 case studies implemented in other institutions	20	
5.	Demonstration of solution capabilities on demand	5	
6.	Project Plan	5	
7.	GRAND TOTAL	50	

- The bidder should score a minimum of 65% in each section (B, C & D) to qualify for the bid.
- The bidder should score an overall mark of 70% to qualify for the bid.

**Note:** The bidder should score a minimum of 65% in each section (B, C & D) and an overall mark of 70% of total marks for qualifying under Technical Evaluation. The bidders





qualified under Technical Proposal Evaluation will be eligible for commercial opening. The weightage will be as follows:

Section	Evaluation Criteria	Total Marks	Weightage of Marks	Minimum marks to be obtained.
B	Bidder's compliance to Functional and Technical Requirements as mentioned in the RFP	200	66.70	43.36
C	Bidder's capability including proven relevant experience and capabilities of identified professionals for the project.	50	16.65	10.82
D	Understanding Bank's requirement and proposed solution architecture	50	16.65	10.82
	Total	300	100	Overall marks should be 70

#### Terms & Conditions

- Bank reserves the right to conduct interviews of the proposed team members.
- In case of absence of the allotted resource, the standby should perform the job of the absentee.
- Bank may reject such manpower if bank is not satisfied with his/her performance.

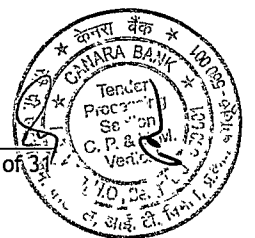
**Declaration:** We hereby confirm that the information submitted above is true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our response to this RFP is liable for rejection.

Date:

Signature with seal

Name:

Designation :



**Annexure-17**  
**Bill of Material**

SUB: RFP for Selection of Service Provider for Implementing Data Lakehouse & End-to-End Analytics Solution in Canara Bank for 3 years

Ref: GEM/2023/B/3708093 dated 18/07/2023.

**Notes**

1. These details should be on the letterhead of Bidder and each & every page should be signed by an Authorized Signatory with Name and Seal of the Company.
2. The base location for the project execution would be Bangalore.
3. The consultant will have to work as per the timings of the Bank.
4. Please be guided by RFP terms, subsequent amendments and replies to pre-bid queries (if any) while quoting.
5. Do not change the structure of the format nor add any extra items.
6. No counter condition/assumption in response to commercial bid will be accepted. Bank has a right to reject such bid.

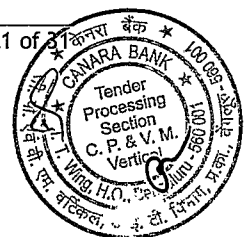
**Table -A**

**Cost for Subscription Licenses for the proposed solution**

[Amount in Indian Rupees]

Sl. No.	Item Details	Unit Price details (Excl. of Taxes)			Total cost (Excl. of Taxes)	Tax for Column d		Total Cost (Incl. of Tax)
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year		% of Tax	Tax amt.	
		a	b	c		e	f	
1.	Subscription License cost for the solution at DC with warranty and support							
2.	Subscription License cost for the solution at DR with warranty and support							
3.	Subscription License cost for the solution at Dev/test (UAT) with warranty and support							
4.	<b>Total Cost of Subscription Licenses</b>							

\* Full payment can be made against the payment Bank guarantee



**Table -B**  
**Cost for Implementation of the Proposed solution and use cases**  
[Amount in Indian Rupees]

Sl. No.	Item Details	Unit Price details (Excl. of Taxes)	Tax for Column a		Total Cost (Incl. of Tax)
			% of Tax	Tax amt.	
		a	b	c	d=a+c
1.	Cost for one time implementation of the solution as per Annexure-9 (Scope of Work).				
2.	Cost for implementation of use cases as per clause 1.5 of Annexure-9 (Scope of Work) (Note: Price Breakup to be provided as per Table-E)				
3.	Total Cost (Sum of Column d from Sl. No. 1 to 2)				

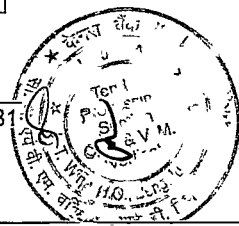
**Table -C**  
**Cost for Training of Bank Officials**  
[Amount in Indian Rupees]

Sl. No.	Item Details	Price details per hour (Excl. of Taxes)	No. of Hours	Total Cost (Incl. of Tax) <i>Ecc</i>	Tax for Column c		Total Cost (Incl. of Tax)
					% of Tax	Tax amt.	
		a	b	c=a*b	d	e	f=c+e
1.	Training cost		500*				
2.	Total Cost						

\* Training hours are indicative Bank may avail more /less hours of training at the rate mentioned above. Payment will be made as per the actuals.

