



## Request for Proposal (RFP)

# Selection of a Qualified Agency to Provide Navigation, Follow-up, and Referral Services in Alignment with Telemedicine Services for C4

Tender Invitation No. DPH/NCD/2026/01

**Director of Public Health**

**Health & Family Welfare Department  
Government of Odisha**

**2<sup>nd</sup> Floor, HOD Building, Bhubaneswar, 751001**

**<https://health.odisha.gov.in>**



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### **DISCLAIMER**

Though adequate care has been taken in the preparation of this document, henceforth referred to as the Request for Proposal document or the RFP document, the Applicants should satisfy themselves that the document is complete in all respects. Intimation of discrepancy, if any, should be given to the address mentioned below latest by **5 PM of Dt. 24.6.2026**. In case, no such intimation is received by the said deadline, it shall be considered that the applicant is satisfied that the document is complete in all respect.

Neither H&FW, Govt. of Odisha nor their employees make any representation or warranty as to the accuracy, reliability, or completeness of the information in this RFP document. Each prospective Applicant/ Bidder should conduct their own investigations and analysis and check the accuracy, reliability, and completeness of the information in this RFP document and obtain independent advice from proper source(s) before submission of their RFP.

Neither H&FW nor their employees will have any liability to any prospective Applicant or any other person under any law for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this RFP document.

H&FW, Govt. of Odisha reserves the right, without any obligation or liability, to accept or reject any or all of the RFPs, and at any stage of the process, to cancel or modify this solicitation process, or any part thereof, or to vary any of the terms and conditions, or to cancel this solicitation process to initiate a new process without assigning any reason thereof.

Neither H&FW nor their employees will have any liability in case of non-receipt of any correspondence from them to the applicants due to the postal delays.

Any dispute arising out of this RFP document is subject to jurisdiction of Sub-ordinate court and Hon'ble High Court of Odisha.

The applicants/ Bidders are supposed/ expected to know the relevant rules and regulations of the respective authorities concerning this project.

## Glossary of Terms

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| <b>H&amp;FW Dept.</b> | <b>Health &amp; Family Welfare Department</b>       |
| <b>SDC/ OSDC</b>      | <b>State Data Centre / Odisha State data Centre</b> |
| <b>RFP</b>            | <b>Request For Proposal</b>                         |
| <b>UAT</b>            | <b>User Acceptance Testing</b>                      |
| <b>SLA</b>            | <b>Service Level Agreement</b>                      |
| <b>SP/SI</b>          | <b>Service Provider/ System Integrator</b>          |
| <b>SSL</b>            | <b>Secure Socket Layer</b>                          |
| <b>MAF</b>            | <b>Manufacturer Authorization Format</b>            |
| <b>OEM</b>            | <b>Original Equipment Manufacturer</b>              |
| <b>EMD</b>            | <b>Earnest Money Deposit</b>                        |
| <b>PBG</b>            | <b>Performance Bank Guarantee</b>                   |
| <b>DPDP</b>           | <b>Digital Personal Data Protection</b>             |
| <b>PHR</b>            | <b>Personal Health Record</b>                       |
| <b>ABHA</b>           | <b>Ayushman Bharat Health Account</b>               |
| <b>ABDM</b>           | <b>Ayushman Bharat Digital Mission</b>              |
| <b>CDAC</b>           | <b>Centre for Development of Advanced Computing</b> |
| <b>C4</b>             | <b>Cancer Command Control Centre</b>                |
| <b>IA</b>             | <b>Implementing Agency</b>                          |
| <b>HMIS</b>           | <b>Health Management Information System</b>         |
| <b>ANM</b>            | <b>Auxiliary Nurse Midwife</b>                      |
| <b>KPI</b>            | <b>Key Performance Indicator</b>                    |
| <b>DHH</b>            | <b>District Headquarter Hospital</b>                |
| <b>OPD</b>            | <b>Outpatient Department</b>                        |
| <b>O&amp;M</b>        | <b>Operation &amp; Maintenance</b>                  |
| <b>DDO</b>            | <b>Drawing and Distribution Officer</b>             |
| <b>US</b>             | <b>Under Secretary</b>                              |
| <b>PQ</b>             | <b>Per-Qualification</b>                            |
| <b>LAN</b>            | <b>Local Area Network</b>                           |
| <b>MVP</b>            | <b>Minimum Viable Product</b>                       |

## **SECTION - I**

### **FACT SHEET**

| SI No. | Particulars                                                        | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Name of the Client                                                 | H&FW Dept., Govt. of Odisha                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2      | Completion Period                                                  | 180 days                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3      | Bid Validity                                                       | 180 days from the last date of submission of the bids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4      | Date of Issue of RFP                                               | 17/06/2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 5      | Pre-Bid Meeting Date & Time                                        | <b>23.6.2026, 3.30 PM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|        | Last date & Time for Pre bid Query by email                        | <b>24.6.2026, 5 PM</b> by email id : <b>dph.orissa@gmail.com</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6      | Last Date of Submission of Bids                                    | <b>18/07/2026 up to 04:00 PM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7      | Opening of Tenders                                                 | <p>Part - I: Technical Bid</p> <p>The technical bids will be opened on <b>18/07/2026, 4.30 PM</b> (Bidders fulfilling the eligibility criteria will <b>only</b> be called for Technical Presentation)</p> <p>Part - II: Financial Bid (Tentative Date)</p> <p>The date &amp; time of opening of Financial Bids of the technically qualified bidders will be intimated later.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 8      | Bid Processing Fee (Non-Refundable)                                | Rs. 11,800/- (Including GST) in shape of Demand Draft/ Banker's Cheque from any scheduled commercial bank in favour of "DDO, Director of Public Health" payable at Bhubaneswar. The Proposal received without bid processing fee will be rejected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 9      | Earnest Money Deposit (EMD)/ Bid Security Declaration (Refundable) | <ul style="list-style-type: none"> <li>Bidders shall submit, along with their Bids, EMD of Rs. 1.00 Cr (Rupees One Crore) in the shape of Bank Draft OR Bank Guarantee (in the format specified in this RFP) issued by any scheduled bank in favour of "DDO, Director of Public Health, payable at Bhubaneswar, and should be valid for 180 days from the due date of the tender / RFP. The EMD should be submitted in the General Bid.</li> <li>The EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.</li> <li>EMD of all unsuccessful bidders would be refunded by within 60 days of the bidder being notified as being unsuccessful. The EMD, for the amount mentioned above, of successful bidder would be returned upon submission of Performance Guarantee.</li> </ul> |
| 11     | Performance Guarantee/Security (PG/ PS)                            | Agency shall submit an irrevocable Performance Guarantee/Security of 5% (Five Percent) of the contract value for proper performance and due fulfilment of the terms and conditions of the contract within 30 days from the date of issue of Letter of Acceptance by the Director of Public Health, Health & Family Welfare Department, Govt. of Odisha. The guarantee shall be in the form of Government securities or fixed Deposit Receipts or Bank Guarantee or Guarantee bonds of any                                                                                                                                                                                                                                                                                                                                                     |

|    |                                                                           |                                                                                                                                 |
|----|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                           | Nationalized Bank of India and will be released after 2 months of total contract period i.e. 62 months.                         |
| 12 | Address for Submission of Proposal (Speed Post/ Registered Post/ Courier) | Director of Public Health, Health & Family Welfare Department, 2 <sup>nd</sup> Floor, HOD Building, Bhubaneswar, Odisha, 751001 |
| 13 | Place of Opening of Technical Proposal                                    | Director of Public Health, Health & Family Welfare Department, 2 <sup>nd</sup> Floor, HOD Building, Bhubaneswar, Odisha, 751001 |

## **SECTION – II**

### **REQUEST FOR PROPOSAL (RFP)**

**Project Name:** Design, Development, Implementation, Operation, and Maintenance of a Cancer Care Command Centre (C4)

**Reference No:** DPH/NCD/2026/01

**Issuing Authority:** Director, DPH, Department of Health & Family Welfare, Government of Odisha,  
2nd Floor, HOD Building,  
Bhubaneswar, Odisha, 751001

**Date:** 17.06.2026

## **Information for Bidders**

Sealed proposals are invited from eligible, reputed, qualified software application developers and implementers for Design, Development, Implementation, Operation, and Maintenance of a Cancer Care Command Centre (C4)

This invitation to bid is open to all bidders meeting the minimum eligibility criteria as mentioned in this RFP Document.

### **a. Basic Information**

Health & Family Welfare Department, Government of Odisha invites responses (“Tenders”) to this Request for Proposals (“RFP”) from SI/Software Solution Provider firms (“Bidders”) for this RFP document for selection of SSP for Design, Development, Implementation, Operation, and Maintenance of a Cancer Care Command Centre (C4) As described in this RFP.

Proposals must be received not later than time, date and venue mentioned in the Fact Sheet. Proposals that are received late will not be considered in this procurement process. Director of Public Health, H&FW Dept. will award the contract to the successful bidder whose proposal has been determined as the best value proposal based on Technical and Financial evaluation criteria and accepted by the Tender Accepting Authority. Not more than one bid shall be submitted by one Bidder. This ‘Invitation to Bid’ is non-transferable under any circumstances. The bids must be submitted through Post/ Courier/ Physically mode only. Director of Public Health, H&FW Dept. reserves the right to reject any or all the Bids in whole or part, prior to signing of the Contract, without assigning any reasons. **The RFP document shall be downloaded from “Tender” in “Tender and Advertisement” section of the H&FW Department website i.e. <https://health.odisha.gov.in>.**

### **b. Bid Validity**

The Bid must be valid for 180 days from the date of opening of commercial proposal. However, Tender No. DPH/NCD/2026/01 validity of the price bid of selected bidder will be for entire contract period as mentioned in the RFP and the extension period, if any.

### **c. Tenure of Contract**

The Contract shall be in force for Three (3) years further extendable for more Two (2) years based on performance, subject to adherence to timelines/time frame and as per the Terms and Conditions of the Contract. b. Termination of the contract: Notwithstanding the allocation of work during the Contract period and/or tenure of Contract, Director of Public Health, H&FW Dept., without prejudice or liability, reserves the right to terminate the contract.

### **d. Pre-Bid Meeting & Clarifications**

#### **(i) Pre-bid Conference:**

Director of Public Health, H&FW Dept. shall hold a pre-bid meeting with the prospective bidders on 23.6.2026, 3.30 PM at Office of the Director of Public Health, 2<sup>nd</sup> Floor, HOD Building, Bhubaneswar.

The Bidders will have to ensure that their queries for Pre-Bid meeting should reach to **email: [dph.orissa@gmail.com](mailto:dph.orissa@gmail.com)** on or before 24/06/2026, 5PM. Submission of proposal through other modes and late pre-bid queries will be rejected.

The queries should necessarily be submitted in Word or Excel as per the following format (Soft copy) only. In any other format the queries shall not be acceptable.

| <i>Sl No.</i> | <i>Document Reference(s)<br/>(Section &amp; Page Number(s))</i> | <i>Content of RFP<br/>requiring<br/>Clarification(s)</i> | <i>Points of clarification</i> |
|---------------|-----------------------------------------------------------------|----------------------------------------------------------|--------------------------------|
|               |                                                                 |                                                          |                                |

H&FW Dept. shall not be responsible for ensuring receipt of the bidders' queries. Any requests for clarifications post the indicated date and time may not be entertained by H&FW Dept.

## **(ii) Responses to Pre-Bid Queries and Issue of Corrigendum:**

The Nodal Officer notified by the H&FW Dept. will endeavor to provide timely response to all queries. However, H&FW Dept. neither makes representation or warranty as to the completeness or accuracy of any response made in good faith, nor does H&FW Dept. undertake to answer all the queries that have been posed by the bidders. At any time prior to the last date for receipt of bids, H&FW Dept. may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by a corrigendum.

The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on <https://health.odisha.gov.in>.

Any such corrigendum shall be deemed to be incorporated into this RFP.

In order to provide prospective Bidders reasonable time for taking the corrigendum into account, H&FW Dept. may, at its discretion, extend the last date for the receipt of Proposals.

## **e. Key Requirements of Bid**

**Right to Terminate the Process:** Director of Public Health, H&FW Dept. may terminate the RFP process at any time and without assigning any reason. H&FW Dept. makes no commitments, express or implied, that this process will result in a business transaction with anyone.

This RFP does not constitute an offer by Director of Public Health, H&FW Dept. The bidder's participation in this process may result Director of Public Health, H&FW Dept. selecting the bidder to engage towards execution of the contract.

### **RFP Document Fees:**

- RFP document can be downloaded from <https://health.odisha.gov.in>
- The bidders are required to pay the document Fee of Rs.11,800/- (Rupees Eleven Thousand Eight Hundred Only) in shape of DD/ Banker's Cheque drawn in any nationalized / scheduled bank favoring “DDO, Director of Public Health, H&FW Dept., Bhubaneswar”, Odisha, payable at Bhubaneswar.
- Proposals received without or with inadequate RFP Document fees shall be rejected.

### **Earnest Money Deposit:**

- Bidders shall submit, along with their Bids, EMD of Rs. 1.00 Cr (Rupees One Crore) in the shape of Bank Draft OR Bank Guarantee (as per format at Annexure-Q)
- EMD of all unsuccessful bidders would be refunded by Director of Public Health, H&FW Dept.

within 60 days of the bidder being notified as being unsuccessful. The EMD, for the amount mentioned above, of successful bidder would be returned upon submission of Performance Bank Guarantee. The EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.

- The bid / proposal submitted without EMD, mentioned above, will be summarily rejected. The EMD may be forfeited:
  - i. If a bidder withdraws its bid during the period of bid validity.
  - ii. In case of a successful bidder, if the bidder fails to sign the contract in accordance with this RFP.
  - iii. If found to have a record of poor performance such as having abandoned work, having been black-listed, having inordinately delayed completion and having faced Commercial failures etc.
  - iv. The Bidder being found to have indulged in any suppression of facts, furnishing of fraudulent statement, misconduct, or other dishonest or other ethically improper activity, in relation to this RFP
  - v. A Proposal contains deviations (except when provided in conformity with the RFP) conditional offers and partial offers.

**Language:**

The Proposal should be filled by the Bidder in English language only.

## **Submission of Proposals**

**General Instruction to Bidders;**

- The bidders should submit their responses as follows:
  - i. Response to Pre-Qualification Criteria and Technical Proposal (Cover-1)
  - ii. Commercial Proposal (Cover-2)
- The Response to Technical Proposal and Financial Proposal (as mentioned in previous paragraph) should be submitted through Post/ Courier/ Physically mode.
- Please Note that Prices should not be indicated in the Technical Proposal but should only be indicated in the financial proposal.
- The proposal/ bid shall contain no interlineations or overwriting, except as necessary to correct errors made by the bidder itself. Any such corrections must be initiated by the person (or persons) who sign(s) the proposals.
- In case of any discrepancy observed by Director of Public Health, H&FW Dept. in the contents of the uploaded bid documents due to improper scanning or not in readable format or verification of authenticity of the scanned documents, Director of Public Health, H&FW Dept. may ask the bidder for resubmission of such documents.

## **Preparation of Bids**

- Bidders should take into account any corrigendum published on the tender document before submitting their bids.
- Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
- Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document.

## **Submission of Bids**

- The Bid has been invited under two bid systems i.e. Technical Proposal and Commercial Proposal. The interested bidders are advised to submit with all relevant documents through Post/ Courier/ physically at **NCD Cell, Director of Public Health, H&FW Department, 2<sup>nd</sup> Floor, HOD Building, Bhubaneswar - 751001.**
- The Bidder must fill up the Technical Proposal (Formats given in the RFP along with Pre-Qualification Criteria & Complete Solution Architecture) submit with all self-attested documents / papers as mentioned in RFP.

## **Late Bids**

- The bids submitted in Online mode i.e. email or other online mode shall not be considered. No correspondence will be entertained on this matter.
- Director of Public Health, H&FW Dept. shall not be responsible for non-submission/delay in submission of bids due to any reason. It is the responsibility of the bidder to ensure submission of bid much prior to the deadline, so as to avoid last minute rush.
- Director of Public Health, H&FW Dept. reserves the right to modify and amend any of the above-stipulated condition / criterion depending upon project priorities vis-à-vis urgent commitments.

## **Evaluation Process**

- Director of Public Health, H&FW Dept. will constitute a Proposal Evaluation Committee to evaluate the responses of the bidders
- The Proposal Evaluation Committee constituted by the Director of Public Health, H&FW Dept. shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection of the bid. The decision of the Proposal Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.
- The Proposal Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals, if required.
- The Proposal Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.
- Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.

## **Tender Opening**

The Proposals submitted up to 18/07/2026 up to 04.00 PM/ PM and will be opened on 18/07/2026 04.30 PM at Office of the Director of Public Health, 2<sup>nd</sup> Floor, HOD Building, Bhubaneswar by Proposal Evaluation Committee.

## **Tender Evaluation**

- Initial Bid scrutiny will be held and incomplete details as given below will be treated as non-responsive if Proposals:
- Documents are not submitted as specified in the RFP document.
- Bid are found with suppression of details.
- Documents with incomplete information, subjective, conditional offers and partial offers submitted.

- Bid submitted without the documents requested in the checklist.
- Bid with lesser validity period.
- All responsive Bids will be considered for further processing as below: Director of Public Health, H&FW Dept. will prepare a list of responsive bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids will be considered for further evaluation by a committee according to the Evaluation process defined in this RFP document. The decision of the Committee will be final in this regard.

## Criteria for Evaluation

Tenders for this contract will be assessed in accordance with Quality-cum-Cost Based Selection (QCBS) system with Technical and Financial ratio **70:30**.

The Proposal Evaluation Committee will carry out a detailed evaluation of the proposals, in order to determine whether the technical aspects are in accordance with the requirements set forth in the RFP Documents. To reach such a determination, the Proposal Evaluation Committee will examine and compare the technical aspect of the proposals based on information provided by the bidder, taking into account the following factors:

- Overall completeness and compliance with the requirement
- Proposed solution, work-plan and methodology to demonstrate that the bidder will achieve the performance standards within the time frame described in RFP documents
- Any other relevant factors, if any, listed in RFP document or the Director of Public Health, H&FW Dept. deems necessary or prudent to take into consideration to facilitate the technical proposal evaluation, the Technical criteria laid down along with the assigned weights have been presented in subsequent sections. The marking scheme presented here is an indication of the relative importance of the evaluation criteria. Bidders securing more than 70% marks in the technical evaluation will only be considered for further financial bid evaluation. Bids or Tenders which don't secure the minimum specified technical score will be considered technically non-responsive and hence disqualified from being considered for financial evaluation.
- The final score for evaluation will be calculated below and accordingly the Agency with the **highest Final Score shall be treated as the Successful Agency**. However, If the Final scores are 'tied', the Agency securing the highest technical score will be adjudicated as the Best Value Agency for award of the Project.
- $$\text{Final Score} = (0.70 * \text{Normalized Technical Score}) + (0.30 * \text{Financial Score})$$
- Where Normalized Technical Score of an Agency =  $\{\text{Technical Score of that Agency} / \text{Score of the Agency with the highest Technical Score}\} \times 100$  (adjusted to 2 decimals)
- Financial Score of an Agency =  $\{\text{Lowest Quote} / \text{Agency Quote}\} \times 100$  (adjusted to 2 decimals)

### SECTION - III

#### GENERAL TERMS & CONDITIONS OF THE CONTRACT

1. Bidders/contractor are advised to read the instructions carefully in relevant section before submitting the documents. If the submitted documents are found to be at deviation from the documents asked for in the Tender Document than the bid will be summarily rejected without any correspondence with the bidder/contractor.
2. The Bidders shall be responsible for payment of any type of incidental charges for delivering materials all local taxes including Sales Tax and Income Tax. The bidder shall pay Ferry and toll gate charges and other local taxes shall be paid by the Bidders/contractor.
3. Bidders shall have to deposit EMD/ Bid security of **Rs. 1.00 Cr (Rupees One Crore)** only in shape of DD / FDR / BG in favour of "**DDO, Director of Public Health, payable at Bhubaneswar**".
4. The Earnest Money deposit is to submitted by the bidder to safeguard against a bidder's withdrawing or altering its bid during the bid validity period, it is clarified that if bidder withdraws or modifies its bids during the validity of the bid than he will be barred from participation in the bids with **Director of Public Health, H&FW Dept., Bhubaneswar** for a period of three years. An undertaking for the same will be given by Bidders/contractor.
5. It should be understood clearly that no claims whatsoever shall be entertained as regards extra item of work or extra quantity of any items more than the estimate. Written order must be obtained from the Competent Authority for such extra items or quantity of work.
6. The Bidders shall be responsible for the loss, damage or theft of any department materials supplied/installed during execution of the work due to reason whatsoever, and the cost of such materials shall be recovered from him at the prevailing stock issue rate or market rates whichever is higher.
7. No part of contract shall be sublet without written permission of Competent Authority or transfer is made by power of attorney authorising others to receive payment on bidder's behalf.
8. The authority shall not responsible to acceptance of contractor rates which will be liable to pay extra charges for load or for any other reason in case the contractor is found afterwards to have misjudged the materials available.
9. Bidder desiring any technical clarification may raise in within the time schedule before the bid closing. However, the tender submission and tender closing dates will remain same.
10. Utmost care shall be taken for uploading Bill of Quantity & Price Bid and any change/ modification of the price schedule shall render it unfit forbidding.
11. The intending bidder is advised to study the bid documents, concerned specifications and other instructions carefully. The bidder shall inspect the proposed site of work and acquaint himself with the site conditions, working hours and all relevant items connected with execution of work. The submission of tender shall be deemed to have been done after careful study and examination of the tender papers with full understanding of the implications thereof.
12. Bidders' personnel shall not divulge or disclose to any person any details of office, operation process, technical know-how, security arrangements, administrative and

organisational matters as all of these are confidential in nature. It is binding for the firm not to disclose the networking module of above work and any other information related to this work to any individual/group/firm which may cause harm to the security of the user.

13. Bidders shall replace immediately any of its personnel, if they are unacceptable to the User because of security risk, incompetence, conflict of interest and breach of confidentiality or improper conduct upon receiving a written notice from any of the User.
14. Bidders shall ensure proper conduct of its personnel in office premises and enforce prohibition of consumption of alcoholic drinks/drugs, chewing of Paan/ Gutka, smoking, using speakers for listening to music and loitering without any work.
15. ONE BID PER BIDDER: Each Bidders shall submit only one bid for one package. A bid is said to be complete if accompanied by cost of bid document and appropriate bid security. Conditional offer or alternative offers will not be considered in the process of bid evaluation.
16. Items of which specifications are not mentioned in tender document should be of ISI/Industrial standards marked or according to applicable Governments Norms.
17. Any illegible documents submitted by the bidder in the technical bid document shall not be considered. Authority of the Director of Public Health, H&FW Dept. reserves the right to ask clarifications on the already submitted documents by the bidder.
18. At any stage if found the bidder has submitted any false documents or suppress any information then in this case the bid will be rejected and no correspondence will be made.
19. The Bidders should declare that tax so collected from the Dept. will be duly discharged either by using input tax credit or paid as per provisions under GST Act.
20. The Bidders should declare that the supply date as mentioned in the invoice will be disclosed correctly in the relevant monthly return (such as GSTR-1, GSTR-2, GSTR-3 & GSTR-3B and other relevant forms).
21. The Bidders should declare that the benefit on account of change of rate of GST and input tax credit will be passed on to Corporation by way of reducing the contract prices and there shall not be any double taxation.
22. As and when GST Law requires deduction of withholding tax i.e., TDS under section 51 of GST Law, Corporation shall deduct such tax as per prevailed provisions.
23. The Bidders should be responsible to issue e-way bill as and when required as per provisions of GST Law for supply of goods.
24. The Bidders shall be responsible for strictly adhering to all safety norms and standards during the entire execution of the work for all staff deployed for this project. Any deviation from these norms will result in strict action being taken against the contractor.
25. The Director of Public Health, H&FW Dept. shall have no liability, financial or otherwise, for any harm/damage/injury caused to the manpower/machinery deployed by the Bidders/contractor while performing work of this Department. Neither the firm nor its workers shall have any claim on this Department for compensation or financial assistance on this account.
26. From the commencement of the works to the completion of the same, they are to be under the bidder's charge. The Bidder is to be held responsible to make good all injuries, damages and repair occasioned or rendered necessary to the same by fire or other causes and they hold the Director of Public Health, H&FW Deptt. harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or any one in his

employment during the execution of the work. Also, no claim shall be entertained for loss due to earthquake, flood, cyclone, epidemic, riot, or any other calamity whether natural or incidental damaged so caused will have to be made good by the contractor at his own cost till completion of comprehensive warranty period. The Director of Public Health, H&FW Deptt. will not be any way responsible for the same and will not pay any cost towards the repair done by the contractor.

27. Advance payment/part payment will not be entertained before completion and handing over the work to the concerned user. However, post completion of the work and subject to the prevailing site conditions, part payment may be processed in accordance with the proper procedure.
28. Statutory Deduction if any shall be made from the gross amount of the bidder's claim/bill.
29. Payment of bill will be made only after successful completion of the work in all respects i.e Supply, Installation, Testing & Commissioning, charging and hand over the work to the concern user as per the payment terms.
30. Deduction if any which is refundable to the bidder shall be made from the gross amount of the bidder's claim/bill and same will be released after successful completion of the comprehensive warranty period and will not carry any interest.
31. Irrespective of turnover, the Bidder shall submit the e-Invoice mandatory before acceptance of payment.
32. No claim can be made due to some unforeseen delay for release of payment.
33. **The tenders containing extraneous conditions not covered by the tender call notice are liable for rejection.** Rates quoted should be reasonable rates containing abnormal, super-flouts and unworkable/excess low liable for rejection.
34. The authority reserves the right to reject any or all tender in whole or part without assigning any reason and can impose any other conditions as deemed proper before or in course of finalization of the tender.
35. The approved tender may be cancelled by the authority any time during validity without assigning any reason thereof and no claim can lie against the Director of Public Health, H&FW Dept. for such cancellation.
36. If the bidder has a relative employed as an Officer in the rank of Dy. Secy.& above in Director of Public Health, Bhubaneswar, he shall inform the same in the bid mentioning the exact details in a covering letter along with the tender, failing which his bid will not be considered (ANNEXURE -C). Also, if the fact of relationship subsequently comes to light, his contract will be rescinded. The bid security or the performance security will be forfeited and he shall be liable to make good any loss or damage resulting from such cancellation. In case the bidder has no relationship with any of the officers mentioned above he shall have to furnish with his bid, a certificate as per (ANNEXURE - D)
37. For delay in handing over of site, no compensation or claims on that account will be entertained. Extension of time maybe granted, if considered reasonable.
38. In case of any dispute in the meaning of specification description of items rates conditions of agreement or due to errors/typo-graphical errors, omissions or due to any other reasons the decision of the Director of Public Health, H&FW Dept. is final and binding on both parties.
39. Bidders shall have to deposit Bid security only in shape of DD/ BG / FDR, duly pledged in favour of **DDO, Director of Public Health, BHUBANESWAR.**
40. Request for reschedule and extension of time, to be eligible for consideration, shall be

made by the bidder in writing well before of the happening of the event causing delay with specific reason. The contractor may also, if practicable indicate in such a request the period for which extension is desired.

41. All the disputes shall be subject to Jurisdiction of Civil Court situated at Bhubaneswar in exception to High Court Orissa, Cuttack.

Sd /-

Director of Public Health,  
H&FW Dept., Bhubaneswar

## SECTION – IV

### PRE-QUALIFICATION CRITERIA, EVALUATION METHODOLOGY & SCOPE OF WORK

#### **1. Introduction**

The Director of Public Health, Health & Family Welfare (hereinafter referred to as the “Department”) invites proposals from eligible and qualified organisations (hereinafter referred to as “Bidders”) for the design, development, implementation, operation and maintenance of a Cancer Care Command Centre (C4).

The selected Bidder (hereinafter referred to as the ‘Implementing Agency’ or ‘IA’), which may be either the Parent Company and / or its wholly owned (100%) Subsidiary, shall be responsible for:

- Designing, developing and deploying the C4 digital platform.
- Setting up and running **Help-desks at District Centres** and **Central Concierge Services at designated State Central Hospitals**.
- Establishing and operating a **Back-end Command Centre** for coordinated cancer care across the State.

The hub-and-spoke model has been successfully piloted across India in oncology (HCG Hospitals, National Cancer Grid), quality improvement (Medical Colleges with PHC Partnership), and government programs (NPCDCS with 753 Districts NCD Clinics, 19 State Cancer Institutes, 20 Territory care Cancer centres). This project aims to establish a technology-enabled, service-supported hub-and-spoke model that connects District Hospitals (Spokes) with State Tertiary Centres (Hubs). The selected Bidder will be responsible for providing a unified solution comprising the digital platform, on-ground help-desks, concierge services, and central command centre operations.

#### **2. Background and Context**

Cancer is an emerging public health challenge in the State, with significant morbidity and mortality. Patients typically first access care at district and sub-district facilities, which often lack specialised oncology services. Referral pathways are fragmented, and tertiary centres are overwhelmed by unplanned walk-ins and poorly prepared referrals, leading to delays and multiple visits.

The C4 model has been conceptualised to:

- Provide a **guided, coordinated pathway** from first suspicion to long-term follow-up.
- Create a **single backbone** connecting district/sub-district facilities with tertiary cancer centres.
- Offer a **real-time pulse for Government** through dashboards highlighting what is working well and where intervention is required.