**Table - D**  
**Total Cost of Ownership for 3 years Contract Period**  
[Amount in Indian Rupees]

Sl. No.	Details	Total Cost of Ownership [exclusive of taxes]	Total Cost of Ownership [inclusive of taxes]
1.	Cost for Subscription Licenses for the proposed solution as per Table-A		
2.	Cost for Implementation of the proposed solution and use cases as per Table-B		
3.	Cost for Training as per Table-C		
4.	Total Cost of Ownership for 3 years Contract Period [Sum of row 1 to 3 of the Table-D]		



Price breakup for Total Cost of Ownership  
Table -A.1

Item-wise break up of Cost for Subscription Licenses quoted in Sl no 1 of Table A  
(Bidder to mention all items inclusive of items provided free of cost)

[Amount in Indian Rupees]

Sl. No.	Item Details	Unit Price details (Excl. of Taxes)			Total cost (Excl. of Taxes)	Tax for Column d		Total Cost (Incl. of Tax)
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year		% of Tax	Tax amt.	
		a	b	c		d=a+b+c	e	
DC Environment								
1.	Components in Data Sources Layer							
1.1	<Item 1>							
1.2	<Item 2>							
2	Components in Data Ingestion Layer							
2.1	<Item 1>							
2.2	<Item 2>							
3	Components in Data Storage and Transformation Layer							
3.1	<Item 1>							
3.1	<Item 2>							
4	Components in Analytics Layer							
4.1	<Item 1>							
4.2	<Item 2>							
5.	Components in Data Consumption Layer							
5.1	<Item 1>							
5.2	<Item 2>							
6	Any other components							
6.1	<Item 1>							
6.2	<Item 2>							
	Total Cost of Subscription Licenses in DC Environment							

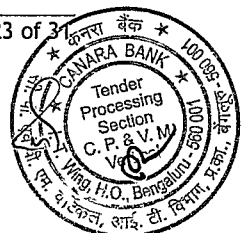


Table -A.2

**Item-wise break up of Cost for Subscription Licenses quoted in Sl 2 of Table A**  
**(Bidder to mention all items inclusive of items provided free of cost)**

[Amount in Indian Rupees]

Sl. No.	Item Details	Unit Price details (Excl. of Taxes)			Total cost (Excl. of Taxes)	Tax for Column d		Total Cost (Incl. of Tax)
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year		% of Tax	Tax amt.	
		a	b	c		d=a+b+c	e	
DR Environment								
1.	Components in Data Sources Layer							
1.1	<Item 1>							
1.2	<Item 2>							
2	Components in Data Ingestion Layer							
2.1	<Item 1>							
2.2	<Item 2>							
3	Components in Data Storage and Transformation Layer							
3.1	<Item 1>							
3.1	<Item 2>							
4	Components in Analytics Layer							
4.1	<Item 1>							
4.2	<Item 2>							
5.	Components in Data Consumption Layer							
5.1	<Item 1>							
5.2	<Item 2>							
6	Any other components							
6.1	<Item 1>							
6.2	<Item 2>							
	Total Cost of Subscription Licenses in DR Environment							

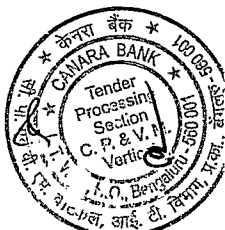


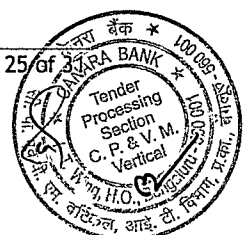


Table -A.3

**Item-wise break up of Cost for Subscription Licenses quoted in Sl 3 of Table A**  
**(Bidder to mention all items inclusive of items provided free of cost)**

[Amount in Indian Rupees]