#### **2.1 Objectives of the RFP**

The primary objectives are to select an IA to:

1. Establish and operate a **Cancer Care Command Centre (C4)** that coordinates referrals, triage, scheduling, and follow-up across a hub-and-spoke network.
2. Deploy a **digital platform** including referral intake, triage, ticketing, slot management, Personal Health Record (PHR) and dashboards.
3. Operate **on-ground help-desks** at district hospitals and **central concierge services** at State hospitals for patient navigation and support.
4. Set up a **back-end command centre** to run operations, monitor performance, and handle internal and external customer touchpoints (programme managers, hospitals, patients).

5. Integrate the C4 platform with **ABHA** (Ayushman Bharat Health Account) and **Government Hospital Information Management Systems (HIMS)** for seamless availability, slot booking and record continuity.
6. Provide an alternative solution to the Hospitals/Centre's not integrated on HIMS for seamless availability, slot booking and record continuity.
7. Provide **traffic-signal (RAG) dashboards** and analytics to support Government's continuous system improvement.

### 3. Pre-Qualification Criteria (Mandatory Eligibility)

Note: Bidders must meet all criteria below to be considered. Failure in any single criterion will result in disqualification. Consortium is allowed and shall consist of exactly two (2) entities only, with one designated as Primary / Lead Bidder and another shall be designated as Secondary bidder/OEM.

| S. No | Criterion                                                                                                                                                                                                                                                                        | Applicability in Case of                                      | Supporting Document Required                                                                    |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1     | <b>Legal Entity:</b> The Bidder must be a company incorporated in India and registered under the Companies Act, 1956 or 2013. The entity must be a 100% Indian-owned company or have majority shareholding and corporate headquarters in India.                                  | <b>Primary Bidder or both parties (In case of consortium)</b> | Certificate of Incorporation                                                                    |
| 2     | The Bidder must be a recognized healthcare IT company and must be a recognised healthcare provider with a valid ABDM M3 certification and NCG – National Cancer Grid Empanelled certification.                                                                                   | <b>Primary Bidder or any parties (In case of consortium)</b>  | NCG Empanelment Certificate & valid ABDM M3 certificate with authentication link on NHA website |
| 3     | <b>Project Experience:</b> The Bidder must have executed or have ongoing SITC e-Health projects for Indian Government entities in the last five (5) years:<br>• One project ≥ ₹30 Cr<br><b>OR</b><br>• Two projects ≥ ₹15 Cr each<br><b>OR</b><br>• Three projects ≥ ₹10 Cr each | <b>Primary Bidder or any parties (In case of consortium)</b>  | Valid copy of Work Order<br><br>OR<br><br>Self-Certification                                    |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                               |                                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | <b>Financial stability:</b> The Bidder must have an average annual turnover of at least <b>INR 50 [Fifty] Crores</b> from Healthcare Services in the last 3 financial years. (i.e. 2022-23, 2023-2024, 2024-25)                                                                                                                                                                                                                | <b>Primary / Lead Bidder only (In case of consortium)</b>     | Audited Balance Sheets and a CA–certified financial statement of the IA, including those of Group Companies and/or 100% Subsidiaries, wherever applicable.               |
| 5 | <b>Net Worth and Profit - The bidder and consortium members must be positive net worth and profit in last three financial years ending on 31st March 2025. (i.e. 2022-23, 2023-24 &amp; 2024-25)</b>                                                                                                                                                                                                                           | <b>Primary Bidder or both parties (In case of consortium)</b> | - Audited balance sheet, P&L Statement and CA Certificate, - Provisional/Audited balance sheet for FY 2024-25 with CA Certificate will be also considered.               |
| 6 | <b>Manpower Capacity:</b> Minimum <b>150 personnel</b> on permanent payroll.                                                                                                                                                                                                                                                                                                                                                   | <b>Primary / Lead Bidder only</b>                             | HR declaration and EPF / ESI proofs (sample basis)                                                                                                                       |
| 7 | <b>Bidder</b> must have executed or have on-going Indian multilocation e-health government projects in following healthcare setups: -<br><br>a) 1 Multilocation e-health Project having medical college hospital<br>b) 1 Multilocation e-health project having Hospitals or PHC & Clinics or both (Hospital & PHC or Clinics)"<br>c) 1 Multilocation Turnkey e-Health Project SITC of software, networking, IT infrastructure. | <b>Primary Bidder or any parties (In case of consortium)</b>  | <b>Work Order</b><br><br>AND<br><br><b>Completion Certificates</b> (for completed projects);<br><br>OR<br><br>Self-Certificate of Project Status (for on-going projects) |
| 8 | <b>Consortium Structure (Mandatory if Consortium):</b> Consortium shall consist of <b>exactly two (2) entities only</b> , with one designated as <b>Primary / Lead Bidder</b> .                                                                                                                                                                                                                                                | <b>Mandatory (Consortium only)</b>                            | Consortium Agreement / MoU as format ( <b>Annexure R</b> ) & Lead Bidder Authorization Letter                                                                            |

|   |                                                                                                                                                                                                                             |                                                               |                                    |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------|
| 9 | <b>Blacklisting:</b> The Bidder and its Consortium partners should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government or PSU in India during its operational tenure. | <b>Primary Bidder or both parties (In case of consortium)</b> | Self- declaration to be submitted. |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------|

#### 4. Bid Evaluation Methodology

The evaluation will follow a **Quality and Cost-Based Selection (QCBS)** method (70% Technical and 30% Financial). The Technical Evaluation places significant weight on the bidder's ability to provide an integrated "Phygital" (Physical + Digital) solution as a single entity.

Only bidders who qualify in the Technical Evaluation shall have their financial proposals opened. The financial proposal will be evaluated out of **100 Marks**.

#### 5. Technical Evaluation Parameters (Total 100 Marks)

##### A. Organizational Capability & Hybrid Model (50 Marks)

In case of a Consortium, technical evaluation shall be carried out considering the credentials, experience, and capabilities of the Lead Bidder or any member of the consortium, unless explicitly specified otherwise in the respective evaluation criteria.

Rationale: To ensure the Agency has full control over both software and ground staff, ensuring single-point accountability.

| Criteria                           | Description & Metrics                                                                                                                                                                                                                                                                                                                           | Max Marks |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Hybrid Operational Model</b>    | The Bidder must have successfully completed or have on-going eHealth projects in Indian government sector. Each project should be of value of Rs. 15.00 Cr. or higher.<br><ul style="list-style-type: none"> <li>• &gt;= 3 similar projects: 20 Marks</li> <li>• 2 similar projects: 15 Marks</li> <li>• 1 similar project: 10 Marks</li> </ul> | <b>20</b> |
| <b>In-House Technical Capacity</b> | Bidder possesses an in-house software development team of <b>30+ full-time engineers</b> to ensure rapid customization and data security.<br>30+ Developers: 10 Marks<br><25 Developers: 6 Marks<br><20 Developers: 3 Marks                                                                                                                     | <b>10</b> |
| <b>District Coverage</b>           | Bidder must have executed or have on-going multi location eHealth Indian government projects in following healthcare setups:-<br>a) 1 Multi location e-health Project having medical college hospital<br>b) 1 Multi location e-health Project having PHC and Clinics                                                                            | <b>20</b> |

|  |                                                                                                                                                                                                                                                                                                                                         |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | c)1 Multi location Turnkey e-Health Project SITC of software, networking, IT infrastructure.<br>Number of Projects satisfying either/all of the above criteria:- <ul style="list-style-type: none"> <li>• &gt;= 5 similar projects: 20 Marks</li> <li>• 4 similar projects: 15 Marks</li> <li>• 3 similar projects: 10 Marks</li> </ul> |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

## B. Digital Platform Maturity & Standards (30 Marks)

Rationale: The State requires immediate, deep integration with the National Digital Health Ecosystem.

| Criteria                                          | Description & Metrics                                                                                                                                                                                                                                                                                                                                                  | Max Marks |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>ABDM Integration &amp; Compliance</b>          | The platform must be integrated with the <b>Ayushman Bharat Digital Mission (ABDM)</b> ecosystem to ensure national interoperability. <ul style="list-style-type: none"> <li>• ABDM Sandbox Approved (Milestone 3 - Link/View): <b>10 Marks</b></li> <li>• ABDM Sandbox Approved (Milestone 1 or 2): <b>5 Marks</b></li> <li>• Not Approved: <b>0 Marks</b></li> </ul> | <b>10</b> |
| <b>Offline Capability (Rural Readiness)</b>       | The mobile application must be capable of <b>full offline data entry</b> with auto-sync when connectivity is restored (crucial for remote districts). <ul style="list-style-type: none"> <li>• Demonstrated Offline-First Architecture: <b>10 Marks</b></li> <li>• Online-only requirement: <b>0 Marks</b></li> </ul>                                                  | <b>5</b>  |
| <b>Data Security &amp; Privacy Certifications</b> | Bidder Quality Certifications <ul style="list-style-type: none"> <li>• ISO 9001: 1 mark</li> <li>• ISO 27001: 1 Mark</li> <li>• ISO 20000: 1 Mark</li> <li>• CMMI Level 3 or Above: 2 Marks</li> </ul>                                                                                                                                                                 | <b>5</b>  |
| <b>Interoperability Standards</b>                 | Platform adherence to global healthcare data standards for seamless data exchange. <ul style="list-style-type: none"> <li>• Native support for <b>HL7 FHIR, SNOMED CT, and ICD-10</b> coding standards: <b>5 Marks</b></li> <li>• Partial / Non-standard formats: <b>0 Marks</b></li> </ul>                                                                            | <b>5</b>  |

| Criteria                              | Description & Metrics                                                                                                                                                                                                          | Max Marks |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Command Centre &amp; Analytics</b> | <p>Availability of a real-time analytics dashboard for administrative monitoring.</p> <ul style="list-style-type: none"> <li>Real-time GIS mapping, disease heat maps, and customizable MIS reports: <b>5 Marks</b></li> </ul> | <b>5</b>  |

### C. Product Capabilities & Clinical Expertise (15 Marks)

Rationale: The project relies on clinical judgment at the help-desk level, not just data entry.

| Criteria                    | Description & Metrics                                                                                                                                                                                                                                                                                                                                                                                                                                      | Max Marks |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Product Capabilities</b> | <p><b>Presentation on the Suitability of the Proposed Solution</b> with ANM Application and Functional Demonstration of e-Health System Modules.</p> <p>5 marks will be awarded for showcasing in-house developed AI/ML solutions such as CDSS (Clinical Decision Support System), Speech-to-Text, Medical Chatbot, etc.</p> <p><b>Training &amp; Skilling</b> – Experienced in already conduct capacity-building programs for ASHA and ANM workforce.</p> | <b>15</b> |

### D. Local Presence

| Criteria              | Description & Metrics                                                                                                            | Max Marks |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Local Presence</b> | <b>In case of Primary Bidder / Consortium member in a consortium is a Local MSE in Odisha / DPIIT Startup in Odisha: 5 Marks</b> | <b>5</b>  |

- All the bidders who secure a Technical Score of more than 70% will be declared as technically qualified.
- The bidder with highest technical bid (H1) will be awarded 100% score.
- Technical Scores for other than H1 bidders will be evaluated using the following formula:
- $T_n = \{(\text{Technical Bid score of the Bidder} / \text{Highest technical evaluation marks} * 100)\} \%$  (Adjusted to two decimal places)
- The commercial bids of only the technically qualified bidders will be opened for further processing.

## 6. Key Deliverables & Timeline

T\*- Timeline (project officially starts)

| Sl. No. | Deliverable                            | Description                                                                      | Timeline (Deadlines)      |
|---------|----------------------------------------|----------------------------------------------------------------------------------|---------------------------|
| 1       | Inception Report                       | Detailed project plan, governance structure, and Scope of Work validation.       | T* + 2 Weeks              |
| 2       | System Requirement Specification (SRS) | Finalized functional and technical specifications for the platform.              | Prior to Platform Go-Live |
| 3       | C4 Platform (MVP & Final)              | Deployment of the proprietary Digital Platform with full ABDM M3 Integration.    | T + 6 Weeks               |
| 4       | District Helpdesk Setup                | Operationalization of physical helpdesks in the first 5 Districts (Pilot Phase). | T + 8 Weeks               |
| 5       | State-wide Rollout                     | Operationalization of helpdesks and services in all remaining districts.         | T + 12 Weeks              |
| 6       | Training**                             | User manuals, standard operating procedures (SOPs), and training of trainers.    | Ongoing / Before Rollout  |
| 7       | Operational Reports                    | Monthly and Quarterly reports on KPIs, SLAs, and service utilization.            | Monthly (Post Go-Live)    |
| 8       | Final Handover Plan                    | Documentation, knowledge transfer, and asset handover details.                   | End of Contract           |

## Training\*\*

### Detailed Training Module & Curriculum Structure

| Module ID    | Training Module Name                           | Key Learning Objectives / Coverage                                                                     | Duration (Hours) | Facilitator Profile                                                         |
|--------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------|
| M1           | <b>Oncology Fundamentals</b>                   | Cancer biology, early signs/detection, referral pathways, and clinical communication ethics.           | 13               | Senior Oncologist / Specialized Cancer Nurse (Master's degree + 5 yrs exp.) |
| M2           | <b>C4 Platform Operations</b>                  | Technical architecture, patient registration, referral intake, ABHA linking, and offline capabilities. | 16               | IT Implementation Team & ABDM Specialist (EHR/EMR expertise)                |
| M3           | <b>Patient Communication &amp; Soft Skills</b> | Active listening, empathy, breaking bad news, culturally sensitive care, and staff stress management.  | 10               | Healthcare Counselor / Certified Soft Skills Trainer                        |
| M4           | <b>Operational &amp; Functional Competency</b> | Helpdesk workflow, queue management, QA protocols, inventory, and incident escalation.                 | 9                | Helpdesk Supervisor / QA Professional (5+ years in healthcare ops)          |
| <b>Total</b> | <b>Classroom Training</b>                      | <b>Comprehensive Theoretical &amp; Lab Sessions</b>                                                    | <b>48</b>        | <b>Multidisciplinary Expert Panel</b>                                       |

**Table 2: Training Delivery & Deployment Schedule**

| Component                    | Phase / Frequency      | Delivery Methodology                                | Mentorship / Duration                                       |
|------------------------------|------------------------|-----------------------------------------------------|-------------------------------------------------------------|
| <b>Staff Induction</b>       | Weeks 1–4 (Intensive)  | Classroom Lectures + Hands-on Lab Sessions          | 4 wks (Full Time) / 8 wks (Part time) (160 hours)           |
| <b>On-the-Job Training</b>   | Weeks 5–12 (Mentoring) | Field Placement & Real-time Queue Management        | 2 hrs/day (for 2 wks); then 2 hrs/wk (for 6 wks) (20 hours) |
| <b>Master Trainers (ToT)</b> | 3-Week Intensive       | Training-the-Trainer (ToT) for 15–20 selected leads | For 3 weeks (Intensive) (120 hours)                         |
| <b>Capacity Updates</b>      | Ongoing                | Quarterly refreshers & Annual advanced training     | Regular Skill Audits                                        |

**Table 3: Assessment & Quality Assurance (QA) Framework**

| Assessment Type  | Method                        | Success Criteria (Pass/Fail)           | Frequency |
|------------------|-------------------------------|----------------------------------------|-----------|
| <b>Formative</b> | Daily Quizzes & Lab Exercises | Ungraded; tracked for performance gaps | Daily     |

|                    |                       |                                      |                    |
|--------------------|-----------------------|--------------------------------------|--------------------|
| <b>Summative</b>   | Module-Specific Tests | ≥ 70–80% Score                       | End of each Module |
| <b>Performance</b> | Supervisor Role-Play  | ≥ 4 / 5 Rating on operational skills | Final Assessment   |
| <b>Compliance</b>  | Skill Audits          | Attendance & Participation Tracking  | Weekly             |

## 7. Commercial Evaluation Criteria

- The Commercial Bids of technically qualified bidders (i.e. Bidders with more than 70 marks in Technical Evaluation) will be opened on the prescribed date in the presence of bidder representatives.
- Only fixed price financial bids indicating total prices for all the deliverables and services specified in this bid document will be considered.
- Any conditional bid would be rejected.
- Commercial bids whose value is less than 30% of the average bid price will be disqualified (the average price shall be computed by adding all commercial bid values of the technically qualified bidders' and dividing the same by number of qualified bidders).
- Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the bidder does not accept the correction of error, its bid will be rejected".
- If there is no price quoted for certain material or service, the bid shall be declared as disqualified.
- In the event that there are 2 or more bidders having the same value in commercial bid, the bidder securing highest technical score will be adjudicated as "Best responsive bid" for award of the Project.
- The bidder with lowest qualifying financial bid (L1) will be awarded 100% score. Financial score for other bidders will be evaluated using the following formula:  $F_n = \{(Financial\ Bid\ of\ L1 / Financial\ Bid\ of\ Bidder) * 100\} \%$ .

## 8. Final Evaluation of Bid

The technical and financial evaluation scores secured by each bidder will be added using weightages of 70% and 30% respectively to compute composite score. The composite score will be computed as under:

$$B_n = 0.70 * T_n + 0.30 * F_n$$

The bidder securing highest composite score will be adjudicated as most responsive bidder for award of project.

- All the bidders who secure a Technical Score of more than 70% will be declared as technically qualified.
- The bidder with highest technical bid (H1) will be awarded 100% score.
- Technical Scores for other than H1 bidders will be evaluated using the following formula:
- $T_n = \{( \text{Technical Bid score of the Bidder} / \text{Highest technical evaluation marks} * 100 \} \%$   
(Adjusted to two decimal places)

The commercial bids of **only the technically qualified bidders** will be opened for further processing.

## **9. Appointment of System Integrator**

### **Signing of Contract**

After Director of Public Health, H&FW Dept. notifies the successful bidders that its proposal has been accepted, DPH, H&FW Dept. shall issue purchase order and enter into a contract with the successful bidders taking into account the relevant clauses of RFP, pre-bid clarifications, Corrigenda, the proposal of the bidder in addition to other agreed clauses. Service Agreement (SA) would be signed for entire project period & value.

### **Performance Security Deposit**

The selected bidder will have to submit performance security deposit of 5% of the contract value in shape of Demand Draft drawn on any scheduled commercial bank in favour of “DDO, Director of Public Health, H&FW Dept. payable at Bhubaneswar within 7 days from the date of notification of award along with the agreement as its commitment to perform the assignments given under the contract. The Director of Public Health, H&FW Dept. reserves the right to forfeit the “Performance Security” partly or fully for failure to fulfill the terms and conditions and obligation as mentioned in Contract Agreement by the selected bidder. The Performance Security Deposit shall be released after three months of expiry of contract provided that there is no breach of contract on the part of the selected bidder. No interest shall be paid on the Performance Security Deposit at the time of release.

### **Failure to Agree with the Terms and Conditions of the RFP**

Failure of the successful bidder to agree with the Terms & Conditions of the RFP and the Proposal submitted by the successful bidder, despite the deviations submitted by the Bidder are adequately considered and mutually agreed, shall constitute sufficient grounds for the annulment of the award, in which event Director of Public Health, H&FW Dept. may award the contract to the next best value bidder or call for new proposals from the interested bidders. In such a case, the Director of Public Health, H&FW Dept. shall invoke the PBG of the most responsive bidder and/or initiate action.

### **Limitation of Liability**

Except in cases of gross negligence or willful misconduct: -

- Neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier/ selected bidder to pay liquidated damages to the Purchaser; and
- Maximum liability of the bidder for this project will be limited to the total value of the contract or the amount actually paid to the bidder whichever is lower and will not include any indirect or consequential clause or damage, loss or profit, data or revenue.

### **Preference to the System Integrator**

A local preference will be afforded to the qualified **Primary Bidder or any parties (In case of consortium)** who have a valid business license and a physical business address within the Odisha State.

## **10. Indemnity**

- a. The System Integrator shall indemnify the Purchaser from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Contract period out of:
  - Any negligence or wrongful act or omission by the Solution Provider or any third party associated with Solution Provider in connection with or incidental to this Contract or;
  - Any breach of any of the terms of this Contract by the Solution Provider, the Solution Provider's Team or any third party
  - Any infringement of patent, trademark/copyright arising from the use of the supplied goods and related services or any party thereof
- b. The Solution Provider shall also indemnify the Purchaser against any privilege, claim or assertion made by a third party with respect to right or interest in, service provided as mentioned in any Intellectual Property Rights and licenses.
- c. All indemnification obligations shall be subject to the Limitation of Liability clause.

## **11. Scope of Work**

### **Stakeholders & Users**

Following Types of users will be using this application;

- Tertiary Hubs
- Spokes (32 District Headquarter Hospitals)
- Cancer Command Control Centre (C4)

## **A. Technology Layer – C4 Digital Platform Requirements**

This Scope of work requires IA to design, develop, deploy, and maintain a secure, scalable proprietary digital platform (C4 Digital Platform) on government on-premise servers, compliant cloud environments, or government-managed cloud providers. The platform supports cancer care referrals across 32 District Headquarters Hospitals (DHHs) as spokes and 3 initial tertiary hubs, with scalability for expansions. Bids must detail technical modules, service operations, governance, and unit costs for future growth.

### **a. Patient Registration and Referral Intake**

- Digital registration of patients at district, sub-district, and other designated facilities.
- Referral creation by authorised providers with mandatory clinical and demographic fields.
- Upload and management of diagnostic reports and clinical notes.
- Patient registration can be seamlessly executed using various pages such as OPD Registration, IPD Registration/Admission, Emergency, and Investigation Registration. The choice of the relevant page is based on the specific transaction. For example, if a patient arrives for OPD consultation, the user can directly navigate to the OPD Registration page. Here, both registration and consultation visits can be efficiently managed in one place.
- The system facilitates the generation of a barcoded health card, providing a unique and secure identity for each patient. This card can be used to streamline processes and ensure accurate patient identification across various healthcare activities.
- The system should include a provision to capture referral hospital details as well as information about the referring doctor. This feature enhances the documentation of patient referrals, facilitating effective communication and collaboration between healthcare providers.
- The system includes a feature that allows users to merge visits records associated with two different Unique Health Identification Numbers (UHIDs) for the same patient. This ensures consolidation of patient information and a unified record under a single UHID, eliminating redundancies and providing a comprehensive view of the patient's medical history.

### **b. Clinical Triage and Prioritisation**

- Configurable triage engine with at least three categories: **Red (high priority)**, **Yellow (medium)**, **Green (routine)** based on predefined rules.
- Mandatory recording of triage decision, time stamp, and responsible user.
- The system should support emergency registration for unknown patients. During this process, identification marks are captured, and a Unique Health Identification Number (UHID) is generated. This ensures the creation of a distinct identifier for efficient management and tracking of emergency cases with unidentified individuals which later on can be updated.
- Clinician Dashboard to be equipped with shortcuts, allowing quick access to specific sections such as Ward Patients, OT Schedules, and Referral Records. These shortcuts enhance the user experience by providing convenient and direct navigation to essential areas
- Patient Summary should show the patients past visit history and treatment detail. Allergies, Habits, Risk Factors, Adverse Drug Reactions, Last Visit Diagnosis, Last Suggestions etc. are visible on the patient summary
- Doctor EMR platform should be equipped with voice driven with Speech to Text to capture and record patient conversation
- Tests ordered on an emergency basis are visually emphasized by displaying their corresponding test names in red, and they are strategically positioned at the top of the list. This distinctive colour coding and prioritization assist healthcare professionals in promptly identifying and addressing urgent tests.

### c. Ticketing and Workflow Management

- Generation of a **unique ticket** for each patient episode, reflecting current stage (referred, triaged, scheduled, seen, under treatment, under follow-up).
- Workflow transitions with time stamps and audit trails.
- The system should facilitate a streamlined process by allowing users to create an Outpatient (OP) visit or encounter directly from the OPD Registration page. This integrated approach enhances efficiency and simplifies the patient management workflow.

### d. Slot Management and Scheduling

- Color coding is utilized to represent different statuses for a specific doctor, including Available Slots, Non-Available Slots, Weekly Off, Pending, Completed, and Cancelled Appointments.
- A calendar view is available for scheduling appointments, offering Day, Week, and Month views for each doctor and department/specialty. This feature allows users to easily navigate and plan appointments within different time frames, enhancing the scheduling flexibility
- The system includes a provision to view doctors' availability based on their specialties.
- Integration with CDAC HIMIS or any other government recommended HMIS to fetch doctor rosters and appointment availability.
- The system allows for the rescheduling of appointments using a drag-and-drop feature on the calendar view. Users can easily adjust appointment timings by dragging them to a new slot. Additionally, they can provide a reason for the rescheduling, enhancing transparency and communication in the scheduling process.

### e. Personal Health Record (PHR) and ABHA Integration

- Creation of a **longitudinal Personal Health Record (PHR)** for each patient capturing demographics, symptoms, diagnosis, and all digitised medical records.
- **ABDM M3 Integration:** On-spot ABHA creation and linking of all relevant encounters to the ABHA ID to enable data sharing.

### f. Dashboards and Analytics

- **Traffic-signal (RAG) dashboards** showing doctor availability, referral quality
- Role-based access for Command Centre, Facility Administrators, and State Programme Managers.
- Dashboards for patient visit summary analysis, we get the Register patient list address wise. We should get the patient list not limited to filters on a report like (Country, State, District, City, Area) with information like as UHID, Patient Name, Age, Gender, Address, City Name, District Name, State Name, Country Name, Mobile No., Aadhaar Card No. etc

### g. AI Elements in-built into an EMR

- Speech-Text AI driven EMR for Clinicians
- Clinical Decision Support System inbuilt inside EMR

### h. Specific focus to the Scope of Work

#### *1. State-level Identity Registers (Master Databases)*

- Create central records for patients, hospitals, doctors and staff, medical equipment, medicines, and diseases. These records act as a single, reliable source of information and work alongside UHID/ABHA to avoid duplication, improve data sharing, and support better planning and monitoring.

#### *2. Live Mapping of Hospitals, Services, Equipment, and Staff*

- Allows the Command & Control Centre (C4) to see real-time availability of services, machines, doctors, and staff at each hospital. Helps doctors and administrators refer patients to the right hospital at the right time, based on what is actually available, not outdated information.

### ***3. Management of Critical and High-Value Cancer Medicines***

- Keeps track of important and costly cancer drugs available at each hospital. Ensures treatment is not delayed due to medicine shortages, which is especially important for cancer patients.

### ***4. Disease Register with Detailed Classification***

- Maintains structured records of different diseases and their sub-types. Helps the government understand disease trends, patient load, and treatment outcomes, and supports better planning and reporting.

### ***5. Complete Patient Records Across the Full Treatment Journey***

- Maintains clear records of a patient's diagnosis, tests, treatment, hospital visits, and case closure or reopening. Strengthens continuity of care by improving patient history, treatment tracking, and follow-up management across hospitals.

### ***6. Tracking the Patient's Full Care Journey***

- Captures how a patient reached the hospital (self-visit, ASHA/ANM referral, emergency, etc.).
- Records visit history, treatment stages, and follow-ups to ensure better coordination and long-term care, even when patients visit multiple facilities.

### ***7. Improved Appointment Scheduling with Three Time Slots***

Hospital appointments can be clearly divided into:

- |                 |                                  |                       |
|-----------------|----------------------------------|-----------------------|
| a. New Patients | b. Existing / Follow-up Patients | c. Emergency Patients |
|-----------------|----------------------------------|-----------------------|

- This helps reduce crowding, protects emergency time slots, and ensures fair time allocation for all patients.

## **B. Digital Platform Development & Management**

The IA is responsible for providing, hosting, and maintaining the technical backbone of the program to ensure seamless patient data flow and service tracking.

- **System Architecture & Reliability:**

- Develop and host a solution guaranteeing **≥99% uptime**.
- Ensure the architecture is scalable to support up to **50 districts** and additional programs without performance degradation.

- **Security & Compliance:**

- Implement **AES-256 encryption** for all data (at rest and in transit).
- Enforce Role-Based Access Control (RBAC) and Multi-Factor Authentication (MFA).
- Ensure strict compliance with **HIPAA and NDHM (Ayushman Bharat Digital Mission)** standards.
- Conduct mandatory annual third-party penetration tests.

- **User Interface & Experience:**

- Deploy a **mobile-first application** (Android/iOS) compatible with tablets/phones used by field staff.
- Ensure a system response time of **<2 seconds**.
- Provide a trilingual interface supporting **Odia, English, and Hindi**.

## C. Manpower Deployment & Service Operations

The IA must recruit, train, and deploy certified medical professionals (Pharmacists, Nurses, or ANMs) to operate a three-tier support structure for a contract period of **3 years (renewable)**.

### a. Spoke Operations: District Headquarters Hospitals (DHH)

- **Locations:** All 32 DHHs in Odisha. (Details at Annexure - O)
- **Staffing:** 3–5 staff per DHH.
- **Key Responsibilities:**
  - **Digitization:** Convert physical patient papers to digital records (Target: **300 records/day per DHH**).
  - **Triage & Referral:** Assist in patient on boarding, family counselling, and coordinating referrals to tertiary hubs.

### b. Hub Operations: Tertiary Care Centres

- **Locations:** 3 designated Tertiary Centres (**Hubs**) - (Details at Annexure - O)
- **Staffing:** 5–10 staff per Hub.
- **Key Responsibilities:**
  - **Concierge Services:** Manage pre-arrival confirmation, physical in-hospital navigation, and facilitation of medicines/diagnostics.
  - **Discharge Management:** Coordinate discharge summaries and setup follow-up protocols.

### c. Command Centre Operations

- **Availability:** 24x7 Operations.
- **Staffing:** 10–15 staff per shift.
- **Key Responsibilities:**
  - **Journey Monitoring:** Real-time tracking of referred patients between facilities.
  - **Helpline Management:** Operate a toll-free helpline capable of handling **500 calls/day**.

## D. Governance, Quality Assurance, & Reporting

The IA acts as the data custodian and is responsible for maintaining service quality standards.

- **Performance Monitoring:**
  - Maintain a Turnaround Time (TAT) of **<48 hours** for service requests.
  - Achieve and maintain a Patient Satisfaction Score of **>85%**.
- **Grievance Redressal:**
  - Implement a grievance portal and app/SMS-based feedback loops.
  - Ensure all grievances are resolved within **24 hours**.
- **Reporting:**
  - Submit monthly reports covering utilization data, operational bottlenecks, and recommendations.
  - Participate in quarterly reviews using "Facility Scorecards."

## E. Scalability & Commercial Scope

The IA must design the project for future expansion without the need for technical redevelopment.

- **Expansion Readiness:**
  - The system must support the addition of **1–3 new hubs** over the contract period via configuration changes only (no code redevelopment).

- **Financial Model:**

- The financial scope includes a **Base Cost** plus a **Unit Cost** model (e.g., Cost per Hub/Year) to facilitate transparent billing during expansion.

## **F. Design & Development:**

The IA shall design the solution architecture and specifications for meeting the requirements mentioned as part of this document.

- In order to achieve the high level of stability and robustness of the application, the system development life cycle shall be carried out using the industry standard best practices and adopting the security constraints for access and control rights.
- The system shall have a module exclusively to record the activities/ create the log of activities happening within the system / application to avoid any kind of irregularities within the system by any User / Application.

## **G. Third Party Audit:**

- a. The IA/OEM shall carryout security audit in compliance to CERT-In guidelines before Go-Live of application.
- b. The SI shall comply with the security audit observations of the application by CSOC Odisha team including Periodic Cyber Security Audit as per OSDC Policy.
- c. The audit shall be performed at least on the below mentioned aspects.
  - Functional Testing
  - Accessibility Testing
  - Application Security Audit
  - Vulnerability Testing

## **12. Service Level Agreements (SLAs)**

### **A. Technology SLAs**

- **Application Uptime:**  $\geq 99\%$  (monthly).
- **Critical Incident Resolution:** Within 4 hours.
- **Data Integration Sync:** Real-time (with HIMS/ABHA)  $< 15$  minutes.

### **B. Process SLAs**

- **Referral to Triage Completion:** Within 24 hours.
- **Red-category Triaged Cases to Consultation:** Within 1 working day.
- **Yellow-category Triaged Cases to Consultation:** Within 3 working days.
- **Follow-up Adherence:**  $\geq 90\%$  of cases contacted as per schedule.

### **C. Help-desk& Concierge SLAs**

- **Help-desk Availability:** 100% coverage during defined OPD hours.
- **Average Waiting Time:**  $\leq 10$  minutes (target).

### 13.Application Support

Key activities to be performed by the IA in the application support phase are as follows:

- Roll out of the application at Tertiary Centers, DHH, C4 of Odisha.
- Support for functional processes.
- Enhancement of MIS report as per the requirement
- Features enhancement based on user feedback.
- Application support.
- Application maintenance.
- Database Administration.
- System Administration.
- User and access management.
- Performance Enhancement and Fine Tuning.
- Scheduled maintenance activity
- Data backup and recovery as per the policy of OSDC.

The IA shall ensure compliance with SLAs as indicated in this RFP and any upgrades / major changes to the software shall be accordingly planned by IA ensuring the SLA requirements are met at no additional cost to H&FW Deptt.

### 14. Key Functional Requirement for C4 Platform

1. **Patient Digital Registration:** Enable digital registration of patients at district, sub-district, and designated facilities, supporting multiple entry points such as OPD, IPD, Emergency, and Investigation Registration pages.
2. **Referral Creation and Management:** Allow authorized providers to create referrals with mandatory clinical and demographic fields, including details of the referral hospital and referring doctor.
3. **Diagnostic Reports and Notes Upload:** Support uploading and management of diagnostic reports, clinical notes, and other relevant documents during referral intake.
4. **Visit Records Merging:** Provide functionality to merge visit records from different Unique Health Identification Numbers (UHIDs) for the same patient into a single consolidated record.
5. **Emergency Registration for Unknown Patients:** Support emergency registration for unidentified patients, capturing identification marks and generating a temporary UHID that can be updated later.
6. **Configurable Triage Engine:** Implement a triage engine with at least three priority categories (Red: high, Yellow: medium, Green: routine) based on predefined configurable rules.
7. **Triage Decision Recording:** Mandate recording of triage decisions, timestamps, and responsible users with full audit trails.
8. **Clinician Dashboard with Shortcuts:** Equip clinician dashboards with quick-access shortcuts to sections like Ward Patients, OT Schedules, and Referral Records.
9. **Comprehensive Patient Summary:** Display patient summaries including past visit history, treatment details, allergies, habits, risk factors, adverse drug reactions, last visit diagnosis, and suggestions.
10. **Voice-Driven EMR:** Integrate speech-to-text functionality in the Doctor EMR platform to capture and record patient conversations.

11. **Emergency Test Prioritization:** Visually emphasize emergency-ordered tests by displaying them in red and positioning them at the top of the test list.
12. **Unique Ticket Generation:** Generate a unique ticket for each patient episode, reflecting the current workflow stage (e.g., referred, triaged, scheduled, seen, under treatment, follow-up).
13. **Workflow Transitions and Audit Trails:** Manage workflow transitions with timestamps and comprehensive audit trails for all changes.
14. **Direct OP Visit Creation:** Allow creation of Outpatient (OP) visits or encounters directly from the OPD Registration page for streamlined workflows.
15. **Appointment Slot Management with Color Coding:** Use color coding to indicate doctor slot statuses (e.g., Available, Non-Available, Weekly Off, Pending, Completed, Cancelled) and support calendar views (Day, Week, Month) by doctor or department/specialty.
16. **Doctor Availability by Specialty:** Provide views of doctor availability filtered by specialties, with integration to CDAC HIMIS or other government HMIS for fetching rosters.
17. **Drag-and-Drop Rescheduling:** Enable rescheduling of appointments via drag-and-drop on the calendar view, including capture of rescheduling reasons.
18. **Personal Health Record (PHR) Creation:** Build a longitudinal PHR for each patient, capturing demographics, symptoms, diagnoses, and all digitized medical records; integrate with ABDM M3 for on-spot ABHA creation and linking of encounters to ABHA ID.
19. **Role-Based Dashboards and Analytics:** Provide traffic-signal (RAG) dashboards for doctor availability, referral quality, and patient visit summaries; include role-based access for Command Centre, Facility Administrators, and State Programme Managers, with customizable reports (e.g., patient lists filtered by location hierarchy: Country, State, District, City, Area) and in-built AI elements such as speech-to-text EMR and Clinical Decision Support System.

## 15. Scope of the H&FW Department

1. H&FW Deptt. will provision for Internet connectivity at all its branch locations and Datacenter which will be H&FW Deptt. – State Data Center at OCAC to install the server and host the program by IA.
2. H&FW Deptt. will provide continuous Power at all locations for smooth functioning and registrations of the patients.
3. The SLA with internet service providers will be H&FW Deptt. responsibility.
4. H&FW Deptt. will provide sitting place for C4, at Tertiary Hubs & DHHs. The IA will also share their Mobile nos. with all the H&FW Deptt. office locations.
5. H&FW Deptt. must establish a Toll-Free number for C4.
6. H&FW Deptt. must ensure proper support and there is smooth coordination between H&FW Deptt. office bearers and IA. So that this dream state project is successfully delivered.

## 16. Team Composition

### a. For Cancer Command Control Centre (C4)

| SI No. | Description                 | No. Of Resources | Qualification & Experience                                                                                                      |
|--------|-----------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1      | Help Desk Support Associate | 12               | ANM from any recognized university/ institution in India with minimum 2+ years of experience and expert in Computer operations. |

|   |                             |    |                                                                                                                                                     |
|---|-----------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | Technical Support Associate | 02 | B.E. / B.Tech./ MCA/ M.Tech/ M.E/ MSc IT from any recognized university/ institution in India with minimum 2+ years of experience.                  |
| 3 | Project Manager             | 01 | ANM/ Pharmacist/ B.E. / B.Tech./ MCA/ M.Tech/ M.E/ MSc IT from any recognized university/ institution in India with minimum 5+ years of experience. |

### **b. Tertiary Centers (Hubs)**

| SI No. | Description                 | No. Of Resources | Qualification & Experience                                                                                                                          |
|--------|-----------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Help Desk Support Associate | 06               | ANM from any recognized university/ institution in India with minimum 2+ years of experience and expert in computer operations.                     |
| 2      | Technical Support Associate | 02               | B.E. / B.Tech./ MCA/ M.Tech/ M.E/ MSc IT from any recognized university/ institution in India with minimum 2+ years of experience.                  |
| 3      | Project Manager             | 01               | ANM/ Pharmacist/ B.E. / B.Tech./ MCA/ M.Tech/ M.E/ MSc IT from any recognized university/ institution in India with minimum 5+ years of experience. |

### **c. District Headquarter Hospital (Spokes)**

| SI No. | Description                 | No. Of Resources | Qualification & Experience                                                                                                                          |
|--------|-----------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Help Desk Support Associate | 04               | ANM from any recognized university/ institution in India with minimum 2+ years of experience and expert in computer operations..                    |
| 2      | Project Manager             | 01               | ANM/ Pharmacist/ B.E. / B.Tech./ MCA/ M.Tech/ M.E/ MSc IT from any recognized university/ institution in India with minimum 5+ years of experience. |

## **17. Modules for C4 Digital Platform**

The C4 Digital Platform shall include the following minimum modules with specified functionalities, APIs, user interfaces (web/mobile), and integrations.

### **a. Patient Registration and Referral Intake Module**

- Support digital registration at district/sub-district facilities capturing demographics (Aadhaar, mobile, address), clinical details (symptoms, family history), and consent forms.
- Referral creation by authorized providers (doctors, ANMs) with mandatory fields: provisional diagnosis (ICD-10/SNOMED coded), urgency level, attachments (DICOM/PDF reports up to 50MB).
- Features: Bulk upload, OCR for paper records, auto-validation, e-signature via Aadhaar/DSC; ABHA pre-linking.

### **b. Clinical Triage and Prioritisation Module**

- Configurable rule engine (UI-based, no-code) defining Red (critical, e.g., stage IV), Yellow (urgent), Green (routine) categories using criteria like age, tumor markers, imaging findings.
- Mandatory logging: triage decision, rationale, timestamp, user ID; escalation for overrides with supervisor approval.

- Features: Real-time alerts (SMS/push), historical triage trends, accuracy reporting (>95% compliance target).

### **c. Ticketing and Workflow Management Module**

- Auto-generate unique ticket ID (e.g., OD-CAN-YYYYMMDD-SEQ) per episode tracking stages: referred, triaged, scheduled, seen, treatment, follow-up, closed.
- Workflow engine with transitions, SLAs (Red: 24hrs), timestamps, immutable audit trails (blockchain optional).
- Features: Notifications (SMS/Email/WhatsApp), escalations, integration hooks for external systems.

### **d. Slot Management and Scheduling Module**

- Centralized dashboard showing real-time slots for oncologists/specialists across facilities; calendar sync via CDAC HIMS APIs (FHIR/REST for rosters, availability).
- Priority logic: Red (within 24hrs), Yellow (72hrs), Green (7 days); auto-allocation, waitlists, rescheduling.
- Features: Buffer slots (15%), patient reminders, multi-hub views with maps.

### **e. Personal Health Record (PHR) and ABHA Integration Module**

- Build longitudinal PHR per patient: demographics, episodes, diagnoses, treatments, labs/images (FHIR standards).
- ABDM compliance: M1 (ABHA creation), M2 (linking), M3 (consent-based sharing); on-spot ABHA generation via sandbox-certified APIs.
- Features: Patient portal (view/download), provider FHIR queries, encryption for records.

### **f. Dashboards and Analytics Module**

- RAG (Red-Amber-Green) visualizations: doctor availability, referral volumes/quality, turnaround times.
- Role-based access: Command Centre (state-level), Facility Admins (local), Programme Managers (KPIs).
- Features: Custom reports (PDF/Excel), drill-downs, predictive trends (e.g., peak loads).

### **g. General Requirements Across All Modules**

- Multi-tenant architecture (state/district/facility hierarchy).
- Responsive UI (web + tablet/mobile).
- Security: Role-based access, data encryption, audit logs, GDPR/MeitY-compliant.
- Performance: Handle 10,000+ daily referrals (scalable cloud deployment).
- Interoperability: FHIR R4, ABDM APIs, HL7 optional.
- Testing: Unit, integration, UAT, security, load testing.
- Training, change management, and post-go-live support (at least 3–6 months).

## **18. Features of the Application**

### **a. User Interface**

System shall provide User interface with the following features:

- Unified, easy, flexible and user-friendly interface.
- Homogenous keyboard use, screen layout and menu operations with Graphic User Interface (GUI) support.
- UI suitable for non-technical users and IT experts.
- Capability to setup logic, to trap conditions to pop messages in response to conditions like logical data entry errors, certain conditions etc
- Confirmation / warning windows for delete /changes etc.
- Consistent screen layouts and access methods across all modules for same look and behaviour.

## **b. Security**

- The system shall support the Digital Certificates as per IT Act of India, 2000 and DPDP Act 2023.
- Support for SSL.
- Authorization by the Username, User Role.
- Facility of one user multiple roles and vice versa.
- Password encryption while passing on wire.
- All Data inside the Database table should be encrypted.
- Ability to define rules for password composition and password encryption.
- Configurable password policies including Password expiry, Password complexity, Password history, reuse policy and Forced password change on first log on.
- Ability to configure the number of permissible log-in attempts.
- Data updation/deletion/creation only through application layer.
- Shall not require opening of any special protocols for connecting the user client to the web/application server. All communication should be on HTTP or HTTPS.
- Support role-based access control, user-based privileges.
- Password management mechanism for passwords having expiry and likewise for time bound password management rules.
- Management of resource allocated to per user session.
- Standalone / integration with Operating system security.
- The bidder shall ensure that security measures, policies and procedures implemented are adequate to protect and maintain the confidentiality of the Confidential Information.
- Bidder also agrees and acknowledges that it shall adhere to reasonable security practices over all sensitive personal information of the said project as prescribed by various rules under I.T. Act, 2000 (as amended from time to time) and DPDP Act 2023.
- The bidder must implement the latest version of Web server, Database Server and applications such as PHP, JSP, ASP, JBoss etc.
- System shall follow Open Web Application Security Project (OWASP) guidelines and shall be based on ISO 27001 standards.
- All data generated under this project shall be the property of the Department.

### **c. Technical Requirements**

- The system shall accommodate 10,000 active users with 10% concurrent session.
- The system shall be scalable to accommodate new users and data volume.
- The system shall be web based with multi-tiered architecture.
- The system shall be Unicode based and bi-lingual (both English and Odia).
- The end user interface shall be browser independent and compatible to all the latest versions of popular browsers like Mozilla Firefox, Internet Explorer, Safari, Google Chrome, Microsoft Edge etc. and Operating Systems like Windows, Mac OS & Linux.
- The system shall have scalable architecture to support clustering and High Availability at each layer i.e., Web Server, Application Server and Database with fault tolerance & load balancing.
- Interface with popular documentation software like MS Office and Open Office.
- The system shall support e-mail, SMS and WhatsApp integration.
- The system should be mobile ready.
- The system shall support Alert Mechanisms (Reminders, Notifications).

### **d. SMS Gateway**

SMS gateway will be used to send notifications like action pending or OTP to the users. For this the system will integrate with a third-party SMS gateway system. For SMS gateway system the message templates will be pre-defined. The system will populate the variables (like OTP, alert messages etc.) in message template to construct the message and send the constructed message to the SMS gateway system along with the recipient mobile number using a REST API call. The system will use a transaction SMS gateway so that the message is delivered to the mobile numbers even if DND setup is done.

### **e. Standards**

- The system architecture should be based on industry standards and protocols
- The system shall be centrally deployed and globally accessed
- The system shall be designed to be scalable and easily extensible
- The system should be flexible to cater to changing business, industry and compliance requirements (including reporting requirements in proper formats)

The system shall comply with relevant defined industry standards (their latest versions as on date) wherever applicable. This shall apply to all the aspects of solution including its design, development, security, installation, and testing. The suggested architecture must be scalable and flexible for modular expansion. It should ensure ease of integration with software /applications developed using common industry standards, since the solution may be linked and connected to other sources (websites, contents, portals, mobile app systems of other user departments etc.) as well as there may be loose/tight integration with backend system of other departments depending on individual service processes. The solution architecture should thus have provision to cater to the evolving requirements of the Department.

A reference list of the minimum industry standards which the system components should adhere to is mentioned below:

| <u><i>Component</i></u>                 | <u><i>Standards</i></u>                                                         |
|-----------------------------------------|---------------------------------------------------------------------------------|
| Information Access / Transfer Protocols | SOAP, HTTP/HTTPS                                                                |
| Interoperability                        | Web Services, Open Standards                                                    |
| Portal Development                      | W3C Specifications                                                              |
| Document encryption                     | PKCS specification                                                              |
| Information Security                    | ISO 27001 certified System                                                      |
| Operation                               | ISO 9001 Certified                                                              |
| Service Management                      | ISO 20000 specifications or latest                                              |
| Project Documentation                   | IEEE/ISO Specifications for documentation                                       |
| Data Standards                          | All-important data entities should be in Line with standards published by DeiTY |

#### **f. Change Request Management**

It may also be required to develop new software modules beyond the coverage of FRS/ SRS/ Scope document.

a. The activities that will be treated as enhancement services is mentioned below:

- Functional changes in the application
- Development of new module/sub-module/Form/Report in the developed system
- Changes in the workflow or core application framework
- Integration with any new system
- Additional onsite resources in the project

b. The procedure for executing the change request is as follows:

- Analysis: Analyses the changes suggested and submit an effort estimation including timeline to H&FW Dept.
- Approval: H&FW Dept. shall do due diligence and provide approval on the effort and timeline suggested.
- Incorporation: After receiving the approval from H&FW Dept., team will incorporate the changes in the application.
- On approval, deliver the services and raise the claim as per actual according to the Commercial Bid.

#### **19. Exit Plan**

- Provide systematic exit plan and conduct proper knowledge transfer process to hand over operations to H&FW Dept. technical team at least three months before project closure.
- H&FW Dept. will work closely with the SI during knowledge transfer of testing, staging and production environment.
- All knowledge transfer should be documented and possibly recorded.
- Ensure capacity building of the IT resource persons of H&FW Dept. on maintenance of software and infrastructure.

### **a. Validity of the Proposal**

Proposals shall remain valid for a period of 180 working days from the date of opening of tender. The department reserves the right to reject a proposal valid for a shorter period as non-responsive and will make the best efforts to finalize the selection process and award of the contract within the bid validity period. The bid validity period may be extended on mutual consent, with approval of competent authority.

### **b. Liquidated Damages**

If the supplier fails to deliver any or all of the solution within the original / re-fixed delivery period (s), department will be entitled to deduct / recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions as mentioned below, @ 0.5% per week or part of the week of delayed period of the value of the quantity supplied after the original/re-fixed delivery period(s) as pre-estimated damages not exceeding 10% of the value of the quantity supplied after the original / re-fixed delivery period(s) without any controversy/dispute of any sort whatsoever.

### **c. Force Majeure Conditions**

If at any time during the continuance of the Contract agreement, the performance in whole or in part by either party of any obligation under this Contract shall be prevented or delayed by the reasons of any war, hostility, acts of the public enemy, epidemics, election, natural calamities, civil commotion, sabotage, fires, floods, explosion, quarantine restrictions, strikes, lockouts or act of God provided notice of happening of such event duly evidenced with documents is given by one party to the other within 10 days from the date of occurrence thereof, neither party shall be by reasons of such event, be entitled to terminate the Contract nor shall either party have any claim for damages against the other in respect of such non-performance or the delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the department as to whether the deliveries have been so resumed or not, shall be final and conclusive, Provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 10 (ten) working days, either party may at its option terminate the contract.

### **d. Resolution of Disputes**

Any dispute between H&FW Dept. and the Suppliers shall be addressed to the other party only in writing in their respective letter heads signed only by the designated signatories as in contract agreement. Both the parties shall make every effort to resolve the same amicably by mutual consultations.

If both the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, the same shall be referred to by either party for conciliation to the conciliation panel. For that purpose, both the parties, shall nominate each one member, and both the nominated members shall form the Conciliation panel.

In case the conciliation panel fails to resolve the dispute, then the matter shall be referred for arbitration, by an Arbitrator. The arbitration proceeding shall be as per the provisions of the Arbitration and Conciliation Act 1996.

## e. Applicable Law and Jurisdiction of Courts

The Contract shall be governed by and interpreted in accordance with the existing law of India in force. All disputes relating to the contract is subject to the pecuniary jurisdiction of the Court at Bhubaneswar and within the territorial jurisdiction of Hon'ble High Court of Odisha.

## 20. Project Duration

The project is to be implemented over an initial period of **3 Years and extendable to further 2 years on the basis of performance**, including:

- **Implementation Phase: 06 months.**
- **Steady-state Operations & Maintenance:** Remaining duration. The department may extend the contract based on performance and mutual agreement.

## 21. Payment Terms

Payment structure shall include:

- **Milestone-based payments:** During implementation (e.g., on SRS sign-off, UAT, Go-Live).
- **Periodic O&M payments:** Based on achievement of KPIs/SLAs (Quarterly/Monthly).
- **Performance-linked components:** Bonus or penalty based on SLA adherence.

### A. Implementation Payment Schedule

*Focuses on compliance, integration with Hospital Information Systems (HIS), and regulatory sign-offs.*

| Milestone                     | Payment % | Key Deliverable / Trigger                                                                 |
|-------------------------------|-----------|-------------------------------------------------------------------------------------------|
| Blueprinting & SRS            | 10%       | Approval of Software Requirements Specification and Data Privacy/HIPAA compliance plan.   |
| Integration                   | 20%       | Completion of core modules and successful integration with medical hardware/existing HIS. |
| UAT                           | 20%       | User Acceptance Testing sign-off.                                                         |
| Security Audit                | 20%       | Successful Vulnerability Assessment/Penetration Testing (VAPT).                           |
| Go-Live & Handover            | 25%       | System operational in production and staff training completed.                            |
| Post-Implementation Retention | 5%        | Released after 90–180 days of stable operation (Defect Liability Period).                 |

### B. O&M Penalty & Performance Structure

*Calculated as a percentage of the Periodic (Monthly/Quarterly) Service Fee.*

| Metric Category | Penalty % (Deduction) | Definition / Threshold |
|-----------------|-----------------------|------------------------|
|-----------------|-----------------------|------------------------|

|                                     |                  |                                                                             |
|-------------------------------------|------------------|-----------------------------------------------------------------------------|
| <b>System Availability</b>          | 5% – 20%         | Graduated penalty if uptime falls below 99.9% (Critical for patient care).  |
| <b>Critical Incident (S1) Delay</b> | 1% – 2% per hour | Failure to resolve life-critical system issues within 2–4 hours.            |
| <b>Data Integrity/Security</b>      | 25% – 100%       | Any unauthorized access or PHI (Protected Health Information) data breach.  |
| <b>Compliance Lapse</b>             | 10% per instance | Failure to provide statutory reports or maintain regulatory certifications. |

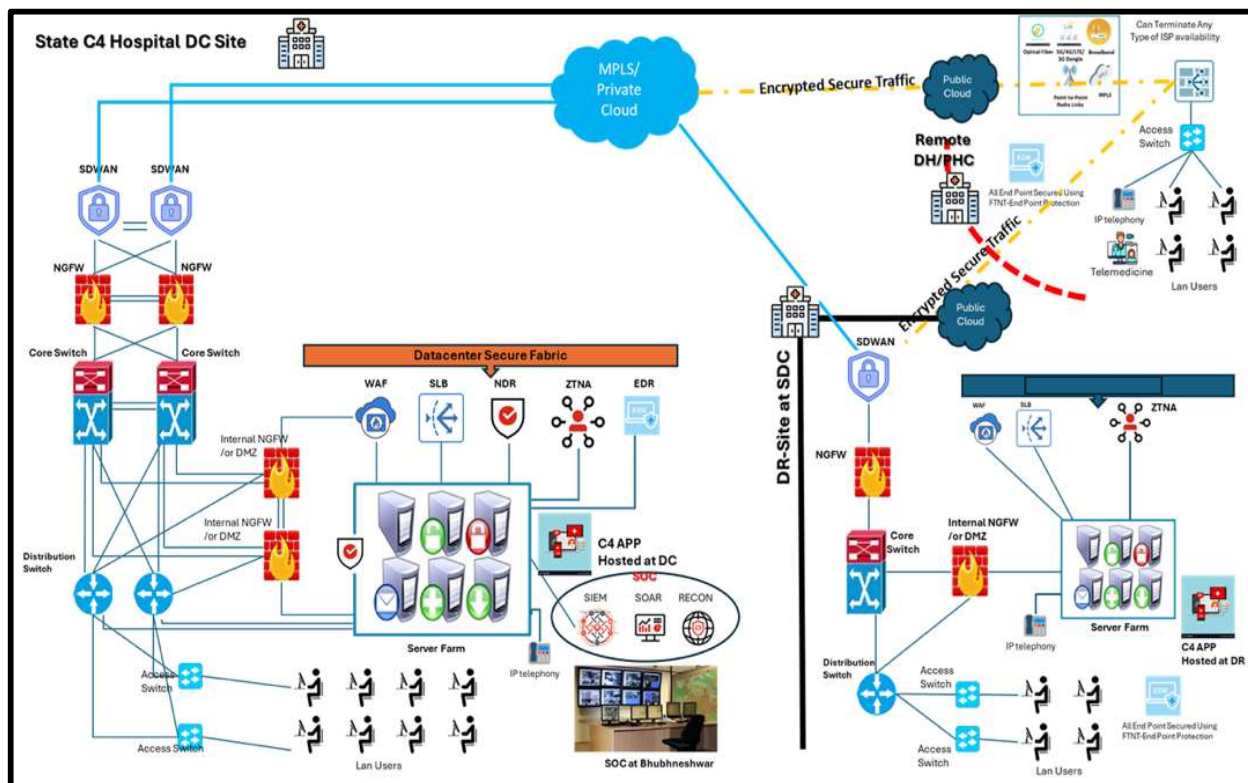
### C. Critical Financial Caps

- **Total Penalty Cap:** Usually limited to **10% of the total contract value** or **25% of the periodic O&M payment** to ensure vendor viability.
- **Liquidated Damages (LD):** For delays in implementation, a standard rate of **0.5% per week** of the total project cost is applied, capped at 10%.
- **Indemnity:** In healthcare, data breach liabilities often have **no cap** or a cap significantly higher than the contract value due to legal requirements for patient data protection.

## 22. Data centre and Secure Infra-structure for 32 District Hospital & 3 Designated Tertiary Care Centres & C4:

- A Centralised Data centre needs to be established at one of the District Hospital which will be based out of Bhubaneswar.
- The Digital Personal Data Protection (DPDP) Act, 2023, along with the DPDP Rules 2025, is mandatory for all healthcare networks in India. This legislation mandates that healthcare providers, as Data Fiduciaries, must comply with strict privacy regulations, including obtaining valid consent for data collection and implementing security measures to protect patient information.
- Hence, the proposed Network must ensure secure, identity-based, per-application access across distributed sites, remote workers, and cloud resources, while leveraging SD-WAN for optimized connectivity and performance.
- Every user, device, and application must be authenticated and continuously validated.
- Unlike traditional VPNs that grant broad access, the proposed designed ZTNA based network must enforce granular policies for each app.
- Access must be based on user identity, role, device posture, and location.
- The Proposed network must ensure Connecting all District Hospitals and required locations, HQ-DC, must be connected using optimized routing and application-aware traffic steering.
- Built an identity-based secure tunnels.
- The proposed Network must - Apply inspection, segmentation, and continuous monitoring.
- It is proposed to provide Secure SDWAN capabilities than with a traditional SDWAN solution. Secure SDWAN benefits provides the End users with direct connectivity to core location while reducing WAN costs, thereby simplifying infrastructures. By leveraging an integrated Secure SDWAN solution, it can be easily managing internet connectivity and performance while simultaneously eliminating the costs associated with implementing separate security solutions as an overlay for an unsecured SDWAN.
- The proposed architecture must ensure, the department can deploy zero-touch provisioning and centralized management capabilities that span the entire SDWAN deployment, from

configurations to connectivity to security. By having the ability to manage and orchestrate a unified security solution across multiple office locations, cloud environments, and devices, the Government can ensure automated control of offices WAN connectivity under Secure SDWAN which can achieve single-pane-of-glass visibility across the network.



## a. Functional Requirements

The supply for SDWAN, integrated with AAA, Bandwidth Aggregator, Cyber Security and AP Controller All in one Box with 3G/4G upgradable to 5G links, PPPoE, Dynamic/Static WAN links Ethernet Port LAN/WAN Switchable port with multisource Internet Connectivity (Internet/broadband/Dongle) and MPLS links. All Servers including orchestration, Database Server will be on Premises from day one only. Supply of software and hardware for AAA, Bandwidth Aggregator, SDWAN, Security, AP Controller as single tightly integrated solution. All Orchestration software should be hosted on-premises Data centre (C4 Hospital Command Centre) and on other site/location as backup information will be shared by Health Department.