Sl. No.	Item Details	Unit Price details (Excl. of Taxes)			Total cost (Excl. of Taxes)	Tax for Column d		Total Cost (Incl. of Tax)	
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year		% of Tax	Tax amt.		
		a	b	c		d=a+b+c	e		f
Dev/Test (UAT) Environment									
1.	Components in Data Sources Layer								
1.1	<Item 1>								
1.2	<Item 2>								
2	Components in Data Ingestion Layer								
2.1	<Item 1>								
2.2	<Item 2>								
3	Components in Data Storage and Transformation Layer								
3.1	<Item 1>								
3.1	<Item 2>								
4	Components in Analytics Layer								
4.1	<Item 1>								
4.2	<Item 2>								
5.	Components in Data Consumption Layer								
5.1	<Item 1>								
5.2	<Item 2>								
6	Any other components								
6.1	<Item 1>								
6.2	<Item 2>								
	Total Cost of Subscription Licenses in Dev/Test (UAT) Environment								



**Table - E (price breakup for sl. no. 2 of Table-B)**  
**Resource cost for implementation use case as per clause 1.5 of Annexure-9 (Scope of Work)**

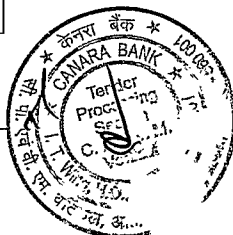
[Amount in Indian Rupees]

Sl. No.	Item Details	Charges Per Manday (Excl. of Taxes)	No. of Mandays per resource	No. of resources	Total Cost of resources (Excl. of Tax)	Tax for Column d		Total Cost of resources (Incl. of Tax)
		a	b	c	d=a*b*c	% of Tax	Tax amt.	g=d+f
1.	Project Manager							
2.	Solution Architect							
3.	Business Analyst							
4.	Data Engineer							
5.	Data Scientist							
6.	Big Data Engineer							
7.	Platform Admin							
8.	Any other (specify)							
9.	Total Cost							

**Rate Card Table F - Cost for one on-site resources for any additional requirements / additional customization/ enhancement of the Solution**

[Amount in Indian Rupees]

Sl. No.	Item Details	Charges Per Resource per Manday (Excl. of Taxes)	Tax for Column a		Total Cost of resources (Incl. of Tax)
		a	% of Tax	Tax amt.	d=a+c
1.	Project Manager				
2.	Solution Architect				
3.	Business Analyst				
4.	Data Engineer				





5.	Data Scientist				
6.	Big Data Engineer				
7.	Platform Admin				
8.	Any other (specify)				

**Note:** \*The charges quoted above shall be fixed for the entire contract period. The above Table-F is indicative only and will not be considered for calculating TCO, however Bank at its discretion may avail the services of resources at the above mentioned cost whenever required during the Contract period.

#### Undertaking

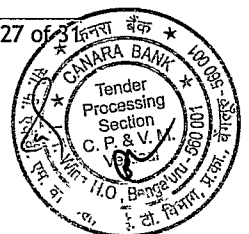
- Bill of material is submitted on the letter head and is signed by an Authorized Signatory with Name and Seal of the Company.
- We confirm that we have gone through RFP clauses, subsequent amendments and replies to pre-bid queries (if any) and abide by the same.
- We have not changed the structure of the format nor added any extra items. We note that any such alternation will lead to rejection of Bid.
- We agree that no counter condition/assumption in response to commercial bid will be accepted by the Bank. Bank has a right to reject such bid.
- We are agreeable to the payment schedule as per "Payment Terms" of the RFP.
- We confirm that all out of pocket expenses, travelling, boarding and lodging expenses for the entire term of this tender and subsequent agreement is included in the amounts, quoted and we shall not be entitled to charge any additional costs.
- We confirm that there shall be no escalation in the agreed prices.

Date

Signature with seal

Name:

Designation:



### Technological Stack:

### Present Analytics Technology Stack in the Bank

1. Data Sources
  - 1.1. Data Warehouse - Exadata with Oracle Database 19c (Present size of 250 TB)
  - 1.2. Database of other major structured source systems - Oracle Database 12g / 19c
2. Analytics
  - 2.1. SAS Software Version 9.5
  - 2.1. SAS Eminer Version 15.2
  - 2.2. SAS EG Version 8.3
  - 2.3. SAS DI Version 4.905
  - 2.4. Python 3.7.3
3. Data Reporting & Visualization
  - 3.1. Oracle Business Intelligence Version 12.2.1.4
  - 3.2. Microsoft Power BI Version 2.117.286.0