## b. Architecture

Secure ZTNA enabled Software Defined Wide Area Network (SDWAN) should be integral part of the entire solution, providing a centrally hosted solution for management, enabling our IT staff to remotely program edge devices and make changes in network policies centrally, in real time. The SDWAN solution should include all the below mentioned functionality and features.

- Orchestrator should be hosted on custom domain (URL) provided during implementation.
- Centralized monitoring dashboard
- Hardware monitoring (Temperature, Load Average, RAM /HDD /CPU Utilization)

- Threshold based alerts and notifications
- Network WAN/LAN/SDWAN monitoring with alerts and notifications
- All network-wide configuration & application routing policies shall be from the Centralized policy management and SDWAN controller.
- All network-wide configuration & application routing policies shall be from the Centralized policy management and SDWAN controller.

### c. Network Services

- Multi-Hybrid WAN Connectivity (ILL, PPPoE, DHCP, 4G LTE, 5G). SDWAN should offer an extensive list of capabilities including sub-second packet steering across multiple WAN interface, packet loss reduction through services such as FEC, packet replication, and poor performing link avoidance. Route exchange should be with SDN controller, stateful high-availability, link aggregation, hierarchical QoS, per tunnel QoS, and overlay encapsulation options (VXLAN, IPsec). Should be available as software to deploy in on premises hardware including appliances, bare metal, hypervisors, or containers.
- **Dynamic Load Sharing of Traffic Based on defined Business logic and/or application policies** Edge devices must be able to load balance traffic across multiple WAN paths based on load balancing algorithms efficiently using all available WAN bandwidth. The solution shall support a mechanism to load balance traffic across multiple underlays / tunnels on a per flow basis based on policy and the detected performance of the underlay / tunnel. The solution must be able to make decisions to forward critical applications over the best-performing path based on the defined application policy-based network performance, packet loss and delay by offered solution. Solution should support Full Duplex 5Gbps throughput expandable to 10Gbps

### d. Application Management

Edge devices must be able to identify and classify applications. Identification and classification of at least the following classes of application types must be supported by the solution:

- Existing HIMS Applications/Solution
- Web based applications
- Video Conferencing
- CCTV Surveillance
- Solution to alert if the application is receiving an acceptable service from the underlay
- The solution must be able to dynamically control data packet forwarding decisions by looking at application type, performance, policies, and path status
- The solution to provide App performance measurement through reporting
- The solution must support zero-touch provisioning and plug-n-play for new remote offices, which entails on- site remote offices personnel having to make physical (i.e., cabling) changes only and administrators not having to make configuration changes to bring new remote offices online. The Remote offices would terminate multiple transport media viz., links (from multiple service providers), Internet link (broadband), LTE etc on the EDGE SERVER(s). The Edge WAN link should be provided with an IP address, netmask, default gateway and DNS server via DHCP, PPPoE, 4G/LTE or Static configuration. The solution shall not require any off-site customer specific pre-staging / pre-configuration

### e. Centralized Management

- The centralized management solution must have web-based GUI (HTTP) / (HTTPS)

- The solution must provide user guide for deployment and management of SDWAN infrastructure
- All network-wide configurations shall be from the centralized management appliance
- All application forwarding policies shall be configured from the centralized management appliance
- The solution must support automatic upgrades of Updates/Patches/Versions of all software components including operating systems, firmware, management software, security software or any other software, which would be part of the remote offices Edge server
- The solution must be able to collect and aggregate traffic statistics for all WAN paths. Traffic statistics include path utilization, application specific utilization and path performance. The solution must support device health monitoring for all the devices within the solution scope

#### **f. Support & AMC**

All the hardware, software products supplied should carry a minimum warranty of 5 - year from the date of operationalization of the system to the satisfaction of DIT. On-site, comprehensive, back-to-back from Original Equipment Manufacturer (OEM) for a period of 5 years from the date of installation (if applicable). The warranty also includes all software subscriptions (critical hot fixes, service packs, and major upgrades). **Remote access to the systems supplied should not be permitted.**

- On-site, comprehensive, back-to-back support from OEM for all hardware and software products as a part of RFP till the end of contract i.e. for 5 year.
- Software updates and upgrades at no extra cost.
- The SI/Bidder must maintain sufficient spares for Replacement of failed hardware (if applicable) within 4 Hrs. from the time call is lodged for critical location.

## SECTION – V

### TECHNICAL SPECIFICATION

#### Technical Specifications:

##### 1. Perimeter NGFW – in HA DC/DR

| SN       | Technical Parameters                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | <b>Hardware Architecture</b>                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1        | The appliance-based security platform should provide firewall, Application Control, Antimalware/Anti-virus, Web Filtering and IPS functionality in a single appliance from day one                                                                                                                                                                                                                                                   |
| 2        | The appliance should have below interface options:<br>1. 4 x 10GE SFP+/SFP, 2 x 25 GE QSFP28<br>2. 18 x GE RJ45<br>3. 8 x SFP Slots for future expansion<br>4. Dedicated management and HA port.<br>The Firewall shall be provided with 2x 10GE SFP+ SR transceivers modules from same OEM.                                                                                                                                          |
| 3        | The appliance hardware should be a multicore CPU architecture with a hardened 64-bit operating system or can be ASIC based.                                                                                                                                                                                                                                                                                                          |
| 4        | The proposed appliance must include a dedicated hardware Trusted Platform Module (TPM) for secure generation, storage, and validation of cryptographic keys, enabling hardware root-of-trust and secure boot to prevent firmware tampering                                                                                                                                                                                           |
| 5        | Proposed firewall shall have 960 GB of internal storage from day 1.                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B</b> | <b>Performance &amp; Scalability</b>                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1        | Firewall should support <b>30Gbps of Threat Prevention throughput (FW+AVC+IPS and AV/AM)</b> real-world/enterprise mix /production performance public document proof must be attached and also must support 30 GBPS of Next Generation throughput                                                                                                                                                                                    |
| 2        | Firewall should support at least 16 Million concurrent sessions or higher and 700K new connections per second                                                                                                                                                                                                                                                                                                                        |
| 3        | Firewall should support Site to Site and Client to Site IPSEC VPN tunnels and NGFW shall also have 50 Gbps of IPSec VPN throughput or higher                                                                                                                                                                                                                                                                                         |
| 4        | Firewall system shall be able to operate on either Transparent (bridge) mode to minimize interruption to existing network infrastructure or NAT/Route mode. Both modes can also be available concurrently using Virtual Contexts. Minimum 10 Virtual Firewall licenses to be provided with the solution from day one and NGFW must have provision of enabling 50 Virtual Firewall by just adding Licenses and no change of Hardware. |
| <b>C</b> | <b>Firewall Features</b>                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1        | Firewall should support creating access-rules with IPv4 & IPv6 objects, user/groups, application, geolocation, url, zones, vlan, etc and also have support for SLAAC Stateless Address Auto configuration                                                                                                                                                                                                                            |
| 2        | Firewall should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat                                                                                                                                                                                                                                                                                                                                                |
| 3        | Firewall should support NAT46, NAT66, NAT64, DNS64 along with DHCP and DHCPv6 functionality from dayone                                                                                                                                                                                                                                                                                                                              |
| 4        | Firewall should support Static, RIP, OSPF, OSPFv3 and BGP and Multicast protocols like IGMP, PIM, etc                                                                                                                                                                                                                                                                                                                                |
| 5        | The proposed NGFW solution shall have the ability to detect, log and take action against network traffic based on over 5000 application signatures and it shall also support 70 Gbps of application control throughput considering HTTP traffic.                                                                                                                                                                                     |
| 6        | The application signatures shall be manual or automatically updated by utilizing OEM's threat intel.                                                                                                                                                                                                                                                                                                                                 |

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7        | The offered NGFW product should have the capability to inspect SSL traffic. The SSL inspection throughput should not be less than 15 Gbps.                                                                                                                                                                                                                                                                                        |
| 8        | The administrator shall be able to define application control list based on selectable application group and/or list and its corresponding actions                                                                                                                                                                                                                                                                                |
| 9        | Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.                                                                                                                                                                                                                                                                                 |
| 10       | Should support more than 20,000 (excluding custom signatures) IPS signatures or more and IPS throughput shall not be less than 40 Gbps, public document proof of IPS signatures and throughput shall also be attached along with the bid.                                                                                                                                                                                         |
| 11       | The Appliance OEM must have its own threat intelligence analysis center and should use the global footprint of security deployments for more comprehensive network protection.                                                                                                                                                                                                                                                    |
| 12       | The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).                                                                                                                                                                                                                                    |
| 13       | Should be able to identify attacks based on Geo- location and define policy to block on the basis of Geo-location                                                                                                                                                                                                                                                                                                                 |
| 14       | The detection engine should support the capability of detecting variants of known threats, as well as new threats                                                                                                                                                                                                                                                                                                                 |
| 15       | Firewall should have SDWAN functionality capable Path quality measurement based on (jitter, packet loss, latency)                                                                                                                                                                                                                                                                                                                 |
| 16       | Should support URL threat intelligence feeds to protect against threats                                                                                                                                                                                                                                                                                                                                                           |
| 17       | WAN load balancing (weighted) algorithms by: volume, sessions, source-destination IP, Source IP, and spill over                                                                                                                                                                                                                                                                                                                   |
| 18       | The proposed system should be able to block, allow or monitor only using AV signatures and file blocking based on per firewall policy based or based on firewall authenticated user groups with configurable selection of the following services: HTTP, SMTP, POP3, IMAP, FTP etc                                                                                                                                                 |
| 19       | The proposed system should have integrated Web Content Filtering solution without external solution, devices or hardware modules.                                                                                                                                                                                                                                                                                                 |
| 20       | The proposed system shall be able to queries a real time database of over 110 million + rated websites categorized into 50+ unique content categories.                                                                                                                                                                                                                                                                            |
| 21       | The DNS filtering solution should have the following features:<br><ul style="list-style-type: none"> <li>• Filters the DNS request based on the domain rating.</li> <li>• Should block the DNS request for the known botnet C&amp;C domains.</li> <li>• Should allow to define own domain category.</li> <li>• Should allow users to define own domain list to block or allow.</li> </ul>                                         |
| 22       | The proposed solution should be able to enable or disable Web Filtering per firewall policy or based on firewall authenticated user groups for both HTTP and HTTPS traffic.                                                                                                                                                                                                                                                       |
| 23       | The proposed system shall provide web content filtering features:<br>a) which blocks web plug-ins such as ActiveX, Java Applet, and Cookies.<br>b) Shall include Web URL block<br>c) Shall include score based web keyword block<br>d) Shall include Web Exempt List                                                                                                                                                              |
| 24       | Solution should be ready for the post-quantum threats to include Post Quantum Cryptography with NIST-approved algorithms like ML-KEM and emerging algorithms like BIKE, HQC, and Frodo to protect against emerging threats , including harvest-now, decrypt-later attacks                                                                                                                                                         |
| 25       | The NGFW should have native protection against credential theft attacks (without the need of endpoint agents) with ability to prevent the theft and abuse of stolen credentials and the following :<br><ul style="list-style-type: none"> <li>· Automatically identify and block phishing sites</li> <li>· Prevent users from submitting credentials to phishing sites</li> <li>· Prevent the use of stolen credential</li> </ul> |
| <b>D</b> | <b>High-Availability Features</b>                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1        | Firewall should support Active/Standby and Active/Active failover.                                                                                                                                                                                                                                                                                                                                                                |

|          |                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2        | Firewall should have built-in redundant power supply                                                                                                                               |
| <b>E</b> | <b>Management/OEM Criteria</b>                                                                                                                                                     |
| 1        | Firewall must be managed/accessed through GUI and CLI both.<br>The proposed firewall should integrate with and be managed through existing firewall management solution.           |
| 2        | OEM should not be blacklisted with in last 3 years in any of the government organisation                                                                                           |
| 3        | All the feature functionalities and throughputs must be achieved from single box. Bids proposing N + 1 clustering or stacking solution shall be rejected                           |
| 4        | The proposed firewall family or its operation system must have EAL4 certified and TEC Certified along with IPv6 Certified/IPv6 logo ready along with EN IEC 62368 Safety Standard. |
| 5        | The Proposed Firewall Vendor should be in the Magic Quadrant of the latest Gartner report for Hybrid Mesh Firewall. Report must be attached.                                       |

## 2. EDR: (Endpoint Detection & Response)

| Sl | Specification                                                                                                                                                                                                                                                               |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | The proposed solution must be compatible with the following operating systems: Windows (32-bit & 64-bit) XP SP2 / SP3, 7, 8, 8.1 and 10                                                                                                                                     |
| 2  | The proposed solution must be compatible with the following operating systems: Windows Server 2003 R2 SP2, 2008 R1 SP2, 2008 R2, 2012, 2012 R2, 2016 y 2019                                                                                                                 |
| 3  | The proposed solution must be compatible with the following operating systems: macOS Versions: El Capitan (10.11), Sierra (10.12), High Sierra (10.13), Mojave (10.14), Catalina (10.15), Big Sur (11.x), and Monterey (12.x)                                               |
| 4  | The proposed solution must be compatible with the following operating systems: Linux Versions: RedHat Enterprise Linux and CentOS 6.x, 7.x, and 8.x, Ubuntu LTS 16.04.x, 18.04.x, 20.04.x server, 64-bit only Oracle Linux 7.7+ and 8.2+, Amazon Linux AMI 2 SuSE SLES 15.1 |
| 5  | The solution must be compatible with the following operating systems: Virtual Desktop Infrastructure (VDI) environments on VMware and Citrix. VMware Horizons 6 and 7, and Citrix Xen Desktop 7                                                                             |
| 6  | Proposed EDR should be able to support min 5000 endpoints from day 1                                                                                                                                                                                                        |
| 7  | The proposed solution must have a consumption of less than 250MB of RAM & Consume less than 2% of CPU and 40Mb of Disk Space only                                                                                                                                           |
| 8  | The solution should have the option to ask for a password to uninstall the workstation agent & should have Anti-Tamper Protection                                                                                                                                           |
| 9  | The proposed solution must support mass installation using tools such as MS System Center, JAMF, and Satellite.                                                                                                                                                             |
| 10 | The proposed solution must have the ability to update the endpoint without user interaction or without requiring a restart of the station                                                                                                                                   |
| 11 | The Agent shall be deployable along with other AV solutions wherever required and shall have the capability to replace the AV eventually over a period of time                                                                                                              |
| 12 | Solution should provide off-network detection to detect potentially malicious activity when not connected to the corporate network.                                                                                                                                         |
| 13 | Solution should Detect running processes, process starts, process stops, and cross process interaction.                                                                                                                                                                     |
| 14 | Solution should provide command line visibility , Detect Malicious Registry changes and Monitor DNS requests and Network connections from host                                                                                                                              |
| 15 | Solution should Detect suspicious activity associated with DLLs & should detect Suspicious user and workstation behaviour to Identifies suspicious user and workstation behaviour.                                                                                          |
| 16 | Solution should Incorporates threat intelligence into detection scheme to Provides contextual threat intelligence into detection scheme.                                                                                                                                    |
| 17 | Solution should Incorporate MITRE ATT&CK into detection scheme to Provides MITRE ATT&CK technique scheme into detection scheme.                                                                                                                                             |
| 18 | The proposed solution should work offline when the system has no access to the corporate network and internet providing complete protection to that workstation.                                                                                                            |
| 19 | The proposed solution should have the ability to load the indicators (IOC) such as IP address, domain, file name, file hash, etc. for threat search                                                                                                                         |

|    |                                                                                                                                                                                                                                                             |
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| 20 | The proposed solution should have the ability to categorize the detected events into different categories such as Malicious, Suspicious, Inconclusive, Probably Safe                                                                                        |
| 21 | The proposed solution should block malicious traffic from data exfiltration (data leakage) & Block malicious traffic from communicating toward C&C (Command & Control)                                                                                      |
| 22 | The proposed solution should incorporate a kernel-based software engine (NGAV) with the capability of "Machine Learning" & should have the ability to control USB Devices                                                                                   |
| 23 | Solution should provide single endpoint agent for both pre- and post- infection protection even when machines are not connected to the cloud so that you can protect your endpoints anywhere.                                                               |
| 24 | Must protect against malicious PowerShell , Script scripts & Office Macros                                                                                                                                                                                  |
| 25 | Solution should have the ability to create playbooks for different response actions for different incidents based on parameters                                                                                                                             |
| 26 | Solution should have the ability to obtain memory snapshot or memory dump which points to the smoking gun forensics                                                                                                                                         |
| 27 | Solution should have the ability to fetch any file or memory at any point. Ability to terminate processes remotely.                                                                                                                                         |
| 28 | Solution should have the API available to allow for tracking of detection investigations with pertinent information regarding the detection (i.e. IP address, host name, user, date/time occurred, suspicious activity, etc.) to allow for ticket creation. |
| 29 | Solution should provide ransomware prevention policy and behavioural analysis offer real-time automated prevention of ransomware encryption.                                                                                                                |
| 30 | The proposed solution shall have the ability to perform free-text query based Threat Hunting                                                                                                                                                                |
| 31 | Ability to whitelist/blacklist based on application name, version and vendor.                                                                                                                                                                               |
| 32 | Must store meta-data generated by the devices on the on-premise management console so that they are used for forensic investigation                                                                                                                         |
| 33 | Must have the ability to take snapshots of memory (dumps) that allow forensic analysis to be performed                                                                                                                                                      |
| 34 | The proposed solution administration console should allow the use of dual-factor authentication(2Fa) to allow access to the same                                                                                                                            |
| 35 | The solution administration console should allow the use of access roles in a granular manner, with different access levels, for solution administrators                                                                                                    |
| 36 | The solution shall not store any information on cloud and shall have an on-premise management console                                                                                                                                                       |
| 37 | The solution administration console should allow you to view the health of installed agents.                                                                                                                                                                |
| 38 | The administration console should allow remote uninstall of the agent installed on the devices & Remote deactivation or Activation                                                                                                                          |
| 39 | The administration console should allow remote updating of agents installed on the devices.                                                                                                                                                                 |
| 40 | The administration console should allow the creation of executive reports containing the summary of the description of security events and system state                                                                                                     |
| 41 | The administration console should allow the creation of organizational groups in which each group can have protection rules independent of the others.                                                                                                      |
| 42 | The administration console must allow the export of agent-generated logs from a single point and the information to be password protected                                                                                                                   |
| 43 | The administration console should allow the creation of inventory reports of installed agents containing information such as: IP address, Hostname, Operating system, MAC address, installed agent version, agent state, last day seen in console           |
| 44 | The admin console should provide visibility into the events generated by devices or events according to the process performed                                                                                                                               |
| 45 | The proposed admin console should allow integration with an external SMTP service for sending alerts via electronic mail                                                                                                                                    |
| 46 | The admin console should allow auditing of changes made by administrators/operators. These audits can be downloaded into a file in CSV or excel format                                                                                                      |
| 47 | The solution shall have remote shell capability to remotely execute commands in user systems via central console                                                                                                                                            |
| 48 | The proposed solution shall be able to conduct threat hunting investigations through the on-premise EDR management console and not store any data on cloud                                                                                                  |
| 49 | Solution should have the full process data collection at all times to collect any process/thread/library/driver related activities including creation/termination/start/load.                                                                               |
| 50 | Solution should able to collect full file data all the time which includes ability to collect any file related activities including creation/read/write/rename/delete.                                                                                      |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 51 | Solution should able to collect any network related activities including socket connect/bind/listen/accept/close.                                                                                                                                                                                                                                                                                                                                                                                                |
| 52 | Solution should able to have ability to collect any registry related activities including key/value create/delete/rename.                                                                                                                                                                                                                                                                                                                                                                                        |
| 53 | Solution should have the ability to create custom classified rules based on threat hunting collected data.                                                                                                                                                                                                                                                                                                                                                                                                       |
| 54 | Solution should enable dynamic search suggestions as most active devices, activity types, source process, signing, target files, protocols etc.                                                                                                                                                                                                                                                                                                                                                                  |
| 55 | Solution should allow to detect known techniques over raw normalized data as lateral movement, extended privilege escalation, log deletion, scheduled tasks, start up tampering, memory violations, commands and arguments spoofing etc.                                                                                                                                                                                                                                                                         |
| 56 | Solution should have Syslog available for SIEM integration.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 57 | The solution should integrate with proposed tool for early detection and response of malware, upon any suspicious detection must have capability to quarantine endpoint solution using same client.                                                                                                                                                                                                                                                                                                              |
| 58 | Proposed solution must have below key native integrations, in case integration are not available natively SI to build the mentioned integration for complete security Platform/ecosystem: -                                                                                                                                                                                                                                                                                                                      |
| 59 | i. Proposed firewall where endpoint tags can be shared for enhanced protection and control on network level.                                                                                                                                                                                                                                                                                                                                                                                                     |
| 60 | ii. Proposed Web application firewall where endpoint tags can be shared for enhanced protection and control on application access and security.                                                                                                                                                                                                                                                                                                                                                                  |
| 61 | iii. Proposed Sandbox/APT solution for endpoint level zero-day prevention.                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 62 | iv. With proposed SIEM and SOAR solution where SIEM and SOAR solution can automatically remediate endpoint during incident triage/threat hunting process.                                                                                                                                                                                                                                                                                                                                                        |
| 63 | v. With proposed centralized authentication and 2nd factor authentication solution, endpoint must authenticate using proposed authentication solution and 2nd factor must be enforced for additional trust check.                                                                                                                                                                                                                                                                                                |
| 64 | Proposed endpoint solution must be endpoint detection and prevention engine of central Security grid should work together as an intelligent security ecosystem to provide advanced threat detection, automated intelligence exchange across entire security ecosystem mentioned in RFP and automated response.                                                                                                                                                                                                   |
| 65 | Proposed Security solutions i. e. Firewalls, APT, EDR, NAC, WAF, PAM, endpoint security, NDR, EDR solution must form a central Security grid/platform with centralized management which should be used as Prevention technologies and must have native integration with proposed SIEM and SOAR solution for centralized Security Operations Platform, preferably from same OEM for easier out of box integration. In case of different OEM solution required integration to be build and demonstrated by bidder. |
| 66 | All Components of central Security grid should work together as a team to share policy, threat intelligence, and application flow information.                                                                                                                                                                                                                                                                                                                                                                   |
| 67 | Security platform should provide complete ecosystem wide visibility and provides fast threat detection in real time and the ability to initiate and synchronize a coordinated response, no matter which part of the network is being compromised.                                                                                                                                                                                                                                                                |
| 68 | The Security platform must allow endpoint and network to automatically see and dynamically isolate affected devices, partition network segments, update rules, push out new policies, and remove malware.                                                                                                                                                                                                                                                                                                        |
| 69 | It should allow you to collect, share, and correlate threat intelligence between security and network devices, centrally manage and orchestrate policies, automatically synchronize resources to enforce policies, and coordinate a response to threats detected anywhere across the extended network.                                                                                                                                                                                                           |
| 70 | The Security platform should provide central unified management platform, unified management interface must provide cooperative security alerts, recommendations, audit reports, and full policy control across the Security Fabric that should provide confidence around network and its security posture.                                                                                                                                                                                                      |
| 71 | Proposed security grid should have capability to provide automation stitches to automate the activities between the different components in the Security grid, which decreases the response times to security events.                                                                                                                                                                                                                                                                                            |

### 3. TOR/Distribution Switch:

| S.No. | Parameter | Technical Specification |
|-------|-----------|-------------------------|
|-------|-----------|-------------------------|

|    |                                       |                                                                                                                                                                                                                                                                                                                                                                 |
|----|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | General Requirements                  | L3 Managed Switch should have minimum 48x 25G/10G/1G SFP28/SFP+/SFP slots, 2x1/10Gig SFP+ slots and 8x 40G/100G QSFP+/QSFP28 slots. Should be populated with 24x 25Gig Multimode Fibre transceivers, 20x10Gig Multimode Fibre Transceivers, 4x10Gig copper transceivers & 8x 100Gig QSFP28 SR transceivers from day 1.                                          |
| 2  |                                       | The proposed switch form factor should be Rack-Mount Appliance and should have minimum one RJ-45 Serial console or any other type of console port and 1 RJ-45 management or service port.                                                                                                                                                                       |
| 3  |                                       | Switching capacity of the proposed switch should be minimum 4000 Gbps and min 4000 Mpps Packet per second.                                                                                                                                                                                                                                                      |
| 4  |                                       | Proposed switch should support Active-Active using McLAG, VSS, or virtual stack or any other equivalent functionality.                                                                                                                                                                                                                                          |
| 5  |                                       | Proposed switch should have hot swappable redundant power supply from day 1                                                                                                                                                                                                                                                                                     |
| 6  |                                       | Proposed switch should support min 8K Multicast route entries from day 1                                                                                                                                                                                                                                                                                        |
| 7  |                                       | Proposed Switch should support network latency of not more than 1 $\mu$ s                                                                                                                                                                                                                                                                                       |
| 8  |                                       | Proposed Switch should support minimum 64K MAC address and 4000 VLAN's ID                                                                                                                                                                                                                                                                                       |
| 9  | Layer 3 Requirements                  | Proposed switch should support routing protocol -static route, RIP, OSPF, BGP from day 1                                                                                                                                                                                                                                                                        |
| 10 |                                       | Proposed switch should support VXLAN, VRF, Bidirectional Forwarding Detection (BFD), ECMP, Multicast protocol (PIM) from day 1                                                                                                                                                                                                                                  |
| 11 |                                       | Proposed switch should support IP Conflict Detection and Notification from day 1                                                                                                                                                                                                                                                                                |
| 12 | Layer 2 & Authentication Requirements | Should support 802.1p support, QoS support prioritizing the traffic                                                                                                                                                                                                                                                                                             |
| 13 |                                       | Should support 802.1x port-based authentication                                                                                                                                                                                                                                                                                                                 |
| 14 |                                       | Should support 802.1x MAC-based authentication, IEEE 802.1x MAC Access Bypass (MAB).                                                                                                                                                                                                                                                                            |
| 15 |                                       | Should support IEEE 802.1x Guest and Fallback VLAN                                                                                                                                                                                                                                                                                                              |
| 16 |                                       | Should support IEEE 802.1x Dynamic VLAN Assignment                                                                                                                                                                                                                                                                                                              |
| 17 |                                       | Should support TFTP, SNTP, DHCP client and server                                                                                                                                                                                                                                                                                                               |
| 18 |                                       | Switch should integrate with RADIUS, Radius CoA, TACACS+ servers                                                                                                                                                                                                                                                                                                |
| 19 |                                       | Should support Multiple Spanning Tree Protocol MSTP, RSTP, STP                                                                                                                                                                                                                                                                                                  |
| 20 | Management                            | Should support SSH, HTTP, HTTPS with IPv4 and IPv6 Management. Support for HTTP REST APIs for Configuration and Monitoring                                                                                                                                                                                                                                      |
| 21 |                                       | Switch should support SNMP v1, v2c and v3, sflow v5 or netflow.                                                                                                                                                                                                                                                                                                 |
| 22 |                                       | Proposed switch should be managed via both, GUI and CLI                                                                                                                                                                                                                                                                                                         |
| 23 | Security                              | Should support TLS v1.3 from day 1                                                                                                                                                                                                                                                                                                                              |
| 24 |                                       | Solution should support in-built network access control feature to bounce all the devices by default in onboarding VLAN and based on the devices matching with the specified criteria devices should be assigned to a specific VLAN. Criteria: a. MAC address, b. hardware vendor, c. device family, d. device type, e. device operating system and user group. |
| 25 |                                       | Solution should have option to allow administrators to quarantine hosts and users connected to a appliance via GUI. Quarantined MAC addresses should be isolated from the rest of the network and LAN.                                                                                                                                                          |
| 26 | Certification/Credentials             | FCC, CE/EU, UL, RoHS2                                                                                                                                                                                                                                                                                                                                           |

|    |                                                                                                                                                                               |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27 | The proposed Switch OEM should be ISO 9001, ISO 14001 and ISO 27001 certified. Bidders need to provide Publicly available Website Link/document along with the technical bid. |
| 28 | The proposed product or product family or operating system should be EAL or higher or NDPP certified.                                                                         |

#### 4. Access Switches – 24-Port PoE+

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SI | Specification Distribution Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1  | Switch should have 24 x RJ-45 Full POE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2  | Switch should have 4x SFP+ 1/10GbE ports to work with 1/10G SFP transceivers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3  | Switch should provide 128 Gbps of switching capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4  | Switch should provide 190 Mpps of throughput                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5  | Switch should have a capacity of 16k MAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 6  | Switch should be in the form of 1RU with 19" Rackmount                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 7  | The Ethernet switch being proposed must be a Secure Access switches deliver a Secure, Simple, Scalable Ethernet solution with outstanding security, performance and manageability for threat.                                                                                                                                                                                                                                                                                                                                                                                        |
| 8  | Switch should support in-built network access control feature to bounce all the devices by default in onboarding VLAN and based on the devices matching with the specified criteria devices should be assigned to a specific VLAN.Criteria: a.MAC address, b. hardware vendor, c. device family, d. device type, e. device operating system and user group. In case, above mentioned functionality is not in-built in the switch bidder can provide additional required hardware and software resources of same OEM whose switches are proposed to meet the mentioned functionality. |
| 9  | Switch should have option to allow administrators to quarantine hosts and users connected to a Switch via GUI. Quarantined MAC addresses should be isolated from the rest of the network and LAN. In case, above mentioned functionality is not in-built in the switch above can provide additional required hardware and software resources of same OEM whose switches are proposed to meet the mentioned functionality.                                                                                                                                                            |
| 10 | Switch should provide traffic prioritization (IEEE 802.1p) allows real-time traffic classification into priority levels mapped to queues                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11 | Switch should provide layer 4 prioritization based on TCP/UDP port numbers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12 | Switch should provide class of service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and Diff. Service                                                                                                                                                                                                                                                                                                                                                                                  |
| 13 | Switch should provide Rate limiting sets per-port ingress enforced maximums and per-port, per-queue minimums                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 14 | Should have management protocol that allows Gateway/Parametric Security Appliance to seamlessly manage any Ethernet Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 15 | Switch should support IEEE 802.1s Multiple Spanning Tree provides high link availability by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w                                                                                                                                                                                                                                                                                                                                                                                                |
| 16 | Switch should support IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking support up to 26 static, dynamic, or distributed trunks with each trunk having up to eight links (ports) per static trunk                                                                                                                                                                                                                                                                                                                                                              |
| 17 | Switch should support SNMPv1, v2, and v3 provide complete; support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption                                                                                                                                                                                                                                                                                                                                                                               |
| 18 | Switch should support dual flash images provide independent primary and secondary operating system files for backup while upgrading                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 19 | Switch should support custom port names to allow assignment of descriptive names to ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 20 | Switch should have a PoE Power Budget of min 400 W, for connecting Access Points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21 | Switch should have VLAN support and tagging supports IEEE 802.1Q (4,094 VLAN IDs) and 512 VLANs simultaneously                                                                                                                                                                                                                                                                                                                                                        |
| 22 | Switch should support jumbo packets to improves the performance of large data transfers; supported frame size of up to 9,220 bytes                                                                                                                                                                                                                                                                                                                                    |
| 23 | Switch should support Rapid per-VLAN spanning tree (RPVST+) to allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+                                                                                                                                                                                                                                                                                           |
| 24 | Switch should support DHCP server to centralize and reduces the cost of IPv4 address management                                                                                                                                                                                                                                                                                                                                                                       |
| 25 | Switch should support static IP routing to provide manually configured routing                                                                                                                                                                                                                                                                                                                                                                                        |
| 26 | Switch should use an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards                                                                                                                                                                                                                                                                                                                   |
| 27 | Switch should support multiple IEEE 802.1X users per port to provide authentication of multiple devices on a single port; which will prevent a user from piggybacking on another user's IEEE 802.1X authentication                                                                                                                                                                                                                                                    |
| 28 | Switch should support RADIUS/TACACS+ to ease switch management security administration by using a password authentication server                                                                                                                                                                                                                                                                                                                                      |
| 29 | Switch must have option to ping using Switch serial number instead of the Switch IP address.                                                                                                                                                                                                                                                                                                                                                                          |
| 30 | Switch should support in-built network access control feature to bounce all the devices by default in onboarding VLAN. And Based on the devices matching with the specified criteria devices should be assigned to a specific VLAN. Criteria: a. MAC address, b. hardware vendor, c. device family, d. device type, e. device operating system and user group. If bidder not supported in-built they should include all the required hardware and software resources. |
| 31 | Switch should support secure shell encryption for all transmitted data for secure remote CLI access over IP networks                                                                                                                                                                                                                                                                                                                                                  |
| 32 | Switch should support Secure Sockets Layer (SSL) encryption for all HTTP traffic, allowing secure access to the browser-based management GUI in the switch                                                                                                                                                                                                                                                                                                            |
| 33 | All the solution should be managed by the central manager which can manages 1000 devices which includes AP and Switches and if central management is unavailable it must have capability to get managed through proposed firewall itself.                                                                                                                                                                                                                             |
| 34 | Security functionalities allowed to be extended till the access port. Proposed Firewall, Endpoint Security, Core & access Switches, Access points should preferably from single OEM in case of multiple OEM's solution integration to be built by bidders.                                                                                                                                                                                                            |
| 35 | Switches should be capable of providing visibility to the devices connected in to the connected ports                                                                                                                                                                                                                                                                                                                                                                 |
| 36 | Switch must support Operating Temperature 0°C to 50°C from Day 1                                                                                                                                                                                                                                                                                                                                                                                                      |
| 37 | Certification & Compliance - FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2, Gartner Leader Quadrant                                                                                                                                                                                                                                                                                                                                                                         |

## 5. Access Switches – 48-Port PoE+

| SI | Specification Distribution Switch                                            |
|----|------------------------------------------------------------------------------|
| 1  | Switch should have 48 x RJ-45 Full POE                                       |
| 2  | Switch should have 4x SFP+ 1/10GbE ports to work with 1/10G SFP transceivers |
| 3  | Switch should provide 176 Gbps of switching capacity                         |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4  | Switch should provide 262 Mpps of throughput                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5  | Switch should have a capacity of 32k MAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6  | Switch should be in the form of 1RU with 19" Rackmount                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 7  | The Ethernet switch being proposed must be a Secure Access switches deliver a Secure, Simple, Scalable Ethernet solution with outstanding security, performance and manageability for threat.                                                                                                                                                                                                                                                                                                                                                                                         |
| 8  | Switch should support in-built network access control feature to bounce all the devices by default in onboarding VLAN and based on the devices matching with the specified criteria devices should be assigned to a specific VLAN. Criteria: a.MAC address, b. hardware vendor, c. device family, d. device type, e. device operating system and user group. In case, above mentioned functionality is not in-built in the switch bidder can provide additional required hardware and software resources of same OEM whose switches are proposed to meet the mentioned functionality. |
| 9  | Switch should have option to allow administrators to quarantine hosts and users connected to a Switch via GUI. Quarantined MAC addresses should be isolated from the rest of the network and LAN. In case, above mentioned functionality is not in-built in the switch above can provide additional required hardware and software resources of same OEM whose switches are proposed to meet the mentioned functionality.                                                                                                                                                             |
| 10 | Switch should provide traffic prioritization (IEEE 802.1p) allows real-time traffic classification into priority levels mapped to queues                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 11 | Switch should provide layer 4 prioritization based on TCP/UDP port numbers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 12 | Switch should provide class of service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ                                                                                                                                                                                                                                                                                                                                                                                        |
| 13 | Switch should provide Rate limiting sets per-port ingress enforced maximums and per-port, per-queue minimums                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 14 | Should have management protocol that allows Gateway/Parametric Security Appliance to seamlessly manage any Ethernet Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 15 | Switch should support IEEE 802.1s Multiple Spanning Tree provides high link availability by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w                                                                                                                                                                                                                                                                                                                                                                                                 |
| 16 | Switch should support IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking support up to 26 static, dynamic, or distributed trunks with each trunk having up to eight links (ports) per static trunk                                                                                                                                                                                                                                                                                                                                                               |
| 17 | Switch should support SNMPv1, v2, and v3 provide complete; support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption                                                                                                                                                                                                                                                                                                                                                                                |
| 18 | Switch should support dual flash images provide independent primary and secondary operating system files for backup while upgrading                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 19 | Switch should support custom port names to allow assignment of descriptive names to ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 20 | Switch should have a PoE Power Budget of min 900 W, for connecting Access Points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 21 | Switch should have VLAN support and tagging supports IEEE 802.1Q (4,094 VLAN IDs) and 512 VLANs simultaneously                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 22 | Switch should support jumbo packets to improves the performance of large data transfers; supported frame size of up to 9,220 bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 23 | Switch should support Rapid per-VLAN spanning tree (RPVST+) to allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+                                                                                                                                                                                                                                                                                                                                                                                                           |
| 24 | Switch should support DHCP server to centralize and reduces the cost of IPv4 address management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 25 | Switch should support static IP routing to provide manually configured routing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 26 | Switch should use an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|    |                                                                                                                                                                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27 | Switch should support multiple IEEE 802.1X users per port to provide authentication of multiple devices on a single port; which will prevent a user from piggybacking on another user's IEEE 802.1X authentication                                         |
| 28 | Switch should support RADIUS/TACACS+ to ease switch management security administration by using a password authentication server                                                                                                                           |
| 29 | Switch must have option to ping using Switch serial number instead of the Switch IP address.                                                                                                                                                               |
| 30 | Switch should support secure shell encryption for all transmitted data for secure remote CLI access over IP networks                                                                                                                                       |
| 31 | Switch should support Secure Sockets Layer (SSL) encryption for all HTTP traffic, allowing secure access to the browser-based management GUI in the switch                                                                                                 |
| 32 | All the solution should be managed by the central manager which can manages 1000 devices which includes AP and Switches and if central management is unavailable it must have capability to get managed through proposed firewall itself.                  |
| 33 | Security functionalities allowed to be extended till the access port. Proposed Firewall, Endpoint Security, Core & access Switches, Access points should preferably from single OEM in case of multiple OEM's solution integration to be built by bidders. |
| 34 | Switches should be capable of providing visibility to the devices connected in to the connected ports                                                                                                                                                      |
| 35 | Switch must support Operating Temperature 0°C to 50°C from Day 1                                                                                                                                                                                           |
| 36 | Certification & Compliance - FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2                                                                                                                                                                                       |

## 6. Server DC & DR

| Sr No  | Minimum Requirement Specifications |                                                                                                                                                                    | Compliance (Yes/ No) |
|--------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| SERVER |                                    |                                                                                                                                                                    |                      |
| 1      | Make & Model                       |                                                                                                                                                                    |                      |
| 2      | Market position                    | The OEM for the proposed server must be in one of the top three server vendors (by market share revenue in IDC) in any of the previous 2 quarters                  |                      |
| 3      | Form Factor                        | Max. 2U rack mounted with OEM sliding rails                                                                                                                        |                      |
| 4      | Configured CPU                     | Min 32 cores with 2.0GHz base frequency required per server by configuring Dual 5th Generation or latest Intel Xeon Scalable processor(s) / AMD EPYC™ Processor(s) |                      |
| 5      | Memory configured                  | 128 GB DDR5-6400MT/s using minimum 32 GB memory modules                                                                                                            |                      |
| 6      | Disks supported                    | 8 x 2.5-inch SAS/SATA disks                                                                                                                                        |                      |
| 7      | RAID Controller                    | 12Gbps 8GB cache PCIe 4.0 with RAID 0,1,5,6,10                                                                                                                     |                      |
| 8      | Disks configured                   | 2 x 960GB SSD in RAID1 for OS and Application                                                                                                                      |                      |
| 10     | Network Ports                      | 2 x 10G SFP+ ports                                                                                                                                                 |                      |
| 11     | FC SAN ports                       | 2 x 32Gbps FC ports using 2 x Dual ported HBA                                                                                                                      |                      |
| 12     | Other Ports                        | Configured Ports                                                                                                                                                   |                      |
|        |                                    | • 1 x Dedicated management Ethernet port                                                                                                                           |                      |
|        |                                    | • 3 x USB 2.0 / 3.0                                                                                                                                                |                      |
|        |                                    | • 1 x VGA                                                                                                                                                          |                      |
| 13     |                                    | • Canonical Ubuntu Server LTS                                                                                                                                      |                      |
|        |                                    | • Microsoft Windows Server with Hyper-V                                                                                                                            |                      |

|    |                                |                                                                                                                                                                                                                       |  |
|----|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|    | OS & Hypervisor support        | • Red Hat Enterprise Linux                                                                                                                                                                                            |  |
|    |                                | • SUSE Linux Enterprise Server                                                                                                                                                                                        |  |
|    |                                | • VMware ESXi                                                                                                                                                                                                         |  |
| 14 | OS and Virtualization Software | Redhate Virtualisation software along with Redhate OS .                                                                                                                                                               |  |
| 15 | Power Supply                   | Dual Redundant, hot swap, 1100W Titanium power supply.                                                                                                                                                                |  |
| 16 | Power & temperature            | Real-time power meter, graphing, thresholds, alerts & capping with historical power counters.                                                                                                                         |  |
|    |                                | Temperature monitoring & graphing                                                                                                                                                                                     |  |
| 17 | Pre-failure alert              | Should provide predictive failure monitoring & proactive alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD                                                           |  |
| 18 | Configuration & management     | • Real-time out-of-band hardware performance monitoring & alerting                                                                                                                                                    |  |
|    |                                | • Agent-free monitoring, driver updates & configuration, power monitoring & capping, RAID management, external storage management, monitoring of FC, HBA & CNA & system health                                        |  |
|    |                                | • Out-of-band hardware & firmware inventory                                                                                                                                                                           |  |
|    |                                | • Zero-touch auto configuration to auto deploy a baseline server configuration profile                                                                                                                                |  |
|    |                                | • Automated hardware configuration and Operating System deployment to multiple servers                                                                                                                                |  |
|    |                                | • Zero-touch repository manager and self-updating firmware system                                                                                                                                                     |  |
|    |                                | • Virtual IO management / stateless computing                                                                                                                                                                         |  |
| 19 | HTML5 support                  | HTML5 support for virtual console & virtual media without using Java or ActiveX plugins                                                                                                                               |  |
| 20 | Server Security Features       | - Should provide effective protection, reliable detection & rapid recovery using:                                                                                                                                     |  |
|    |                                | • Cryptographically verified trusted booting standards meeting NIST SP 800-147B, NIST SP 800-155, protection standards meeting NIST SP 800-193 standards & secure media sanitization standards meeting NIST SP 800-88 |  |
|    |                                | • Data at Rest Encryption (SEDs with local or external key management)                                                                                                                                                |  |
|    |                                | • Secure Boot                                                                                                                                                                                                         |  |
|    |                                | • Secure Erase                                                                                                                                                                                                        |  |
|    |                                | • Secured Component Verification (Hardware integrity check)                                                                                                                                                           |  |
|    |                                | • Silicon Root of Trust                                                                                                                                                                                               |  |
|    |                                | • System Lockdown                                                                                                                                                                                                     |  |
|    |                                | • TPM 2.0 FIPS, CC-TCG certified                                                                                                                                                                                      |  |
|    |                                | - Should have a cyber resilient architecture for a hardened server design for protection, detection & recovery from cyber attacks                                                                                     |  |

|    |                 |                                                                                                                                                                 |  |
|----|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|    |                 | - Configuration upgrades should be only with cryptographically signed firmware and software. Should protect against firmware which executes before the OS boots |  |
|    |                 | - Should provide system lockdown feature to prevent change (or “drift”) in system firmware image(s) & prevent malicious modification of server firmware         |  |
| 21 | Intrusion alert | Intrusion alert in case chassis cover being opened                                                                                                              |  |
| 22 | Certifications  | - Server should have BIS, IEC60950 (UL) certification.                                                                                                          |  |
|    |                 | - Server should have EPEAT registered in India.                                                                                                                 |  |
|    |                 | - Server OEM should have ISO9001, ISO14001, ISO27001, ISO45001 and ISO50001.                                                                                    |  |
|    |                 | <b>All Certificate from certifying agency to be submitted</b>                                                                                                   |  |
| 23 | Warranty        | 5 Year Onsite Service with NBD Part Replacement comprehensive warranty.                                                                                         |  |

#### 7. AI Server

| Sl. No. | Component               | Minimum Requirement                                                                           | Compliance (Yes/No) |
|---------|-------------------------|-----------------------------------------------------------------------------------------------|---------------------|
| 1       | Form Factor             | Max. 2U rack mounted with OEM sliding rails                                                   |                     |
| 2       | Configured CPU          | Min 16 cores 7302P AMD EPYC Processor(s)                                                      |                     |
| 3       | Memory configured       | 128 GB DDR5 using minimum 64 GB memory modules                                                |                     |
| 4       | RAID Controller         | 12Gbps 4GB cache PCIe 4.0 with RAID 0,1,5,6,10                                                |                     |
| 5       | Disks configured        | 1TB NVMe SSD                                                                                  |                     |
| 6       | Network Ports           | 2 x 1G BaseT and 2 x 10G SFP+ ports                                                           |                     |
| 7       | GPU Installed           | 1 x NVIDIA A100 40GB PCIe                                                                     |                     |
| 8       | Ports                   | Front Ports                                                                                   |                     |
|         |                         | • 1 x Management (Micro-AB USB) port                                                          |                     |
|         |                         | • 1 x Dedicated management Ethernet port                                                      |                     |
|         |                         | • 2 x USB 2.0                                                                                 |                     |
|         |                         | • 1 x USB 3.0                                                                                 |                     |
|         |                         | • 1 x VGA                                                                                     |                     |
| 9       | OS & Hypervisor support | • Canonical Ubuntu Server LTS                                                                 |                     |
|         |                         | • Microsoft Windows Server with Hyper-V                                                       |                     |
|         |                         | • Red Hat Enterprise Linux                                                                    |                     |
|         |                         | • SUSE Linux Enterprise Server                                                                |                     |
|         |                         | • VMware ESXi                                                                                 |                     |
| 10      | OS Software             | OEM supported Operating System                                                                |                     |
| 11      | Power Supply            | Dual, hot swap, Platinum redundant power supply                                               |                     |
| 12      | Power & temperature     | Real-time power meter, graphing, thresholds, alerts & capping with historical power counters. |                     |
|         |                         | Temperature monitoring & graphing                                                             |                     |

|    |                            |                                                                                                                                                                                |  |
|----|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 13 | Pre-failure alert          | Should provide predictive failure monitoring & proactive alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD                    |  |
| 14 | Configuration & management | • Real-time out-of-band hardware performance monitoring & alerting                                                                                                             |  |
|    |                            | • Agent-free monitoring, driver updates & configuration, power monitoring & capping, RAID management, external storage management, monitoring of FC, HBA & CNA & system health |  |
|    |                            | • Out-of-band hardware & firmware inventory                                                                                                                                    |  |
|    |                            | • Zero-touch auto configuration to auto deploy a baseline server configuration profile                                                                                         |  |
|    |                            | • Automated hardware configuration and Operating System deployment to multiple servers                                                                                         |  |
|    |                            | • Zero-touch repository manager and self-updating firmware system                                                                                                              |  |
|    |                            | • Virtual IO management / stateless computing                                                                                                                                  |  |
| 15 | HTML5 support              | HTML5 support for virtual console & virtual media without using Java or ActiveX plugins                                                                                        |  |
| 16 | Server Security Features   | - Should provide effective protection, reliable detection & rapid recovery using:                                                                                              |  |
|    |                            | • Data at Rest Encryption (SEDs with local or external key management)                                                                                                         |  |
|    |                            | • Secure Boot                                                                                                                                                                  |  |
|    |                            | • Secure Erase                                                                                                                                                                 |  |
|    |                            | • Secured Component Verification (Hardware integrity check)                                                                                                                    |  |
|    |                            | • Silicon Root of Trust                                                                                                                                                        |  |
|    |                            | • System Lockdown                                                                                                                                                              |  |
|    |                            | • TPM 2.0 FIPS, CC-TCG certified                                                                                                                                               |  |
|    |                            | - Should have a cyber resilient architecture for a hardened server design for protection, detection & recovery from cyber attacks                                              |  |
| 17 | Intrusion alert            | - Configuration upgrades should be only with cryptographically signed firmware and software. Should protect against firmware which executes before the OS boots                |  |
|    |                            | - Should provide system lockdown feature to prevent change (or “drift”) in system firmware image(s) & prevent malicious modification of server firmware                        |  |
|    |                            | Intrusion alert in case chassis cover being opened                                                                                                                             |  |
|    |                            | Server should have BIS, IEC60950 (UL) certification.                                                                                                                           |  |
| 18 | Certifications             | Server should have EPEAT registered in India.                                                                                                                                  |  |
|    |                            | Server OEM should have ISO9001, ISO 14001, ISO27001                                                                                                                            |  |
|    |                            | <b>All Certificate from certifying agency to be submitted</b>                                                                                                                  |  |
| 19 | Warranty                   | 5Yrs Onsite Service with NBD Part Replacement comprehensive warranty.                                                                                                          |  |

### 8. Storage 15TB DC & DR

| Sl. No. | Component                       | Minimum Requirement                                                                                                                                                              | Compliance (Yes/ No) |
|---------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1       | Unified Storage System          | The system should support both file and block storage to allow storing, accessing, and managing data in multiple formats from a single device.                                   |                      |
| 2       | Dual Controllers                | The system should have dual controllers, to ensure no single point of failure.                                                                                                   |                      |
| 3       | Operating System                | The system should run a Unix or Linux-based operating system optimized for NAS operations.                                                                                       |                      |
| 4       | Cache                           | A minimum of 128 GB cache/system memory across controllers, with persistent data protection even during a power outage, and SSD/Flash support for extended Read and Write Cache. |                      |
| 5       | Disk Support                    | The system should support SSD/Flash drives, SAS 12 Gb/s, and SATA II 7200 RPM/Nearline SAS 7200 RPM drives.                                                                      |                      |
| 6       | Encryption                      | The system should provide a minimum of 256 Bit encryption for the entire capacity offered.                                                                                       |                      |
| 7       | Protocols and Ports Support     | The system should support CIFS, NFS, 16/32 Gb/s FC, iSCSI (1 and 10 Gb), with minimum 4 x32 Gbps FC ports and 4 x 10Gbps iSCSI/IP ports.                                         |                      |
| 8       | Software licenses               | The system should come with licenses for FC, iSCSI, CIFS, NFS, File Level Deduplication/compression, Thin Provisioning, and Virtualization integration.                          |                      |
| 9       | Performance Monitoring Software | The software should provide detailed performance and capacity reports.                                                                                                           |                      |
| 10      | Snapshots                       | The system should support snapshot and snapshot restore capabilities.                                                                                                            |                      |
| 11      | RAID Support                    | The system should support RAID 10, 5, and 6                                                                                                                                      |                      |
| 12      | Management                      | The system should provide browser-based management and proactive maintenance features, with a dedicated Ethernet port for management.                                            |                      |
| 13      | Storage space                   | with a dedicated Ethernet port for management - capacity (15TB using SSDs/Flash) after RAID 5/6.                                                                                 |                      |
| 14      | Scalability                     | The system should be scalable up to at least 500 TB                                                                                                                              |                      |
| 15      | Replication                     | The system should support real-time replication for both block and file. The system should be capable of performing real-time replication with the Unified.                      |                      |
| 16      | Automated Tiering               | The system should support automated tiering at Sub-LUN level across all tiers of storage, based on application I/O workload.                                                     |                      |
| 17      | Encryption                      | The system should offer Data at Rest Encryption with self-managed keys and File-Level Retention capability.                                                                      |                      |
| 18      | Warranty                        | 5 years                                                                                                                                                                          |                      |

### 9. Virtualisation Software

| Sr No | Minimum Specifications | Compliance (Yes/ No) |
|-------|------------------------|----------------------|
|-------|------------------------|----------------------|

|   |                                                                                                                                                                                                                                                                        |  |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1 | The virtualisation software Solutions should provide High availability for VMs that Includes functionality for node fencing and workload recovery.                                                                                                                     |  |
| 2 | The virtualisation software Solutions should include Resource distribution which uses the descheduler and policies to adjust cluster resources and avoid contention by rescheduling pods to more suitable nodes.                                                       |  |
| 3 | The virtualisation software Solutions should offer Storage consumption analysis and management which gives administrators per-disk granularity for storage features and functions, such as snapshots and clones.                                                       |  |
| 4 | The virtualisation software Solutions should provide Host network configurability using the operator to apply network configuration using labels and selectors to identify which nodes need what configuration automatically.                                          |  |
| 5 | The virtualisation software Solutions should offer VM connectivity can be done by virtual local area network (VLAN) ,other external networks for intra-cluster communication.                                                                                          |  |
| 6 | The virtualisation software Solutions should offer Network policy, at both the per-VM and project level, allows administrators to enforce global connectivity rules at the platform level, while also allowing VM administrators to define and manage their own rules. |  |
| 7 | The virtualisation software Solutions should offer workload monitoring and cluster logging features allow administrator teams to view, assess, and address issues using native dashboards and integrated tools.                                                        |  |
| 8 | The Virtualisation software in servers must be able to crate required numbers of VMs all the license should be perpetual with free upgrades for the entire warranty periods.                                                                                           |  |
| 9 | The virtualisation software Solutions should have Console-based virtualization management                                                                                                                                                                              |  |

#### 10. Operating System

| Sr No | Minimum Specifications                        | Compliance (Yes/ No) |
|-------|-----------------------------------------------|----------------------|
| 1     | Red Hat Enterprise Linux Server Standard 5 Yr |                      |
| 2     | Nos of Physical server 3, Nos of VMs 16       |                      |

#### 11. Database Software

| S. No. | Features                                                                                                             | Specifications                                                                           | Compliance (Yes/ No) |
|--------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------|
| 1      | Duration of Subscription                                                                                             | 60 months                                                                                |                      |
| 2      | Number of Years up to which support is available from OEM for Updation (Patches and Bug fixes) within support period | 5 years                                                                                  |                      |
| 3      | Software Components/ Modules                                                                                         | A. RDBMS General<br>1. Query tuning 2. Columnar database 3. In-database machine learning |                      |

4. Temporal database 5. Scheduler & alerting 6. Change data capture  
 7. Data quality capture 8. Master data services 9. Python & R integration  
 10. Graph Data Support 11. Cross language support 12. Support of network protocols 13. Web application optimized features 14. Partitioning (Table/Index) 15. Full Text Search 16. Manageability & Ease of Use  
 17. All Graphical tools 18. Cloud Service Features 19. Storage Management Features 20. Data warehouse optimized features 21. High Performance Features 22. JSON (Java Script Object Notation)Support  
 23. Portability 24. Enterprise Monitor Features

#### B. RDBMS Security

1. Auditing
2. Encryption of data in motion as well as at rest
3. Multilevel access control based on classification of data
4. Block privileged account access to application data
5. Masks and subsets sensitive production data before sharing on non-production environments
6. Centralized encryption key management platform

#### C. RDBMS Replication

1. Real time transactional change data capture, transformation, and delivery
2. Unidirectional and bidirectional data replication
3. Replication data comparison and repair solution

#### D. RDBMS Clustering

1. Active-active cluster
2. Active-passive cluster
3. Scalability
4. High Availability

#### E. RDBMS Performance

1. Read from disaster recovery database while in recovery mode
2. Performance benefit by compression

|  |  |                                                                                                                                                                                                                                                                                                                                      |  |
|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  | 3. Partition tables, indexes and index organized tables<br>4. Caching performance-critical subsets of data in the application tier<br>5. Memory-optimized relational database on application tier<br>6. Automatic performance diagnostics and monitoring<br>7. Automated application and SQL tuning<br>8. Partitioning (Table/Index) |  |
|  |  | F. RDBMS Spatial<br>1. Spatial database management<br>2. Network data model graph<br>3. Geo Spatial Support                                                                                                                                                                                                                          |  |
|  |  | G. RDBMS Management<br>1. Manage multiple databases as one<br>2. Assess outcome of a system changes on database<br>3. Automate the processes required to manage Database Lifecycle<br>4. Self-service provisioning, policy-based resource                                                                                            |  |
|  |  | H. RDBMS Integration<br>1. Extraction, loading and transformation tool<br>2. Out-of-box integration with databases, Hadoop, ERPs, CRMs, B2B systems, flat files, XML, JSON, LDAP, JDBC, ODBC                                                                                                                                         |  |
|  |  | I. Miscellaneous feature:<br>1. Tool for implementation of Fail over Manager<br>2. 24*7 Support                                                                                                                                                                                                                                      |  |
|  |  | J. RDBMS Backup<br>1. Centralized backup and recovery management<br>2. Enterprise Backup                                                                                                                                                                                                                                             |  |
|  |  | K. RDBMS Analytics<br>1. Multidimensional analytic engine                                                                                                                                                                                                                                                                            |  |

|  |  |                                                                                                                                                                                                                                     |  |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  | 2. In-database predictive analytics, data mining and statistics<br>3. In-memory database functionality to transactional RDBMS                                                                                                       |  |
|  |  | L. RDBMS Transactional<br>1. OLTP & Transaction<br>2. Online Analytical Processing (OLAP) and Real Time Analytic Processing (RTAP)<br>3. Maintainability<br>4. Reliability<br>5. In-memory object caching features (In-Memory OLTP) |  |