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Canara Bank

Appendix-H  
Tripartite Agreement

This agreement is executed on this \_\_\_\_\_ day of \_\_\_\_\_ 2023

**Between**

M/s \_\_\_\_\_ (Vendor), a company incorporated under the Companies Act, 1956 and having its registered office at \_\_\_\_\_ (hereinafter referred to as "VENDOR" or "\_\_\_\_\_") which expression shall unless repugnant to the context or meaning thereof mean and include its successor and permitted assigns on the One Part

**And**

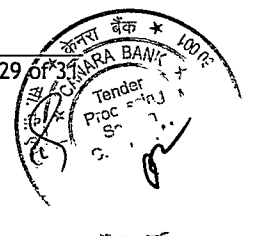
M/s \_\_\_\_\_ (OEM), a company incorporated under \_\_\_\_\_ having its registered office at \_\_\_\_\_ (herein after referred to as "OEM" or "\_\_\_\_\_") which expression shall unless repugnant to the context or meaning thereof mean and include its successor and permitted assigns on the Second Part

**And**

M/s. Canara Bank, a body corporate, incorporated under the banking companies (Acquisition & Transfer of undertakings) Act 1970 and having its Registered office at Bengaluru, Karnataka (hereinafter referred to as "the Bank" or "Customer" which expression shall unless repugnant to the context or meaning thereof mean and include its successor and permitted assigns) on the Third Part.

**WHEREAS:**

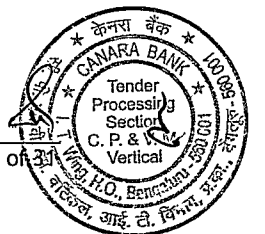
- a) Vendor is in the business of \_\_\_\_\_ and other related businesses;
- b) OEM is in the business of \_\_\_\_\_ Manufacturing and other related businesses;
- c) The Bank had floated a Request For Proposal Ref. No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as "RFP") inviting bids for selection of service provider for implementing Data Lakehouse & End-to-End analytics solution in Canara Bank on the terms and conditions explained in detail therein which is attached as Annexure -1 hereto;
- d) In response to the said RFP, Vendor had submitted its Technical & Commercial proposal to the Bank; and proposed to implement the proposed Data Lakehouse & End-to-End Analytics Solution manufactured by OEM along with other components and emerged as successful bidder in the evaluation process.



- e) The Bank, has issued Purchase Order No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred as "Purchase Order") based on the above bidding process to the Vendor for providing the services, which is attached as Annexure-1 hereto.
- f) Vendor has accepted the Purchase Order and has agreed to implement the proposed Data Lakehouse & End-to-End Analytics Solution manufactured by OEM along with other components, along with OEM for the Bank. Accordingly, the Vendor and the Bank has entered in to a Service Level Agreement dated \_\_\_\_\_ (hereinafter referred to as "SLA") which is attached as Annexure III.
- g) OEM in consideration of Vendor paying/agreed to pay them the price for the solutions supplied to Canara Bank as detailed in the Purchase Order placed on Vendor, have consented to provide the services as envisaged in this document.

**NOW THEREFORE THIS AGREEMENT WITNESSETH** and it is hereby agreed by and between the parties hereto as under:

1. The RFP, Purchase Order and the Service Level Agreement executed between the Bank and the Vendor shall form part and parcel of this Agreement and the parties herein shall be bound by the terms and conditions.
2. The contract shall be for a period of 3 years from the date of acceptance of purchase order or from the date of supply of hardware whichever is later.
3. The Vendor and OEM shall take the responsibility of execution of the project as per the terms and conditions of RFP, Purchase Order and SLA.
4. The Vendor and OEM specifically agrees as follows:
  - 4.1 Vendor should ensure, the Vendor to OEM ratio of 70:30 resources for implementation of the project with a minimum of 30% from OEM who shall handle critical responsibilities of the implementation such as installation, configuration, platform administration etc.
  - 4.2 OEM has to ensure that their respective products are installed and implemented by the OEM or Vendor as the case may be by following the industry best practices and to be made available to the bank in the optimal state.
  - 4.3 The Vendor and OEM both have to take the respective shared responsibility of project implementation as per the Purchase Order, Service Level Agreement and RFP.
  - 4.4 The bank shall be indemnified by the Vendor and OEM in case of any loss or damage caused from any dispute arising between Vendor and OEM in terms of implementation and financials.



31 of 3

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CANARA BANK

Tender Processing Section

C. P. & V. M. Vertical

Wing H.O., Bangalore-560 001

100 009-560 001