## 12. Backup Solution

| Sr No | Features        | Specifications                                                                                                                                                                                                                                                                                                 | Compliance (Yes/ No) |
|-------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1     | Backup Software | The proposed software must offer a unified console to centrally manage backups across physical, virtual, cloud, and containerized environments. All core components shall be deployed on Linux to strengthen ransomware resilience, minimize attack vectors, and ensure hardened, enterprise-grade protection. |                      |
|       |                 | The solution shall offer centralized policy-driven management to define backup, retention, replication, and tiring workflows across all workloads and storage targets.                                                                                                                                         |                      |
|       |                 | The software must support protection of diverse workloads - including databases, file systems, applications, endpoints, and SaaS, through a unified framework.                                                                                                                                                 |                      |
|       |                 | The solution shall support real-time monitoring, custom reporting, and proactive alerts, with native integration to SOC, SOAR, and SIEM platforms. It must provide REST APIs, audit logs, RBAC, and multi-tenant dashboards with SLA and chargeback reporting.                                                 |                      |
|       |                 | The proposed software shall be highly optimized to deliver enterprise-grade scalability while minimizing infrastructure footprint. It must support efficient, dynamic allocation of compute resources without imposing hardcoded or fixed mappings between data operations and CPU cores.                      |                      |
| 2     | Data Protection | The solution must support full, incremental, differential, synthetic full, and active full backups as native, configurable methods with in a single schedule/policy.                                                                                                                                           |                      |

|   |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|---|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   |                                      | Backup types must be configurable per workload and usable together within a single schedule to align with data change rates, optimize backup windows, and meet recovery objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
|   |                                      | To ensure verifiable data integrity and guarantee long-term recoverability, the solution must support scheduled active full (non-synthetic) backups for critical datasets, such as annual or quarterly retention points supporting all workloads listed in this RFP.                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|   |                                      | As per industry best practices, the solution must enforce GFS retention with scheduled daily, weekly full, monthly full, and yearly full backups across operating systems, NAS, databases, and virtual machines to ensure compliance, auditability, and resilient recovery.                                                                                                                                                                                                                                                                                                                                                                                             |  |
|   |                                      | The solution must enforce GFS retention throughout tiered copy workflows, including disk- to-disk-to-tape (D2D2T), disk-to-disk-to-cloud (D2D2C), and disk-to-disk-to-object (D2D2O).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|   |                                      | The solution must support flexible policies like Full + Incremental, Full + Differential, and Incremental Forever with Synthetic Fulls, along with unified short-term and GFS retention without creating multiple schedules/policies.                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|   |                                      | <p>The proposed solution must support a common backup policy and retention across all workloads, including virtual machines, containers, physical servers, databases, and unstructured data (NAS/S3).</p> <p>Retention policy to be followed:</p> <ul style="list-style-type: none"> <li>a. Daily incremental/differential backups: retain for 15 days (basic retention)</li> <li>b. Weekly full backups: retain for 1 month</li> <li>c. Monthly full backups: retain for 3 months</li> <li>d. Yearly full backups: retain for 1 years</li> </ul> <p>The backup environment must be sized for 5 years, assuming 5% annual data growth and a 1.5% daily change rate.</p> |  |
| 3 | Application-Aware Backup and Restore | The proposed backup solution shall offer application-aware backups for critical enterprise applications and databases, including Oracle and Oracle RAC with full RMAN integration, SAP HANA, PostgreSQL, PostgreSQL Cluster, Microsoft Exchange, and NoSQL databases like MongoDB, Cassandra, and Hadoop.                                                                                                                                                                                                                                                                                                                                                               |  |
|   |                                      | The proposed solution must provide comprehensive, native backup and granular restore capabilities for Oracle, MySQL, Microsoft SQL Server, and PostgreSQL across all topologies, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |

|   |                                        |                                                                                                                                                                                                                                                                                                                                                                                              |  |
|---|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   |                                        | <ul style="list-style-type: none"> <li>• Database clusters (for all four platforms)</li> <li>• RAC and ASM (for Oracle)</li> <li>• Multi-instance and advanced storage engines (for MySQL)</li> <li>• AlwaysOn Availability Groups and failover clusters (for Microsoft SQL Server)</li> <li>• High availability, streaming replication, and cluster deployments (for PostgreSQL)</li> </ul> |  |
|   |                                        | Policy-driven, centralized scheduling and retention (including daily, weekly, monthly, yearly, full, differential, incremental, and GFS) must be available directly for all database workloads, not limited to individual backup jobs or requiring scripts.                                                                                                                                  |  |
|   |                                        | Support for multi-instance, cluster, and advanced plugin/database configurations must be built-in.                                                                                                                                                                                                                                                                                           |  |
|   |                                        | The solution must allow direct backup and granular, point-in-time restore (including log shipping/replay and transaction consistency) for all major databases, regardless of underlying platform (physical, virtualized, or cloud), with no manual intervention, external tools, or complex scripting.                                                                                       |  |
|   |                                        | Backup copies (including tape, cloud/object, and disk) must be managed through the same retention and policy engine for all database types.                                                                                                                                                                                                                                                  |  |
| 4 | Virtual Environments and Cloud Support | The proposed backup software shall offer agentless backup for leading virtualization platforms, including VMware, Microsoft Hyper-V, and Nutanix AHV. It must support full, incremental, and synthetic full backups reducing backup times and minimizing system impact.                                                                                                                      |  |
|   |                                        | The solution must integrate with VMware, Microsoft Hyper-V, and Nutanix AHV to enable application-consistent snapshots, allowing efficient backup and recovery operations with minimal impact on production environments.                                                                                                                                                                    |  |
|   |                                        | The backup software should allow cross-hypervisor restores, enabling virtual machines to be restored to different virtualization platforms.                                                                                                                                                                                                                                                  |  |
|   |                                        | The bidder shall clearly articulate the requirements of Virtual Proxies as per the sizing guidelines in the RFP and appropriate additional server hardware, along with virtualization licenses, shall be proposed by the bidder.                                                                                                                                                             |  |
|   |                                        | The solution must provide dynamic load balancing across multiple VSA proxies, distributing workloads and ensuring failover capabilities during backup operations, with automated failover to maintain business continuity.                                                                                                                                                                   |  |
| 5 | Security and Ransomware Protection     | The solution must support malware detection tools, either native or open-source (e.g., YARA), with                                                                                                                                                                                                                                                                                           |  |

|   |                                      |      |                                                                                                                                                                                                                                                                                                                                                    |  |
|---|--------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   | and Capabilities                     | WORM | automated latest signature or rule updates by the OEM every 24 hours. The solution must detect a broad spectrum of malware including viruses, ransomware, trojans, rootkits, spyware, and advanced threats, using built-in detection engines without requiring administrators to write or maintain custom detection rules for baseline protection. |  |
|   |                                      |      | The backup solution must support integrated antivirus/malware detection and quarantine capabilities, ensuring backups are scanned and verified for threats. The solution must support clean restore without requiring a scan during recovery. Alternatively, the solution may provide third-party antivirus/malware licenses for protection.       |  |
|   |                                      |      | The proposed backup software shall support immutable backups, ensuring that stored backup data cannot be modified or deleted by ransomware or unauthorized users.                                                                                                                                                                                  |  |
|   |                                      |      | The solution should feature integrated anomaly detection to identify abnormal backup patterns indicative of ransomware attacks, with built-in alerts and mitigation actions. It must support repository protection to restrict access to authorized users and processes only. Open-source tools or components must not be used.                    |  |
|   |                                      |      | The software shall support automatic detection and allow quarantine suspicious files to prevent the spread of malware within backup repositories.                                                                                                                                                                                                  |  |
|   |                                      |      | Any additional hardware or software (including licenses) required shall be provided.                                                                                                                                                                                                                                                               |  |
|   |                                      |      | The backup solution shall support air-gapped storage to isolate backups from the production environment, providing enhanced protection against cyberattacks.                                                                                                                                                                                       |  |
|   |                                      |      | The backup software should provide AES-256 encryption for data both at rest and in transit, ensuring data confidentiality throughout the backup lifecycle.                                                                                                                                                                                         |  |
| 6 | Storage Vendor and Cloud Integration |      | The proposed solution must integrate (WORM and Snapshots) seamlessly with major storage systems like NetApp, Dell EMC, Pure Storage, and HPE, providing flexibility across diverse environments without vendor lock-in.                                                                                                                            |  |
|   |                                      |      | Support for automated cloud storage tiering is required to ensure cost-effective data retention by moving backups between high- performance and lower-cost storage tiers based on policies.                                                                                                                                                        |  |
|   |                                      |      | The software must natively support S3- compatible object storage, enabling scalable and efficient long-term retention in both public and private clouds.                                                                                                                                                                                           |  |
|   |                                      |      | The backup software should support multiple storage targets - tape, disk libraries, purpose- built backup                                                                                                                                                                                                                                          |  |

|   |                                 |                                                                                                                                                                                                                                                                                  |  |
|---|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   |                                 | appliances (PBBAs), NAS, SAN (FCP/iSCSI), and object storage. It must allow snapshot-based, SAN-based, LAN-based, NDMP (2-way and 3-way), and off-host backups without restricting the use of any storage type or topology, now or in the future.                                |  |
|   |                                 | The proposed solution's target storage must be designed with no single point of failure, ensuring that the entire capacity of the target backup disk storage remains accessible and unaffected by hardware failures.                                                             |  |
| 7 | Snapshot, NDMP, and NAS Support | The proposed solution must provide seamless integration with hardware snapshots for fast, application-consistent and fast/instant NAS File granular recovery across a variety of storage vendors.                                                                                |  |
|   |                                 | The backup solution must offer full NDMP (2- way and 3-way) support for NAS systems, including support for incremental and differential backups to ensure efficient data protection in large-scale environments. NDMP shall be supported directly to tape and to disk libraries. |  |
|   |                                 | The solution must allow recovery of individual files or folders from NAS backups without needing to restore the entire system. This should be possible from weekly, monthly, and yearly backups stored on both disk and tape.                                                    |  |
| 8 | Deduplication Efficiency and    | The proposed solution must provide global deduplication across schedules, jobs, physical, virtual, and cloud environments, ensuring efficient storage usage and reduced data redundancy.                                                                                         |  |
|   |                                 | The solution must support source-side deduplication to minimize network bandwidth usage during backup operations.                                                                                                                                                                |  |
|   |                                 | The backup software must include incremental forever and synthetic full backups, ensuring optimized storage utilization and reduced backup windows.                                                                                                                              |  |
| 9 | Compliance and Legal Hold       | The proposed solution shall support compliance enforcement for retention policies, including GDPR, HIPAA, and SOC Type 2, with strict adherence to policy-driven data retention.                                                                                                 |  |
|   |                                 | The solution must support legal hold functionality to preserve critical data immutably for legal, audit, and regulatory purposes.                                                                                                                                                |  |
|   |                                 | The solution must support WORM (Write Once, Read Many) storage, ensuring backups are immutable and tamper-proof across all supported storage platforms.                                                                                                                          |  |
|   |                                 | The backup solution should support a Compliance Lock to prevent unauthorized deletion or modification of backups in both cloud and on-premises environments.                                                                                                                     |  |

|    |                                 |                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|----|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|    |                                 | The solution must maintain detailed audit trails for all backup and recovery operations, enabling comprehensive reporting for regulatory audits.                                                                                                                                                                                                                                                         |  |
| 10 | Automation<br>Orchestration and | The proposed solution must support automated DR orchestration for seamless failover and failback across both on-premises and cloud environments, ensuring minimal disruption during recovery.                                                                                                                                                                                                            |  |
|    |                                 | The solution must provide API integration for automating backup, recovery, and maintenance operations                                                                                                                                                                                                                                                                                                    |  |
|    |                                 | The solution must support customizable workflows to automate repetitive tasks like backup scheduling, data replication, and recovery processes, enhancing operational efficiency.                                                                                                                                                                                                                        |  |
|    |                                 | The proposed backup solution must support Four-Eye or better Authorization ensuring multiple levels of approvals for operations, including backup deletion, policy changes and restores. It must apply across all repository types (disk, cloud, object, tape) with robust RBAC, API support, and comprehensive audit logging to address enterprise-grade security and compliance needs.                 |  |
| 11 | Licenses                        | Capacity license for 5TB Backup Software must allow backup and recovery of all types of workloads including virtual and physical servers, containers, database agents, NAS/S3 backup.                                                                                                                                                                                                                    |  |
|    |                                 | The backup software solution must allow backups of unlimited no of Virtual Servers and Physical Servers                                                                                                                                                                                                                                                                                                  |  |
|    |                                 | The solution must support customizable workflows to automate repetitive tasks like backup scheduling, data replication, and recovery processes, enhancing operational efficiency.                                                                                                                                                                                                                        |  |
|    |                                 | The proposed backup solution must support multi-personal approval or better authorization ensuring multiple levels of approvals for operations, including backup deletion, policy changes, and restores. It must apply across all repository types (disk, cloud, object, tape) with robust RBAC, API support, and comprehensive audit logging to address enterprise-grade security and compliance needs. |  |
| 12 | Support and Warranty            | The solution must offer 24/7 global support, backed by Service Level Agreements (SLAs) for timely issue resolution.                                                                                                                                                                                                                                                                                      |  |
|    |                                 | The solution must include professional services for deployment, customization, and ongoing system optimization.                                                                                                                                                                                                                                                                                          |  |
|    |                                 | The solution must deliver regular software updates, security patches, and feature enhancements to ensure system security and functionality.                                                                                                                                                                                                                                                              |  |
|    |                                 | The Vendor must provide 5 years Back to Back OEM warranty / support.                                                                                                                                                                                                                                                                                                                                     |  |

### 13. SDWAN Gateway Devices

| SN       | Technical Specifications                                                                                                                                                                                                                                                                              | Compliance<br>Yes/No |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>A</b> | <b>Hardware Architecture</b>                                                                                                                                                                                                                                                                          |                      |
| 1        | The Secure Gateway Router must be appliance-based security platform should provide firewall, Application Control, Antimalware/Antivirus, Web Filtering and IPS functionality in a single appliance from day one                                                                                       |                      |
| 2        | The appliance should have below interface options:                                                                                                                                                                                                                                                    |                      |
|          | 1. 2 x 10GE SFP+/SFP                                                                                                                                                                                                                                                                                  |                      |
|          | 2. 8 x GE RJ45                                                                                                                                                                                                                                                                                        |                      |
|          | 3. Dedicated management and HA port.                                                                                                                                                                                                                                                                  |                      |
|          | The Secure Gateway Router shall be provided with 2x 10GE SFP+ SR transceivers modules from same OEM.                                                                                                                                                                                                  |                      |
| 3        | The appliance hardware should be a multicore CPU architecture with a hardened 64-bit operating system or can be ASIC based.                                                                                                                                                                           |                      |
| 4        | The proposed appliance must include a dedicated hardware Trusted Platform Module (TPM) for secure generation, storage, and validation of cryptographic keys, enabling hardware root-of-trust and secure boot to prevent firmware tampering                                                            |                      |
| 5        | Proposed Secure Gateway Router shall have 120 GB of internal storage from day 1.                                                                                                                                                                                                                      |                      |
| <b>B</b> | <b>Performance &amp; Scalability</b>                                                                                                                                                                                                                                                                  |                      |
| 1        | Secure Gateway Router should support <b>2.2 Gbps of Threat Prevention throughput (FW+AVC+IPS and AV/AM)</b> real-world/enterprise mix /production performance public document proof must be attached and <b>NGFW Through (including Enterprise Mix) must be atleast 2.5GBPS or higher from Day 1.</b> |                      |
| 2        | Secure Gateway Router should support atleast 3 Million concurrent sessions or higher and 120K new connections per second                                                                                                                                                                              |                      |
| 3        | Secure Gateway Router should support Site to Site and Client to Site IPSEC VPN tunnels and NGFW shall also have 25 Gbps of IPSec VPN throughput or higher                                                                                                                                             |                      |
| 4        | Secure Gateway Router system shall be able to operate on either Transparent (bridge) mode to minimize interruption to existing network infrastructure or NAT/Route mode. Both modes can also be available concurrently using                                                                          |                      |

|          |                                                                                                                                                                                                                                                                  |  |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|          | Virtual Contexts. Minimum 10 Virtual Firewall licenses to be provided with the solution from day one                                                                                                                                                             |  |
| <b>C</b> | <b>Secure Gateway Router Features</b>                                                                                                                                                                                                                            |  |
| 1        | Secure Gateway Router should support creating access-rules with IPv4 & IPv6 objects, user/groups, application, geolocation, url, zones, vlan, etc and also have support for SLAAC Stateless Address Auto configuration                                           |  |
| 2        | Secure Gateway Router should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat                                                                                                                                                               |  |
| 3        | Secure Gateway Router should support NAT46, NAT66, NAT64, DNS64 along with DHCP and DHCPv6 functionality from day one                                                                                                                                            |  |
| 4        | Secure Gateway Router should support Static, RIP, OSPF, OSPFv3 and BGP and Multicast protocols like IGMP, PIM, etc                                                                                                                                               |  |
| 5        | The proposed Secure Gateway Router solution shall have the ability to detect, log and take action against network traffic based on over 5000 application signatures and it shall also support 6 Gbps of application control throughput considering HTTP traffic. |  |
| 6        | The application signatures shall be manual or automatically updated by utilizing OEM's threat intel.                                                                                                                                                             |  |
| 7        | The offered Secure Gateway Router product should have the capability to inspect SSL traffic. The SSL inspection throughput should not be less than 2.5Gbps and application throughput of atleast 6.5GBPS or higher.                                              |  |
| 8        | The administrator shall be able to define application control list based on selectable application group and/or list and its corresponding actions                                                                                                               |  |
| 9        | Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.                                                                                                                |  |
| 10       | Should support more than 15,000 (excluding custom signatures) IPS signatures or more and IPS throughput shall not be less than 4 Gbps, public document proof of IPS signatures and throughput shall also be attached along with the bid.                         |  |
| 11       | The Appliance OEM must have its own threat intelligence analysis center and should use the global footprint of security deployments for more comprehensive network protection.                                                                                   |  |
| 12       | The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).                                                                   |  |
| 13       | Should be able to identify attacks based on Geo- location and define policy to block on the basis of Geo-location                                                                                                                                                |  |

|    |                                                                                                                                                                                                                                                                                   |  |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 14 | The detection engine should support the capability of detecting variants of known threats, as well as new threats                                                                                                                                                                 |  |
| 15 | Secure Gateway Router should have SDWAN functionality capable Path quality measurement based on (jitter, packet loss, latency)                                                                                                                                                    |  |
| 16 | Should support URL threat intelligence feeds to protect against threats                                                                                                                                                                                                           |  |
| 17 | WAN load balancing (weighted) algorithms by - volume, sessions, source-destination IP, Source IP, and spillover                                                                                                                                                                   |  |
| 18 | The proposed system should be able to block, allow or monitor only using AV signatures and file blocking based on per firewall policy based or based on firewall authenticated user groups with configurable selection of the following services: HTTP, SMTP, POP3, IMAP, FTP etc |  |
| 19 | The proposed system should have integrated Web Content Filtering solution without external solution, devices or hardware modules.                                                                                                                                                 |  |
| 20 | The proposed system shall be able to queries a real time database of over 110 million + rated websites categorized into 50+ unique content categories.                                                                                                                            |  |
| 21 | The DNS filtering solution should have the following features:                                                                                                                                                                                                                    |  |
|    | • Filters the DNS request based on the domain rating.                                                                                                                                                                                                                             |  |
|    | • Should block the DNS request for the known botnet C&C domains.                                                                                                                                                                                                                  |  |
|    | • Should allow to define own domain category.                                                                                                                                                                                                                                     |  |
|    | • Should allow users to define own domain list to block or allow.                                                                                                                                                                                                                 |  |
| 22 | The proposed solution should be able to enable or disable Web Filtering per Secure Gateway Router policy or based on firewall authenticated user groups for both HTTP and HTTPS traffic.                                                                                          |  |
| 23 | The proposed system shall provide web content filtering features:                                                                                                                                                                                                                 |  |
|    | a) which blocks web plug-ins such as ActiveX, Java Applet, and Cookies.                                                                                                                                                                                                           |  |
|    | b) Shall include Web URL block                                                                                                                                                                                                                                                    |  |
|    | c) Shall include score-based web keyword block                                                                                                                                                                                                                                    |  |
|    | d) Shall include Web Exempt List                                                                                                                                                                                                                                                  |  |
| 24 | Solution should be ready for the post-quantum threats to include Post Quantum Cryptography with NIST-approved algorithms like ML-KEM and emerging algorithms like BIKE, HQC, and Frodo to protect against emerging threats, including harvest-now, decrypt-later attacks          |  |

|          |                                                                                                                                                                                                                     |  |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|          | The Secure Gateway Router should have native protection against credential theft attacks(without the need of endpoint agents) with ability to prevent the theft and abuse of stolen credentials and the following : |  |
| 25       | · Automatically identify and block phishing sites                                                                                                                                                                   |  |
|          | · Prevent users from submitting credentials to phishing sites                                                                                                                                                       |  |
|          | · Prevent the use of stolen credential                                                                                                                                                                              |  |
| <b>D</b> | <b>High-Availability Features</b>                                                                                                                                                                                   |  |
| 1        | Secure Gateway Router should support Active/Standby and Active/Active failover.                                                                                                                                     |  |
| 2        | Secure Gateway Router should have built-in 2 External DC Power Adapters                                                                                                                                             |  |
| <b>E</b> | <b>Management/OEM Criteria</b>                                                                                                                                                                                      |  |
| 1        | Secure Gateway Router must be managed/accessed through GUI and CLI both.                                                                                                                                            |  |
|          | The proposed Secure Gateway Router should integrate with and must be managed through Central Manager including other network secure devices like – Perimeter Firewall, WAF, Switches, Load Balancer, NDR etc.       |  |
| 2        | OEM should not be blacklisted with in last 3 years in any of the government organisation                                                                                                                            |  |
| 3        | All the feature functionalities and throughputs must be achieved from single box. Bids proposing N + 1 clustering or stacking solution shall be rejected                                                            |  |
| 4        | The proposed Secure Gateway Router family or its operation system must have EAL4 certified and TEC Certified along with IPv6 Certified/IPv6 logo ready along with EN IEC 62368 Safety Standard.                     |  |
| 5        | The Proposed Secure Gateway Router must be from same OEM as that of NGFW, WAF, Network Switches etc.                                                                                                                |  |

#### 14. Centralised Call-Centre Software

| 1   | Core functionalities                                                                                                                     | Compliance (Yes/No) |
|-----|------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1.1 | Solution must support predictive, progressive, preview and manual dialling modes with answer-prediction and call pacing controls         |                     |
| 1.2 | Support blended contact handling so agents can handle both inbound ACD queues and outbound dialler calls without separate agent profiles |                     |
| 1.3 | Platform must provide IVR creation, skill-based routing, priority queues and time-of-day routing for inbound calls                       |                     |
| 1.4 | Provide a web-based agent panel with script panels, dispositions and one-click wrap-up                                                   |                     |

|              |                                                                                                                                                        |                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 1.5          | Call recording for inbound/outbound campaigns with per-campaign retention policies, searchable metadata and manager playback                           |                            |
| 1.6          | should have Real-time campaign dashboards, SLA widgets and supervisor controls including monitor, whisper and barge.                                   |                            |
| 1.7          | Platform must support multi-campaign and multi-tenant deployments with role-based separation.                                                          |                            |
| 1.8          | Platform must interoperate with SIP trunks and Dialler systems, supporting trunk failover and codec negotiation.                                       |                            |
| 1.9          | Provide DNC list management, caller ID controls, timezone-aware dialling windows and audit logs for compliance                                         |                            |
| 1.1          | Solution must demonstrate scalable architecture supporting growth to hundreds of agents with horizontal scaling options                                |                            |
| <b>2.1</b>   | <b>Call Recording</b>                                                                                                                                  |                            |
| <b>Sl No</b> | <b>Functional Specification</b>                                                                                                                        | <b>Compliance (Yes/No)</b> |
| 1            | Should use the recording interface provided by ACD or PBX API                                                                                          |                            |
| 2            | Should provide 100% voice call recordings for inbound & outbound calls                                                                                 |                            |
| 3            | Should provide a single license that can support recording on all IP Phones.                                                                           |                            |
| 4            | Should be able to record calls coming on any type of trunk line like PRI/IP and system should also record internal calls.                              |                            |
| 5            | Should be able to record IP endpoints                                                                                                                  |                            |
| 6            | Should support SIP or IP or TDM (Time Division Multiplexing) endpoints                                                                                 |                            |
| 7            | Should support for search and replay of calls                                                                                                          |                            |
| 8            | Should have Rules-based storage and recording                                                                                                          |                            |
| 9            | Should be able to "Tag" or classify calls with user-defined labels for simplified search and replay                                                    |                            |
| 10           | Should be able to provide online, and offline storage capability in any combination.                                                                   |                            |
| 11           | Should have an open storage platform that can provide instant access to call recording in the storage.                                                 |                            |
| 12           | Should provide facility to store voice digitally in central database or to a hierarchical file system in any of the standard format like wav, mp3 etc. |                            |
| 13           | Provision for archival to network attached storage or network drive should be included as a standard component with the recording platform             |                            |
| 14           | Should provision of high availability configuration if required                                                                                        |                            |
| 15           | Should have agent portal for agent login and options like call transfer, hold, mute etc.                                                               |                            |
| 16           | Should have the feature of admin panel for monitoring call and should have option of call barging and listen at any point of time                      |                            |
| 17           | shoulds have provision of multiple campaign to be run simultaneously for different services as required                                                |                            |
| <b>2.2</b>   | <b>IVRS (Interactive Voice Response Solution)</b>                                                                                                      |                            |
| 1            | Provision for receiving all inbound calls on the toll-free telephone number                                                                            |                            |
| 2            | Provision for identifying customer through command line interface (CLI) and support intelligent call routing.                                          |                            |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 3          | Provision for calling on identified numbers for outbound calls.                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 4          | The system should flexible enough to configure speech recognition engine in order to support and interpret multiple languages, especially English and Hindi in Future                                                                                                                                                                                                                                                                                                                   |  |
| 5          | Provision for Text-to-speech capability support for English and Hindi.                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 6          | Should be an easy to configure system that enables the users to change the IVR tree with no hard coding.                                                                                                                                                                                                                                                                                                                                                                                |  |
| 7          | Should support messages scheduling                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 8          | Should support Outbound blast of Voice (pre-recorded or text to speech)                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| 9          | Should support running multiple campaigns at the same time                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| 10         | Provision for capturing usage details of each citizen as the citizen traverses through a call. The IVR solution will have an interface through which usage details can be shared with other solutions.                                                                                                                                                                                                                                                                                  |  |
| 11         | Provision for integration with the rest of the proposed solution using web services / rest APIs to provide seamless Contact Centre performance.                                                                                                                                                                                                                                                                                                                                         |  |
| <b>2.3</b> | <b>ACD (Automatic Call Distribution)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|            | The Automatic Call Distributor shall be capable of handling high call volumes and distributing the calls amongst the CCEs. ACD shall support relaying of the information messages (marketing messages) to voice callers waiting in queues or on hold. It shall support Skill based routing with standard features like Call Transfer, Conference, Barge in, Dialed Number Identification Sequence (DNIS), Automatic Number Identification (ANI), Caller Line Identification (CLI), etc. |  |
| 1          | Should be capable to identify User availability and route the call to the identified executive.                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 2          | Should be able to handle call & IP Phone as per capacity defined in scope                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 3          | Should support skill base routing, multiple group support, priority handling and Queue status indicator.                                                                                                                                                                                                                                                                                                                                                                                |  |
| 4          | Should have capability to distribute the calls based on Skill level of the user like efficiency of the user and work load                                                                                                                                                                                                                                                                                                                                                               |  |
| 5          | Should have Least Occupied User details                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| 6          | Should have functionality where Supervisor can observe the executive pattern or silently monitor the executive.                                                                                                                                                                                                                                                                                                                                                                         |  |
| 7          | Should have functionality to provide best service to the caller like listen only, listen and talk only etc.                                                                                                                                                                                                                                                                                                                                                                             |  |
| 8          | Should allow comparing specified skills, identifying the skill that will provide the best service to a call, and deliver the call to that resource. If no executives are currently available, the call is queued.                                                                                                                                                                                                                                                                       |  |
| 9          | Should have expected Time for waiting in routing                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| 10         | Should support load balancing of all calls                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| 11         | Should support for multiple announcements be played to a caller on queue.                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 12         | Should redirect unanswered calls.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 13         | Should provide interface to signal call release, call hold, requests from call takers                                                                                                                                                                                                                                                                                                                                                                                                   |  |

|                            |                                                                                                                                                                                                                          |                     |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 14                         | Should allow a call facility for executives. If a call taker enters clerical mode that will be signaled to ACD and call will not be routed to that executive until it becomes free.                                      |                     |
| 15                         | Should be able to block nuisance callers against list of numbers captured in master database until either number is removed from the master database of nuisance callers.                                                |                     |
| 16                         | Should provision of allow non-voice communication channel like email, web chat and SMS to be routed to agent based on skill set and agent availability.                                                                  |                     |
| 17                         | Automatic Call back: The automatic call back function should enable calling back the missed calls or abandon calls which may be received on the system. It has to work in conjunction with the ACD as well.              |                     |
| 18                         | Should be provision of deployed in High availability if required                                                                                                                                                         |                     |
| <b>2.4 Outbound Dialer</b> |                                                                                                                                                                                                                          |                     |
|                            | Outbound Dialers shall enable the CCEs to place outbound calls to customer for collecting feedback. It shall also facilitate conference calls between the customer, vendor and Identified Authority as and when required |                     |
| 1                          | Should support outbound preview dialing, either automated or user-initiated                                                                                                                                              |                     |
| 2                          | Should provide campaign management tool for supervisors to manage the campaigns                                                                                                                                          |                     |
| 3                          | Should have the capability to fetch missed calls data from the ACD and dial out whenever the executive is available                                                                                                      |                     |
| 4                          | Should support campaign management for data selection.                                                                                                                                                                   |                     |
| 5                          | Should support Do not call list.                                                                                                                                                                                         |                     |
| 6                          | Should support agentless dialing.                                                                                                                                                                                        |                     |
| <b>2.5 SIP/PRI Gateway</b> |                                                                                                                                                                                                                          |                     |
| S. No                      | Technical Specification for SIP/PRI Gateway                                                                                                                                                                              | Compliance (Yes/No) |
| 1                          | CALL Routing                                                                                                                                                                                                             |                     |
| 2                          | The appliance should be Desktop model, tower or Rack mountable                                                                                                                                                           |                     |
| 3                          | The gateway should support Standard ISDN compliant and Interoperable with a wide range of Call Server                                                                                                                    |                     |
| 4                          | The gateway should support Support echo cancellation, DJB, CNG, VAD and QoS                                                                                                                                              |                     |
| 5                          | The Gateway should support DF,CRC-4,CRC_ITU E1 Frame type for multi ISP connectivity                                                                                                                                     |                     |

#### 15. IP Phone/ Soft Phone

| S/N | Specification                          | Compliance (Yes/ No) |
|-----|----------------------------------------|----------------------|
| 1   | VOIP Soft Phone for Agent with License |                      |

#### 16. Headphone with Mic

| S/N | Specification | Compliance (Yes/ No) |
|-----|---------------|----------------------|
|     |               |                      |

|   |                                                  |  |
|---|--------------------------------------------------|--|
| 1 | Noise cancellation Mic with Ear-Phone USB-A Type |  |
|---|--------------------------------------------------|--|

### 17. Barcode Scanner

| S/N | Features                    | Specifications                                          | Compliance (Yes/ No) |
|-----|-----------------------------|---------------------------------------------------------|----------------------|
| 1   | Connectivity Technology     | Wired                                                   |                      |
| 2   | Decode Capability           | Code 39, QR code, UPC, PDF417                           |                      |
| 3   | Features                    | Adaptus Imaging Technology, Digimarc Barcode Technology |                      |
| 4   | Max Working Distance        | 32 cm                                                   |                      |
| 5   | Minimum Bar Width           | 5 mil                                                   |                      |
| 6   | OK Notification             | Beeper, LED indicator                                   |                      |
| 7   | Pitch (Degrees)             | 45                                                      |                      |
| 8   | Print Contrast Signal (PCS) | 0.2                                                     |                      |
| 9   | Scan Element Type           | 2D imager                                               |                      |
| 10  | Scan Mode                   | Single-pass                                             |                      |
| 11  | Skew (Degrees)              | 65                                                      |                      |
| 12  | TTL Decoding                | Decoded                                                 |                      |
| 13  | Depth                       | 16 cm                                                   |                      |
| 14  | Height                      | 10.4 cm                                                 |                      |
| 15  | Weight                      | 147 g                                                   |                      |
| 16  | Width                       | 7.1 cm                                                  |                      |
| 17  | Humidity Range Operating    | 0 - 95%                                                 |                      |
| 18  | Max Operating Temperature   | 50 °C                                                   |                      |
| 19  | Min Operating Temperature   | 0 °C                                                    |                      |
| 20  | Interfaces                  | 1 x USB - Type A                                        |                      |
| 21  | Color                       | Black                                                   |                      |
| 22  | Type                        | Barcode scanner - handheld                              |                      |
| 23  | warranty                    | 3 years                                                 |                      |

### 18. Video wall

| S/N | Features          | Specifications         | Compliance (Yes/ No) |
|-----|-------------------|------------------------|----------------------|
| 1   | Screen Size       | 98"                    |                      |
| 2   | Panel Technology  | ADS                    |                      |
| 3   | Back Light Type   | Direct                 |                      |
| 4   | Aspect Ratio      | 0.672916667            |                      |
| 5   | Native Resolution | 3,840 x 2,160 (4K UHD) |                      |
| 6   | Refresh Rate      | 60 Hz                  |                      |
| 7   | Brightness (Typ.) | 500 nit                |                      |
| 8   | Contrast Ratio    | 1,200 : 1              |                      |

|    |                                |                                                                                                                                                        |  |
|----|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 9  | Dynamic CR                     | 200,000 : 1                                                                                                                                            |  |
| 10 | Color gamut                    | DCI-P3 88%↑                                                                                                                                            |  |
| 11 | Viewing Angle (H x V)          | 178 × 178                                                                                                                                              |  |
| 12 | Color Depth                    | 1.07 Billion Colors (8 bits + FRC)                                                                                                                     |  |
| 13 | Response Time                  | 8 ms (G to G)                                                                                                                                          |  |
| 14 | Surface Treatment (Haze)       | 0.25                                                                                                                                                   |  |
| 15 | Lifetime                       | 30,000(Typ.)                                                                                                                                           |  |
| 16 | Operation Hours (Hours / Days) | 16 / 7                                                                                                                                                 |  |
| 17 | Portrait / Landscape           | Yes / Yes                                                                                                                                              |  |
| 18 | Bezel Color                    | Black                                                                                                                                                  |  |
| 19 | Bezel Width                    | 17 mm (Even Bezel)                                                                                                                                     |  |
| 20 | Weight (Head)                  | 78 kg                                                                                                                                                  |  |
| 21 | Packed Weight                  | 105 kg                                                                                                                                                 |  |
| 22 | Monitor Dimensions (W × H × D) | 2,198 × 1,253 × 79.5 mm                                                                                                                                |  |
| 23 | Carton Dimensions (W × H × D)  | 2,455 × 1,458 × 288 mm                                                                                                                                 |  |
| 24 | Handle                         | Yes                                                                                                                                                    |  |
| 25 | VESA™ Standard Mount Interface | 800 × 400 mm                                                                                                                                           |  |
| 26 | OPS Type Compatible            | No                                                                                                                                                     |  |
| 27 | OPS Power Built In             | No                                                                                                                                                     |  |
| 28 | Wi-Fi                          | Built-in Wi-Fi                                                                                                                                         |  |
| 29 | Temperature Sensor             | Yes                                                                                                                                                    |  |
| 30 | Auto Brightness Sensor         | Yes                                                                                                                                                    |  |
| 31 | Acceleration(Gyro) Sensor      | Yes                                                                                                                                                    |  |
| 32 | Local Key Operation            | Yes                                                                                                                                                    |  |
| 33 | Power Indicator                | Yes                                                                                                                                                    |  |
| 34 | Operation Temperature          | 0°C to 40°C                                                                                                                                            |  |
| 35 | Operation Humidity             | 10 % to 80 %                                                                                                                                           |  |
| 36 | Power Supply                   | AC 100-240 V~, 50/60 Hz                                                                                                                                |  |
| 37 | Power Type                     | Built-In Power                                                                                                                                         |  |
| 38 | Speaker                        | Yes (10W X 2)                                                                                                                                          |  |
| 39 | Input                          | HDMI (3 (HDMI1/2 : HDCP 2.2/1.4, HDMI3)), DP (HDCP 2.2/1.3), DVI-D (HDCP 1.4), Audio In, RS-232C (4 Pin Phone-jack), RJ45 (LAN), IR In, USB 2.0 Type A |  |
| 40 | Output                         | HDMI Out, Audio Out, RS-232C Out (4 Pin Phone-jack), Daisy Chain (Input HDMI, DP, DVI / Output HDMI)                                                   |  |
| 41 | Warranty                       | 3 Years                                                                                                                                                |  |

## 19. Infrastructure for C4

| SN | Infrastructure requirement details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <p>The C4 will involve interior work in H&amp;FW Bhubaneswar such as wall partition &amp; flooring if required, baffle ceiling, wall panelling if required, Glass panelling if required etc. All the installation must be done with OEM products. The furniture for the operation is to factory fabricated. The operation centre will have a display unit on the wall.</p> <p><b>Electrical and Air conditioning work</b><br/>Rewiring to be done for all lights, fans, air conditioners, display devices and the workstation furniture. Wiring for UPS/inverter points and raw power points to be separated. Earthing work need to be done as per site requirement.</p> <p>The work will be done in such a manner that the other occupants of the building are not inconvenienced. Work timing will be mutually agreed between the building authority and the system integrator and the same must be adhered to at all times.</p> |

## 20. Infrastructure for Territory Hub

| SN | Infrastructure requirement details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <p>The Territory hub will involve interior work such as wall partition &amp; flooring if required, baffle ceiling, wall panelling if required, Glass panelling if required etc. All the installation must be done with OEM products. The furniture for the operation is to factory fabricated.</p> <p><b>Electrical and Air conditioning work</b><br/>Rewiring to be done for all lights, fans, air conditioners, display devices and the workstation furniture. Wiring for UPS/inverter points and raw power points to be separated. Earthing work need to be done as per site requirement.</p> <p>The work will be done in such a manner that the other occupants of the building are not inconvenienced. Work timing will be mutually agreed between the building authority and the system integrator and the same must be adhered to at all times.</p> |

## 21. Infrastructure for DHH

| SN | Infrastructure requirement details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <p>The DHH will involve interior work such as wall partition &amp; flooring if required, baffle ceiling, wall panelling if required, Glass panelling if required etc. All the installation must be done with OEM products. The furniture for the operation is to factory fabricated.</p> <p><b>Electrical and Air conditioning work</b><br/>Rewiring to be done for all lights, fans, air conditioners, display devices and the workstation furniture. Wiring for UPS/inverter points and raw power points to be separated. Earthing work need to be done as per site requirement.</p> <p>The work will be done in such a manner that the other occupants of the building are not inconvenienced. Work timing will be mutually agreed between the building authority and the system integrator and the same must be adhered to at all times.</p> |

## 22. Desktop Computer

| Sl. No. | Components | Minimum Specification |
|---------|------------|-----------------------|
|---------|------------|-----------------------|

|    |                                                                         |                                                                                                                                                                                                                                                                                                                                                                       |
|----|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Processor                                                               | Latest generation Intel Processor with minimum 30 MB cache, 20 cores TOPS = 13 or more with 5.3 GHz Turbo speed. Offered Processor should be latest i.e. should be launched in the year 2025 and quoted processor must be from Desktop segment.                                                                                                                       |
| 2  | Chipset                                                                 | Intel Q 670 series chipset or higher "Q" series Chipset compatible with the above processor.                                                                                                                                                                                                                                                                          |
| 3  | Memory                                                                  | Minimum 16 GB (1 x 16GB) DDR5, 4800 MT/s RAM with 64 GB expandability and One DIMM slot should be Freely available                                                                                                                                                                                                                                                    |
| 4  | Motherboard                                                             | OEM motherboard with OEM logo should be embossed / Printed on the mother board (Sticker is not acceptable). Integrated hardware diagnostic tool in the BIOS from same Desktop OEM, BIOS or the Desktop must be from same Desktop OEM. Minimum 2 x M.2 Slots and Minimum 3 x expansion slots (including 1x PCIe Gen 3 x 16 slots)                                      |
| 4  | Storage                                                                 | 1 TB PCIe M.2 NVMe SSD                                                                                                                                                                                                                                                                                                                                                |
| 5  | Graphics                                                                | Integrated/Inbuilt                                                                                                                                                                                                                                                                                                                                                    |
| 6  | Operating System                                                        | Factory pre-install Windows 11 professional (64 bit) with latest Service Pack. Systems Hardware driver should be available in OEM website against the offered model name OEM letter confirming that Operating system pre- loaded / pre-installed from OEM factory only.                                                                                               |
| 7  | Networking                                                              | Integrated Ethernet controller (10/100/1000 Mbps) , Wi-Fi 6 and Bluetooth                                                                                                                                                                                                                                                                                             |
| 8  | Ports                                                                   | Total 8 Nos. of USB (4 x USB 2.0, 1 x USB 3.2 Type-C port, 2 x USB 3.2 Gen 1), 1 x HDMI, 1x Display Port, 1 x RJ45 Port (Ethernet Port), 1xuniversal audio port.                                                                                                                                                                                                      |
| 9  | Power Management                                                        | Minimum 300W or higher 90% - 94% energy efficient power supply                                                                                                                                                                                                                                                                                                        |
| 10 | Security                                                                | TPM 2.0 (Hardware) and chassis intrusion switch / sensor                                                                                                                                                                                                                                                                                                              |
| 12 | Monitor                                                                 | Minimum 21.5 "Wide TFT minimum TCO edge and energy star 8.0 certified, Resolution min 1920x1080.with internal power supply, Minimum 2 x 2W or better speakers and monitor stand must height, Tilt, Swivel, Pivot adjustable.                                                                                                                                          |
| 13 | Keyboard                                                                | 104 Keys or Higher OEM USB Keyboard with (₹) symbol, same Desktop OEM make (OEM logo must embossed in the keyboard)                                                                                                                                                                                                                                                   |
| 14 | Chassis                                                                 | SFF chassis (not more than 10L in volume)                                                                                                                                                                                                                                                                                                                             |
| 15 | Mouse                                                                   | Optical Scroll with USB Interface. Same Desktop OEM make Mouse (OEM Logo Must embossed in the Mouse)                                                                                                                                                                                                                                                                  |
| 16 | Operating system and Regulatory Certification (for the offered Desktop) | Microsoft Windows 11 Professional & Linux (Ubuntu/Red hat / SUSE / Fedora) FCC, CE, UL, Energy Star 8.0, EPEAT India Gold, ROHS, ISO 9001,14001,27001, 50001, 45000 in the name of the Desktop OEM, not in the name of Desktop ODM (Original design manufacturer). Technical Compliance and Warranty undertaking on OEM Letterhead need to submit along with the Bid. |

|    |             |                                                                       |
|----|-------------|-----------------------------------------------------------------------|
| 17 | Accessories | All Power Cords, Connecting cable, Patch Cord etc.                    |
| 18 | Warranty    | 03 Years Comprehensive OEM onsite Warranty including all accessories. |

### 23. Multi-Function Printer (MFP)

#### A. A4 Size

| Sl. No. | Specification                                                                               | Parameters                              | Compliance<br>Yes/No |
|---------|---------------------------------------------------------------------------------------------|-----------------------------------------|----------------------|
| 1       | Print technology                                                                            | Laser                                   |                      |
| 2       | Functions                                                                                   | Print                                   |                      |
| 3       | Type of Printing                                                                            | Monochrome (Black)                      |                      |
| 4       | Cartridge Technology                                                                        | Composite Cartridge                     |                      |
| 5       | Print Paper Size                                                                            | A4 and Legal                            |                      |
| 6       | Memory                                                                                      | 256 MB or higher                        |                      |
| 7       | Minimum Print Speed per Minute as per ISO/IEC 24734 in A4 Size- Monochrome (Black) (in PPM) | 33 PPM or Higher                        |                      |
| 8       | Auto Duplexing Printing                                                                     | Yes                                     |                      |
| 9       | Original Document Feeder Type                                                               | Platen                                  |                      |
| 10      | Number of Main Paper Tray                                                                   | 1                                       |                      |
| 11      | Total Paper Tray Combined Capacity (Number) at 75 GSM                                       | 101 to 200                              |                      |
| 12      | Scanning Technology                                                                         | Optical                                 |                      |
| 13      | Scanning Speed                                                                              | 2.7 S (Mono)                            |                      |
| 14      | Minimum Duty Cycle (Number of Prints/Month)                                                 | 50000 or Above                          |                      |
| 15      | Power Supply                                                                                | Single Phase AC 220 - 240 V, 50 - 60 Hz |                      |
| 16      | Additional                                                                                  | 1 Extra Toner Cartridge                 |                      |
| 17      | Onsite Warranty                                                                             | 5 Years                                 |                      |

#### B. A3 Size

| Sl. No. | Specification    | Parameters         | Compliance<br>Yes/No |
|---------|------------------|--------------------|----------------------|
| 1       | Print technology | Laser              |                      |
| 2       | Functions        | Print              |                      |
| 3       | Type of Printing | Monochrome (Black) |                      |

|    |                                                       |                                         |  |
|----|-------------------------------------------------------|-----------------------------------------|--|
| 4  | Cartridge Technology                                  | Composite Cartridge                     |  |
| 5  | Print Paper Size                                      | A3                                      |  |
| 6  | Memory                                                | 1 GB or Higher                          |  |
| 7  | Minimum Print Speed                                   | 60 PPM or Higher                        |  |
| 8  | Auto Duplexing Printing                               | Yes                                     |  |
| 9  | Original Document Feeder Type                         | Platen: Sheet, Book                     |  |
| 10 | Number of Main Paper Tray                             | 2                                       |  |
| 11 | Total Paper Tray Combined Capacity (Number) at 75 GSM | 250 to 800                              |  |
| 12 | Scanning Technology                                   | Optical                                 |  |
| 13 | Scanning Speed                                        | 1.2 S (Mono)                            |  |
| 14 | Minimum Duty Cycle (Number of Prints/Month)           | 50000 or Above                          |  |
| 15 | Power Supply                                          | Single Phase AC 220 - 240 V, 50 - 60 Hz |  |
| 16 | Additional                                            | 1 Extra Toner Cartridge                 |  |
| 17 | Onsite Warranty                                       | 5 Years                                 |  |

#### 24. Online UPS 10KV with 2-hour Backup

| Sl | Parameter                     | Minimum specification                                                                              | Compliance (Yes/ No) |
|----|-------------------------------|----------------------------------------------------------------------------------------------------|----------------------|
| 1  | Make & model                  | (Please specify make & unique model name)                                                          |                      |
| 2  | Country of Origin             | India                                                                                              |                      |
| 3  | Capacity (in kVA / kW)        | >10 KVA, Unity or Better O/P power factor(2 HOUR BACKUP)                                           |                      |
| 4  | Technology and Capability     | a) True Online configuration with double conversion VFI SS 111                                     |                      |
|    |                               | b) Microprocessor /DSP based control, using IGBT devices and high switching frequency PWM (>10kHz) |                      |
|    |                               | c) Active Power Factor Correction (APFC) in converter to improve Input Power Factor > 0.98         |                      |
| 5  | Input facility - Phases/Wires | 1 Phase IN & 1 Phase Out                                                                           |                      |

|    |                                                        |                                                                                            |  |
|----|--------------------------------------------------------|--------------------------------------------------------------------------------------------|--|
| 6  | Input Voltage Range                                    | 110 – 280 V AC                                                                             |  |
| 7  | Input Frequency Range                                  | 40 to 70 Hz                                                                                |  |
| 8  | Input Power Factor                                     | > 0.98 on Full Load                                                                        |  |
| 9  | Generator Compatibility                                | Compatibility to genset supply required                                                    |  |
| 10 | Input Protection (Thru In- built 1P MCB)               | Should be provided at the input of the UPS suitable for the full rated capacity of the UPS |  |
| 11 | Nominal Output voltage                                 | 220/ 230/ 240VAC (Selectable)                                                              |  |
| 12 | Output Voltage Regulation                              | +/- 1% static and +/- 5% at 100% load step                                                 |  |
| 13 | Nominal Output Frequency                               | 50 / 60 Hz                                                                                 |  |
| 14 | Output Frequency Regulation                            | +/- 0.10 Hz (Free Running / Self Clocked Mode)                                             |  |
| 15 | Output Wave Form                                       | Pure sine wave                                                                             |  |
| 16 | Output Voltage Distortion (THDu)                       | <= 3% for Linear load                                                                      |  |
| 17 | Crest Factor                                           | 3 : 1 On Full Load (Minimum)                                                               |  |
| 18 | Output Short circuit protection                        | Electronic / Fused                                                                         |  |
| 19 | Transfer Time (Mode of operation)                      | Nil from Mains mode to Battery Mode                                                        |  |
|    |                                                        | Nil from Battery Mode to Mains mode                                                        |  |
| 20 | Transfer Time (Inverter to Bypass /Bypass To Inverter) | < 4 ms (Synchronized Mode)                                                                 |  |
| 21 | Automatic By- pass (In- built)                         | To be provided                                                                             |  |

|       |                                                                  |                                                                                                               |  |
|-------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--|
| 22 a. | Overall Efficiency (AC to AC) - Online (Double Conversion)       | >= 90% at Full Load<br>>= 98% in Green ECO mode                                                               |  |
| 22 b. | Green Mode / Eco Mode                                            | Shall be provided in each UPS (All ratings) to choose Higher Efficiency Mode of Operation                     |  |
| 23    | Measurements (On LCD)                                            | Input: Voltage / Frequency                                                                                    |  |
|       |                                                                  | Output: Voltage / frequency                                                                                   |  |
|       |                                                                  | Battery: Remaining time / Voltage                                                                             |  |
|       |                                                                  | Load: Percentage / kW                                                                                         |  |
| 24    | Fault Indication (On LCD)                                        | Charger Failure                                                                                               |  |
|       |                                                                  | Battery Failed                                                                                                |  |
|       |                                                                  | Battery Low                                                                                                   |  |
|       |                                                                  | Overload                                                                                                      |  |
| 25    | Indications (LED/LED)                                            | AC indicator/Battery Mode of Operation / Bypass feeding the load / UPS Fault                                  |  |
| 26    | Audible Alarms                                                   | Battery Low beep / DC Fault beep/ UPS Overload beep/ o/p short circuit fault beep/ Shutdown beep              |  |
| 27    | Backup Required                                                  | 120 Min back up at 0.8 PF and 1.75 ECV. (Minimum VAH required 14400) Calculations to be submitted by the OEM. |  |
| 28    | Battery Bank Voltage                                             | Vendor to Specify                                                                                             |  |
| 29    | Batteries Type                                                   | Sealed Maintenance Free (SMF) - 12V Cells                                                                     |  |
| 30    | Battery Makes                                                    | Exide / Amara Raja/                                                                                           |  |
| 31    | Battery recharge time (After complete discharge) to 90% capacity | 8-10 hours                                                                                                    |  |
| 32    | USB Port                                                         | Shall be present in the UPS                                                                                   |  |

|    |                                               |                                                                                                                                                                    |  |
|----|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 33 | Emergency Power Off                           | Should be provided as standard in the UPS                                                                                                                          |  |
| 34 | Remote Monitoring                             | To be provided with access to user using a mobile app compatible with IOS/Android.                                                                                 |  |
| 35 | Interface to BMS (Building Management System) | ModBus Card for connecting to UPS to BMS thru RS485 & monitoring thru BMS option shall be available.                                                               |  |
| 36 | Interface to DCS (Distributed Control System) | Relay I/O Card or PFC (Potential free contacts) for connecting to UPS to DCS / PLC / SCADA system for communicating UPS operating status option shall be available |  |
| 37 | Scheduled Shutdown                            | The UPS NMC shall be capable for scheduling a Shutdown.                                                                                                            |  |
| 38 | NMC Security                                  | Remote Access: SSH File Transfer: SCP Web Server: TLS Remote Authentication Dial-In User Service for central administer remote access shall be provided            |  |
| 39 | Cold Start                                    | UPS should start up                                                                                                                                                |  |
|    |                                               | On AC Supply (Mains) without DC Supply (Batteries)                                                                                                                 |  |
|    |                                               | On DC Supply (Batteries) without AC Supply (Mains)                                                                                                                 |  |
| 40 | Automatic Restart                             | UPS should start up automatically on mains resumption after battery low shutdown                                                                                   |  |
| 41 | Operating Temperature                         | 0 to 40 deg C                                                                                                                                                      |  |
| 42 | Storage Temperature                           | -15 to 50 deg C                                                                                                                                                    |  |
| 43 | Operating Humidity                            | 0% ~95%RH (No Condensing)                                                                                                                                          |  |
| 44 | Operating Elevation                           | 0 - 1000 m                                                                                                                                                         |  |
| 45 | Type of Cooling                               | Natural Convection Cooling through air vents                                                                                                                       |  |

|    |                                                       |                                                                                                                                                                                           |  |
|----|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 46 | Noise Level                                           | < 60 dbA at 1 meter distance                                                                                                                                                              |  |
| 47 | Form Factor                                           | 10 KVA: Rack & Tower mountable both                                                                                                                                                       |  |
| 48 | Air Filters (mandatory)                               | UPS should have internal anticorrosion air filters for dust filtration                                                                                                                    |  |
| 49 | Dimension (w x d x h) in mm                           | To be furnished by the vendor                                                                                                                                                             |  |
| 50 | Weight - in kg                                        | To be furnished by the vendor                                                                                                                                                             |  |
| 52 | Product Certificates & Makes & Manufacturing location | BIS Certification                                                                                                                                                                         |  |
|    |                                                       | OEM should have own centralized Help Desk (24 X 7 support) with Toll Free Number.                                                                                                         |  |
|    |                                                       | For all Rack-Tower Mount UPS, Domestic component shall be >30% Component (Only for UPS excluding Battery and related accessories) & PCBs shall be manufactured in OEM's factory in India. |  |
| 53 | Warranty                                              | UPS 5 years and battery 2 Years                                                                                                                                                           |  |

#### 25. Online UPS 6KV with 2-hour Backup

| Sl. No. | Specification                   | Description                                                                                        | Compliance (Yes/No) |
|---------|---------------------------------|----------------------------------------------------------------------------------------------------|---------------------|
| 1       | Make & model                    | (Please specify make & unique model name)                                                          |                     |
| 2       | Country of Origin               | India                                                                                              |                     |
| 3       | Capacity (in kVA / kW)          | >6 KVA, Unity or Better O/P power factor(2 HOUR BACKUP)                                            |                     |
| 4       | Technology and Capability       | a) True Online configuration with double                                                           |                     |
|         |                                 | conversion VFI SS 111                                                                              |                     |
|         |                                 | b) Microprocessor /DSP based control, using IGBT devices and high switching frequency PWM (>10kHz) |                     |
|         |                                 | c) Active Power Factor Correction (APFC) in converter to improve Input Power Factor > 0.98         |                     |
| 5       | Input facility - Phases / Wires | 1 Phase IN & 1 Phase Out                                                                           |                     |
| 6       | Input Voltage Range             | 110 – 280 V AC                                                                                     |                     |
| 7       | Input Frequency Range           | 40 to 70 Hz                                                                                        |                     |

|    |                                                                                                                          |                                                                                                                                              |  |
|----|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--|
| 8  | Input Power Factor                                                                                                       | > 0.98 on Full Load                                                                                                                          |  |
| 9  | Generator Compatibility                                                                                                  | Compatibility to genset supply required                                                                                                      |  |
| 10 | Input Protection (Thru In-built 1P MCB)                                                                                  | Should be provided at the input of the UPS suitable for the full rated capacity of the UPS                                                   |  |
| 11 | Nominal Output voltage                                                                                                   | 220/ 230/ 240VAC (Selectable)                                                                                                                |  |
| 12 | Output Voltage Regulation                                                                                                | +/- 1% static and +/- 5% at 100% load step                                                                                                   |  |
| 13 | Nominal Output Frequency                                                                                                 | 50 / 60 Hz                                                                                                                                   |  |
| 14 | Output Frequency Regulation                                                                                              | +/- 0.10 Hz (Free Running / Self Clocked Mode)                                                                                               |  |
| 15 | Output Wave Form                                                                                                         | Pure sine wave                                                                                                                               |  |
| 16 | Output Voltage Distortion (THDu)                                                                                         | <= 3% for Linear load                                                                                                                        |  |
| 17 | Crest Factor                                                                                                             | 3 : 1 On Full Load (Minimum)                                                                                                                 |  |
| 18 | Output Short circuit protection                                                                                          | Electronic / Fused                                                                                                                           |  |
| 19 | Transfer Time (Mode of operation)                                                                                        | Nil from Mains mode to Battery Mode<br>Nil from Battery Mode to Mains mode                                                                   |  |
| 20 | Transfer Time (Inverter to Bypass /Bypass To Inverter)                                                                   | < 4 ms (Synchronized Mode)                                                                                                                   |  |
| 21 | Automatic By- pass (In- built)                                                                                           | To be provided                                                                                                                               |  |
| 22 | (a) Overall Efficiency (AC to AC) - Online (Double Conversion)<br>(b) Green Mode / Eco Mode<br>(b) Green Mode / Eco Mode | >= 90% at Full Load<br>>= 98% in Green ECO mode<br>Shall be provided in each UPS (All ratings) to choose Higher Efficiency Mode of Operation |  |
| 23 | Measurements (On LCD)                                                                                                    | Input: Voltage / Frequency<br>Output: Voltage / frequency<br>Battery: Remaining time / Voltage<br>Load: Percentage / kW                      |  |
| 24 | Fault Indication (On LCD)                                                                                                | Charger Failure                                                                                                                              |  |
|    |                                                                                                                          | Battery Failed                                                                                                                               |  |
|    |                                                                                                                          | Battery Low                                                                                                                                  |  |
|    |                                                                                                                          | Overload                                                                                                                                     |  |

|    |                                                                  |                                                                                                                                                                    |  |
|----|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 25 | Indications (LED/LED)                                            | AC indicator/Battery Mode of Operation / Bypass feeding the load / UPS Fault                                                                                       |  |
| 26 | Audible Alarms                                                   | Battery Low beep / DC Fault beep/ UPS Overload beep/ o/p short circuit fault beep/ Shutdown beep                                                                   |  |
| 27 | Backup Required                                                  | 120 Min back up at 0.8 PF and 1.75 ECV. (Minimum VAH required 12480) Calculations to be submitted by the OEM.                                                      |  |
| 28 | Battery Bank Voltage                                             | Vendor to Specify                                                                                                                                                  |  |
| 29 | Batteries Type                                                   | Sealed Maintenance Free (SMF) - 12V Cells                                                                                                                          |  |
| 30 | Battery Makes                                                    | Exide / Amararaja/                                                                                                                                                 |  |
| 31 | Battery recharge time (After complete discharge) to 90% capacity | 8-10 hours                                                                                                                                                         |  |
| 32 | USB Port                                                         | Shall be present in the UPS                                                                                                                                        |  |
| 33 | Emergency Power Off                                              | Should be provided as standard in the UPS                                                                                                                          |  |
| 34 | Remote Monitoring                                                | To be provided with access to user using a mobile app compatible with IOS/Android.                                                                                 |  |
| 35 | Interface to BMS (Building Management System)                    | ModBus Card for connecting to UPS to BMS thru RS485 & monitoring thru BMS option shall be available.                                                               |  |
| 36 | Interface to DCS (Distributed Control System)                    | Relay I/O Card or PFC (Potential free contacts) for connecting to UPS to DCS / PLC / SCADA system for communicating UPS operating status option shall be available |  |
| 37 | Scheduled Shutdown                                               | The UPS NMC shall be capable for scheduling a Shutdown.                                                                                                            |  |
| 38 | NMC Security                                                     | Remote Access: SSH File Transfer: SCP Web Server: TLS Remote Authentication Dial-In User Service for central administer remote access shall be provided            |  |
| 39 | Cold Start                                                       | UPS should start up                                                                                                                                                |  |
|    |                                                                  | On AC Supply (Mains) without DC Supply (Batteries)                                                                                                                 |  |
|    |                                                                  | On DC Supply (Batteries) without AC Supply (Mains)                                                                                                                 |  |
| 40 | Automatic Restart                                                | UPS should start up automatically on mains resumption after battery low shutdown                                                                                   |  |
| 41 | Operating Temperature                                            | 0 to 40 deg C                                                                                                                                                      |  |
| 42 | Storage Temperature                                              | -15 to 50 deg C                                                                                                                                                    |  |
| 43 | Operating Humidity                                               | 0% ~95%RH (No Condensing)                                                                                                                                          |  |
| 44 | Operating Elevation                                              | 0 - 1000 m                                                                                                                                                         |  |

|    |                                                       |                                                                        |  |
|----|-------------------------------------------------------|------------------------------------------------------------------------|--|
| 45 | Type of Cooling                                       | Natural Convection Cooling through air vents                           |  |
| 46 | Noise Level                                           | < 60 dbA at 1 meter distance                                           |  |
| 47 | Form Factor                                           | 6 KVA: Rack & Tower mountable both                                     |  |
| 48 | Air Filters (mandatory)                               | UPS should have internal anticorrosion air filters for dust filtration |  |
| 49 | Dimension (w x d x h) in mm                           | To be furnished by the vendor                                          |  |
| 50 | Weight - in kg                                        | To be furnished by the vendor                                          |  |
| 51 | Product Certificates & Makes & Manufacturing location | BIS Certification                                                      |  |
|    |                                                       | OEM should have own centralized                                        |  |
|    |                                                       | Help Desk (24 X 7 support) with Toll Free Number.                      |  |
|    | Warranty                                              | UPS 5 years and battery 2 Years                                        |  |

#### 26. Inverter with Battery for Light and Fan

| Sr.No | Description                                                      | Compliance (Yes/ No) |
|-------|------------------------------------------------------------------|----------------------|
| 1     | 1100 VA (+/- 50 VA) Invertor with 180 Mh Battery (5 Yr Warranty) |                      |
| 2     | Trolley for Invertor set                                         |                      |

#### 27. Structured LAN Cabling with Rack and accessories

| SN | Technical Parameters                                                                                                                                                                                                                                                                                                                                             | Compliance (Yes/ No) |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1  | <ol style="list-style-type: none"> <li>1. Structure LAN cabling using CAT 6 cable, I/O box, Patch panel, patch cords, Rack with accessories required for all locations, i.e. C4 ,Territory hub &amp; DHH .</li> <li>2. Bidder has to do the site survey and calculate the Lan points as per the actual requirement at the time of execution of work .</li> </ol> |                      |

## **SECTION - VI**

### **SCHEDULE OF REQUIREMENT**

| <b>NAME OF THE WORK: - CANCER COMMAND CONTROL CENTER (C4)</b> |                                                                  |             |             |
|---------------------------------------------------------------|------------------------------------------------------------------|-------------|-------------|
| <b>Sl. No.</b>                                                | <b>Description of work</b>                                       | <b>Unit</b> | <b>Qty.</b> |
| <b>PART - 1</b>                                               | <b>APPLICATION</b>                                               |             |             |
| 1                                                             | Design, Development, Deployment of C4 App and SITC all inclusive | LS          | 1           |
| <b>PART - 2</b>                                               | <b>DATA CENTER</b>                                               |             |             |
| 1                                                             | Server                                                           | Nos.        | 3           |
| 2                                                             | AI Server                                                        | No.         | 1           |
| 3                                                             | 42U Rack                                                         | No.         | 1           |
| 4                                                             | 15 TB alt flash storage                                          | Nos.        | 1           |
| 5                                                             | TOR Switch                                                       | Nos.        | 2           |
| 6                                                             | Linux Virtualisation for 96 core                                 | Nos.        | 1           |
| 7                                                             | Linux OS for 96 core                                             | Nos.        | 1           |
| 8                                                             | Database Software                                                | Nos.        | 1           |
| 9                                                             | Next-Generation Firewall                                         | Nos.        | 2           |
| 10                                                            | Backup Solution                                                  | Nos.        | 1           |
| 11                                                            | SDWAN gateway device                                             | Nos.        | 36          |
| 12                                                            | End point security                                               | Nos.        | 202         |
| <b>PART - 3</b>                                               | <b>DISASTER RECOVERY</b>                                         |             |             |
| 1                                                             | Server                                                           | Nos.        | 1           |
| 2                                                             | 15 TB alt flash storage                                          | Nos.        | 1           |
| 3                                                             | TOR Switch                                                       | Nos.        | 1           |
| 4                                                             | Next-Generation Firewall                                         | Nos.        | 1           |
| <b>PART - 4</b>                                               | <b>C4</b>                                                        |             |             |

|                 |                                                                |      |     |
|-----------------|----------------------------------------------------------------|------|-----|
| 1               | Infra Setup for Command Control with 15 Manpower Setup         | LS   | 1   |
| 2               | Desktop with Monitor (23.8" or Higher)                         | Nos. | 15  |
| 3               | Headset with Mic                                               | Nos. | 15  |
| 4               | IP Phone / Soft Phone                                          | Nos. | 15  |
| 5               | Network Switch (24-Port)                                       | Nos. | 1   |
| 6               | Structured LAN Cabling (Including RACK and accessories)        | LS   | 1   |
| 7               | UPS (Online) 10 KV                                             | Nos. | 1   |
| 8               | Video Wall / Dash Board Display                                | Nos. | 1   |
| 9               | Centralized Call-Centre Software                               | Nos. | 1   |
| 10              | Multi-Function Printer (60 PPM)                                | Nos. | 1   |
| <b>PART - 5</b> | <b>TERTIORY HUB</b>                                            |      |     |
| 1               | Desktop with Monitor (23.8" or Higher)                         | Nos. | 27  |
| 2               | Barcode Scanner                                                | Nos. | 6   |
| 3               | Multi-Function Printer (33 PPM or Higher)                      | Nos. | 6   |
| 4               | Network Switch (24-Port)                                       | Nos. | 3   |
| 5               | Online UPS 6 KV                                                | Nos. | 3   |
| 6               | Structured LAN Cabling (Including RACK and accessories)        | LS   | 3   |
| 7               | Infra Setup for Command Control Control with 10 Manpower Setup | Lot  | 3   |
| <b>PART - 6</b> | <b>DISTRICT</b>                                                |      |     |
| 1               | Desktop with Monitor (23.8"++)                                 | Nos. | 160 |
| 2               | Barcode Scanner                                                | Nos. | 32  |
| 3               | Multi-Function Printer (33 PPM or Higher)                      | Nos. | 32  |
| 4               | Network Switch (24-Port)                                       | Nos. | 32  |
| 5               | Online UPS 6 KV                                                | Nos. | 32  |
| 6               | Inverter with Battery for Electric Backup                      | Nos. | 32  |
| 7               | Structured LAN Cabling (Including RACK and accessories)        | LS   | 32  |

|   |                                                          |     |    |
|---|----------------------------------------------------------|-----|----|
| 8 | Infra Setup for Command Control with 5<br>Manpower Setup | Lot | 32 |
|---|----------------------------------------------------------|-----|----|

**Note:- All quantities specified in the BOQ are indicative and may be subject to variation based on actual requirements. The bidder shall ensure interoperability, scalability, and compliance with applicable standards and guidelines. After place of work order, the bidder will do a site survey and submit the Blue Print.**

## **SECTION VII**

### **Checklist and Formats (Annexures) for Submission of Proposal & Other Annexures**

# **CHECKLIST**

(to be submitted in technical bid envelop)

The following documents are required to be submitted as part of the bid. Failure to submit any mandatory document may result in rejection of the bid. Bidders are advised to carefully review the RFP and ensure that all required documents are submitted.

The commercial proposal shall be submitted separately in the prescribed price format

| Sl.      | Particulars of Documents                                                                                                                                                                             | Submitted (Yes/No) | Page No. | Remark |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|--------|
| <b>A</b> | <b>Technical Bid Envelop</b>                                                                                                                                                                         |                    |          |        |
| 1        | Bid Processing Fee of ₹11,800/- (incl. GST) in the form of Demand Draft / Banker's Cheque drawn in favour of "DDO, Director of Public Health, H&FW Dept., Bhubaneswar", payable at Bhubaneswar.      |                    |          |        |
| 2        | EMD of Rs. 1.00 Cr (One Crore) in the form of Bank Draft / Bank Guarantee in the format Annexure - Q)                                                                                                |                    |          |        |
| 3        | Certificate of Incorporation under Companies Act, 1956/2013 and supporting document evidencing 100% Indian ownership or majority Indian shareholding with corporate headquarters in India.           |                    |          |        |
| 4        | Valid PAN Card, GST Registration Certificate and latest GST Return (GSTR-3B) filed under GST Laws.                                                                                                   |                    |          |        |
| 5        | Tender Document duly signed and stamped on each page as a token of acceptance.                                                                                                                       |                    |          |        |
| 6        | NCG (National Cancer Grid) Empanelment Certificate and Valid ABDM M3 Certification (Milestone-3 Link/View) along with authentication link on the NHA website.                                        |                    |          |        |
| 7        | ISO 9001 Quality Management System Certificate, ISO 27001 Information Security Management System Certificate, ISO 20000 IT Service Management Certificate and CMMI Level-3 (or above) Certification. |                    |          |        |
| 8        | Audited Balance Sheets and Profit & Loss Statements for FY 2022-23, FY 2023-24 and FY 2024-25 (Provisional/Audited for FY 2024-25 acceptable).                                                       |                    |          |        |
| 9        | CA-Certified Financial Statement confirming an average annual turnover of at least ₹50 Crore from Healthcare Services during the last three financial years.                                         |                    |          |        |
| 10       | CA Certificate confirming Positive Net Worth and Profitability for each of the last three financial years ending 31st March 2025.                                                                    |                    |          |        |
| 11       | HR Declaration confirming minimum 150 permanent employees on payroll along with EPF/ESI supporting documents (sample basis).                                                                         |                    |          |        |
| 12       | Working Experience Format duly filled (Annexure-E) along with List of Similar Projects Executed.                                                                                                     |                    |          |        |

|    |                                                                                                                                                                                                                                                                                                                                           |  |  |  |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| 13 | Work Orders / Contract Documents, Completion Certificates and/or Self-Certificates supporting compliance with Project Experience Criteria, including Government e-Health Projects, Multi-location Healthcare Projects, Medical College Hospital Projects, PHC/Clinic Projects and Turnkey SITC e-Health Projects as specified in the RFP. |  |  |  |
| 14 | Consortium Agreement / MoU (in a non - judicial stamp paper of Rs.100/- in the format <b>Annexure - R</b> ), Lead Bidder Authorization Letter and all applicable Pre-Qualification Documents of both Consortium Members (Applicable for Consortium Bids only).                                                                            |  |  |  |
| 15 | Non-Blacklisting / Non-Debarment Declaration (in a non-judicial stamp paper of Rs. 100/- as per Annexure-K).                                                                                                                                                                                                                              |  |  |  |
| 16 | Affidavit in a Non-Judicial Stamp Paper stamp paper of Rs.100/- confirming correctness of information, no project abandonment/rescission and willingness to furnish additional information (Annexure-B).                                                                                                                                  |  |  |  |
| 17 | Certificate of No Relationship (Annexure-C) or Relationship Declaration (Annexure-D), as applicable.                                                                                                                                                                                                                                      |  |  |  |
| 18 | Undertaking on Authenticity of IT Hardware & Peripherals on ₹100/- Non-Judicial Stamp Paper (Annexure-M)                                                                                                                                                                                                                                  |  |  |  |
| 19 | Manufacturer's Authorization Form (MAF) from OEM authorizing the bidder to participate and fulfil obligations under the tender (Annexure-L), if applicable.                                                                                                                                                                               |  |  |  |
| 20 | Power of Attorney / Board Resolution / Authorization Letter authorizing the signatory to sign, submit the bid, execute agreements, and represent the bidder in all matters related to this tender.                                                                                                                                        |  |  |  |
| 21 | Covering Letter (Annexure-H) confirming bid validity of 180 days and unconditional acceptance of RFP terms and conditions.                                                                                                                                                                                                                |  |  |  |
| 22 | Tender Acceptance Letter (Annexure-A).                                                                                                                                                                                                                                                                                                    |  |  |  |
| 23 | Bidder's Profile, statutory information and experience summary (Annexure-F).                                                                                                                                                                                                                                                              |  |  |  |
| 24 | Description of Proposed Solution ( <b>Annexure-J</b> ) including Executive Summary, Architecture Diagrams (Functional, Technical, Network, Deployment and Security) and Key Solution Attributes (Scalability, Completeness, Simplicity and Interoperability, ABDM Integration & compliance, Offline Capability).                          |  |  |  |
| 25 | Letter of Authorization for Attending Bid Opening (Annexure-G).                                                                                                                                                                                                                                                                           |  |  |  |
| 26 | Item wise Para-wise Technical Compliance Statement (Annexure -N)                                                                                                                                                                                                                                                                          |  |  |  |
| 27 | Technical Brocheures / Leaflets / Data sheet of the items in support of the compliance to technical specifications                                                                                                                                                                                                                        |  |  |  |

|          |                                                                                                                                                             |  |  |  |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| 28       | Any other supporting documents, certifications, technical credentials, project references, brochures or relevant information supporting the bid submission. |  |  |  |
| <b>B</b> | <b>Commercial Bid Envelop</b>                                                                                                                               |  |  |  |
| 1        | Financial Bid Covering Letter (Annexure -I)                                                                                                                 |  |  |  |
| 2        | Price Bid Format (Annexure – P)                                                                                                                             |  |  |  |

**Signature of Bidder with Seal**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Place:** \_\_\_\_\_

## **Annexure "A"**

(To be submitted in Technical Bid Envelop)

### **Tender Acceptance Letter**

(To be given on Company Letter Head)

Date:

To,

**The Director of Public Health.,  
H & F.W. Dept.,  
Bhubaneswar**

Sub: Acceptance of Terms & Conditions of Tender Reference No: \_\_\_\_\_

Name of Tender / Work: - "....."

Madam/Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned "Tender/Work" from the web site(s) namely:  
\_\_\_\_\_  
\_\_\_\_\_ as per your advertisement, given in the above-mentioned website(s).
2. I/We hereby certify that I/we have read the entire terms and conditions of the tender documents from Page No. \_\_\_\_\_ to \_\_\_\_\_ (including all documents like annexure(s) and supporting documents), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your firm/organization too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality.
5. In case any provisions of this tender are found violated, then your firm/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

**Signature of the Bidder with Seal**

## **Annexure "B"**

To be submitted in Technical Bid Envelop)

### **AFFIDAVIT (in a stamp paper of Rs.100/-)**

1. The undersigned do hereby certify that all the statements/ copies of documents furnished in the required attachments are true and correct. This affidavit is furnished in connection with the work "....." Bid identification No. \_\_\_\_\_ dated. \_\_\_\_\_.
2. The undersigned also hereby certifies that neither my/our firm/company/individuals nor any of its constituent partners have abandoned any such types of Project Work or other project work in India nor any contract awarded to us for such works have been rescinded during the last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or Corporation to furnish pertinent information as deemed necessary and as requested by the Department to verify this statement or regarding my(our) competency and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested and agree to furnish any such information at the request of the Department.
5. The undersigned undertake that in case of any information furnished by me found to be incorrect, the Director of Public Health, H. & F.W. Dept. has right to reject the Bid.

**Signature of the Bidder with Seal**

Date:

## **Annexure "C"**

(To be submitted in Technical Bid Envelop)

### **CERTIFICATE OF NO RELATIONSHIP**

I/We hereby certify that I/We\*am/are\***related / not related** (\*) to any officer of H & F.W. Dept. of the rank of Dy. Secy. & above of H &FW Dept. I/We\* am/are\* aware that, if the facts subsequently proved to be false, my/our\* contract will be rescinded with forfeiture of E.M.D / and performance security deposit and I/We\* shall be liable to make good the loss or damage resulting from such cancellation.

I/ We also note that, non-submission of this certificate will render my/our tender liable for rejection.

(\*)-Strike out which is not applicable.

**Signature of the Bidder with Seal**

Date:-

## **Annexure "D"**

(To be submitted in Technical Bid Envelop)

### **RELATIONSHIP DECLARATION**

To,

The Director of Public Health,

H & FW Dept., Bhubaneswar.

Subject: (Name of the Work)

Reference: (Bid reference number)

Sir,

Pursuant to General Terms & Conditions of the Contract clause 36 of the schedule, it is to inform that I have relative(s) employed as an officer of H & F.W. Deptt.in the rank of Dy. Secy.& above. His /Her (Their) details are as follows.

Relationship:

Name:

Designation :

Office :

Address :

Pursuant to clause 36 of the General Condition of the Contract, I am to submit herewith the names of persons who are working under my firm having near relative (s) employed as an officer of H. & F.W. Dept. of the rank of Dy. Secy.& above. His/her (Their) details are as follows.

| Sl No. | Name of my employee and his designation in the firm | Presently working at | Details of his relatives working in the Department        |
|--------|-----------------------------------------------------|----------------------|-----------------------------------------------------------|
| 1.     |                                                     |                      | Relationship<br>Name:<br>Designation<br>Office<br>Address |

I am also duty bound to inform the relationship of any subsequent employee to any officer of H & FW Dept. of the rank of Dy. Secy. & above. I am aware that any breach of this condition would render my firm liable for penal action for suppression of facts.

Yours sincerely,

**Signature of the Bidder with Seal**

## **Annexure "E"**

(To be submitted in Technical Bid Envelop)

### **WORKING EXPERIENCE (LIST OF SIMILAR NATURE OF PROJECTS EXECUTED DURING THE LAST FIVE YEARS)**

| Name of<br>Organiza<br>tion * | Name of<br>location and<br>name of<br>work | Descri<br>ption<br>of<br>work | Contract<br>price<br>In Indian<br>Rupees | Date of<br>starting of<br>the work<br>As per<br>Agreement | Stipulated<br>date of<br>completion<br>of the work<br>as<br>per the<br>Agreement | Actual<br>date of<br>completi<br>on of work | Actual<br>value of<br>work<br>executed | Reasons for<br>delay in<br>starting/<br>completion<br>of work, if<br>any. |
|-------------------------------|--------------------------------------------|-------------------------------|------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------|---------------------------------------------------------------------------|
| 1                             | 2                                          | 3                             | 4                                        | 5                                                         | 6                                                                                | 7                                           | 8                                      | 9                                                                         |
|                               |                                            |                               |                                          |                                                           |                                                                                  |                                             |                                        |                                                                           |

**\*Attach the work order copies / contracts / client certificate serially as per the information provided above in support of the past experience**

**Signature of the Bidder with Seal**

## **Annexure "F"**

(To be submitted in Technical Bid Envelop)

### **Profile of the Bidder**

| <b>Sl. No.</b> | <b>Description</b>                                                                                                                                               | <b>Details to be given by the Bidder</b> |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 1.             | Name and Full Postal Address of bidder                                                                                                                           |                                          |
| 2              | Whether participated as sole bidder or consortium bid                                                                                                            |                                          |
| 3              | In case of Consortium bid , pl. mention who is the Lead bidder and the name & address of the lead member and consortium partner                                  |                                          |
| 4              | Name of the representative of the firm and his Telephone/Mobile No.                                                                                              |                                          |
| 5.             | Date of Registration of firm's with details (Copy of registration to be enclosed, if any).<br>(in case of Consortium, for both Lead bidder & consortium partner) |                                          |
| 6.             | GST No.<br>(in case of Consortium, for both Lead bidder & consortium partner)                                                                                    |                                          |
| 7.             | PAN Number<br>(in case of Consortium, for both Lead bidder & consortium partner)                                                                                 |                                          |
| 8.             | Present/past experience in the field (Satisfactory performance certificate from other Departments is to be enclosed)                                             |                                          |

*Note: All the pre-qualification documents mentioned in the Terms and Conditions of the contract should also be attached with the technical bid.*

It is confirmed that we have fully understood the scope of work and all other requirements for “.....” as per the given details in the Tender. We hereby agree to the Terms and Conditions of the Contract as detailed in the tender document. We undertake that the documents enclosed herewith are genuine and no material/facts have been concealed or suppressed. We also undertake that the submitted bid shall not be withdrawn or modified during the validity of the bid and we understand that in case if we withdraw or modify the bid than we shall be barred from participations in future bids with **H. & F.W. Dept.** for a period of next 03 years.” We are not debarred / blacklisted by any Government organization in the field of same nature of work during the last five years prior to the date of this bid. We also understand that the contract is liable to be cancelled if found to be obtained through fraudulent means or by concealment of information/facts.

This offer is made to be valid for acceptance by your firm within 180 days from the date of opening of the technical bid.

**Signature of the Bidder with Seal**

## **Annexure "G"**

### **Letter of Authorisation for attending Bid Opening**

Subject: Authorization for attending bid opening on\_ (date) in the tender no. ....  
..... of DPH, H. & F.W. Dept., Bhubaneswar.

Shri/Ms.....of ..... is hereby authorized to attend the bid opening for the tender mentioned above on behalf of.....(Bidder/Contractor) in order of preference is given below.

Specimen Signature of person authorized to attend the bid opening

**Signature of the Bidder with Seal**

Note:

1. Only one representative will be permitted to attend bid opening.
2. Permission for entry to the hall where bids are opened may be refused in case authorization letter as above is not produced before the bid opening committee.

## **Annexure "H"**

(To be submitted in Technical Bid Envelop)  
**[Insert Your Company Letterhead Here]**

### **COVERING LETTER**

**Date:** [DD/MM/YYYY]

**To,**

The Director of Public Health,  
Health & Family Welfare Department (H&FW Deptt.)  
Govt. Of Odisha, Bhubaneswar.

**Sub:** (Name of the Work)

**Ref:** Bid Invitation Number: [Insert Bid Number] dated [Insert Date].

**Dear Madam/Sir,**

I/We, the undersigned, hereby submit our proposal to participate in the selection process for the "(Name of the Work)" in accordance with the Request for Proposal (RFP) cited under the reference above.

I/We hereby declare that all the information and statements made in this proposal are true and correct, and I/we accept that any misinterpretation contained in it may lead to the disqualification of our proposal.

Our proposal will be valid for acceptance up to **180 working days** from the date of opening of the RFP, and I/we confirm that this proposal will remain binding upon us and may be accepted by you at any time before the stipulated date.

I/We have carefully read and understood the RFP document and hereby unconditionally undertake to accept all the terms and conditions as incorporated therein. In case any provisions of this RFP document are found violated, then the Department shall, without prejudice to any other right or remedy, be at liberty to reject our proposal.

I remain,

**Yours faithfully,**

**(Signature)**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**(Official Rubber Stamp)**

**Place:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Annexure "I"**

(To be submitted in Price Bid Envelop)

### **Financial Bid Covering Letter**

*(To be submitted on the Letterhead of the Bidder)*

**Date:** [Insert Date]

**To,**

The Director of Public Health,  
Health & Family Welfare Department (H&FW Dept.)  
Govt. Of Odisha, Bhubaneswar.

**Sub:** (Name of the Work)

**Ref:** Bid Invitation Number: [Insert Bid Number] dated [Insert Date].

**Madam/Sir,**

I/We, the undersigned, offer to provide the service for **[Insert Name of the Project/Service]** as per RFP No. **[Insert RFP Number]**, our Pre-Qualification, Technical and Financial Proposals. Our attached Financial Proposal is inclusive of all applicable taxes and duties.

**BID PRICE** We declare that our Bid Price is for the entire scope of the work as specified in this RFP. These prices are indicated in the Financial Bid as part of this RFP response. In case there is a substantial difference between the component-wise price approved by the Department and the price quoted by the bidder, the Department will have the right to ask the bidder to realign their prices without impacting the total bid price. We hereby agree to submit our offer accordingly.

**PERFORMANCE BANK GUARANTEE** We hereby declare that in case the contract is awarded to us, we shall submit the Performance Bank Guarantee as specified in this RFP document.

We understand you are not bound to accept any Proposal you receive. We hereby declare that our Proposal is made in good faith, without collusion or fraud, and the information contained in the proposal is true and correct to the best of our knowledge and belief.

We understand that our proposal is binding on us and that you are not bound to accept any proposal you receive.

**Yours faithfully,**

**(Signature)**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**(Official Rubber Stamp)**

**Place:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Annexure "J"**

(To be submitted in Technical Bid Envelop)

### **Description of Proposed Solution**

*[To be submitted on the Letterhead of the Bidder]*

**Sub:** Description of Proposed Solution (Technology, Scalability, Completeness, Simplicity, and Interoperability)

**Ref:**[Insert RFP Number / Bid Invitation Number]

#### **1. Executive Summary of the Solution**

#### **2. Proposed Architecture Diagrams and Descriptions**

- a) Functional Architecture
- b) Technical Architecture
- c) Network Architecture
- d) Deployment Architecture
- e) Security Architecture

#### **3. Key Solution Attributes**

- a) Scalability
- b) Completeness
- c) Simplicity
- d) Interoperability
- e) ABDM Integration & Compliance
- f) Offline Capability (Rural Readiness)

(Signature)

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

(Official Rubber Stamp)

Place: \_\_\_\_\_ Date: \_\_\_\_\_

## **Annexure "K"**

(To be submitted in Technical Bid Envelop)

### **Format for Non-black listing Declaration**

*(To be submitted on Non judicial stamp paper of Rs.100/-)*

**To,**

The Director of Public Health,  
Health & Family Welfare Department (H&FW Deptt.),  
Govt. Of Odisha, Bhubaneswar.

**Sub:** (Name of the Work)

**Ref:** Bid Invitation Number: [Insert Bid Number] dated [Insert Date]

**Madam/Sir,**

In response to the RFP No. cited above for (Name of the Work)I/We, the undersigned, in the capacity of Owner/Partner/Director of **[Insert Organization Name]**, hereby declare that presently our Company/Firm is not under a declaration of ineligibility for corrupt or fraudulent practices.

We further declare that our organization has **not been blacklisted**, either indefinitely or for a particular period of time, and has not had work withdrawn by any State Government, Central Government, or PSU.

If this declaration is found to be incorrect, then without prejudice to any other action that may be taken, my/our security deposit may be forfeited in full and the tender, if any to the extent accepted, may be cancelled.

**(Signature)**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**(Official Rubber Stamp)**

**Place:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Annexure "L"**

(To be submitted in Technical Bid Envelop)

### **Manufacturer's Authorization Form (MAF)**

*(On OEM Letterhead in Original)*

**To,**

Letter No. \_\_\_\_\_

The Director of Public Health,  
Health & Family Welfare Department (H&FW Dept.),  
Govt. Of Odisha, Bhubaneswar.

**Sub:** OEM Authorisation letter for (Name of the Work)

**Ref:** Bid Invitation Number: [Insert Bid Number] dated [Insert Date]

Madam/Sir,

We, who are established and reputable manufacturer of \_\_\_\_\_ having factories / development facilities at \_\_\_\_\_ (*address of factory / facility*) do hereby authorize M/s \_\_\_\_\_ (*Name and address of Agent*) to submit a Bid and accept the Purchase Order against the above Bid Invitation. We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation. We further undertake that we will support the supplier will all related spares and maintenance during the entire contract period.

We duly authorize the said firm to act on our behalf in fulfilling all Installations, Technical support and maintenance obligations required by the Project.

Yours faithfully,

(Name) Seal

Note: This letter of authority should be on the **letterhead of the OEM** in Original and should be signed by a person competent and having the power of attorney to bind the manufacturer.

## **Annexure "M"**

(To be submitted in Technical Bid Envelop)

### **Undertaking on Authenticity of IT Hardware &Peripherals**

*(To be filled by the bidder on ₹100/-Non-judicial stamp paper)*

**To,**

The Director of Public Health,  
Health & Family Welfare Department (H&FW Dept.),  
Govt. Of Odisha, Bhubaneswar.

**Sub:** (Name of the Work)

**Ref:** Bid Invitation Number: [Insert Bid Number] dated [Insert Date]

This has reference to the items being supplied/quoted to you vide our bid ref.no.:

We hereby undertake that all the components / parts / assembly / software used in the equipment shall be genuine, original and new components / parts / assembly / software from respective OEMs of the products and that no refurbished / duplicate/ second hand components / parts / assembly / software are being used or shall be used. In respect to licensed operating system, we undertake that the same shall be supplied along with the authorized license certificate with our name / logo. Also, that it shall be sourced from the authorized source for use in India.

In case, we are found not complying with above at the time of delivery or during installation, for the equipment already billed, we agree to take back the equipment already supplied at our cost and return any amount paid to us by you in this regard and that you will have the right to forfeit our PBG for this bid or debar/ black list us or take suitable action against us.

**(Signature)**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**(Official Rubber Stamp)**

**Place:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Annexure "N"**

(To be submitted in Technical Bid Envelop)

### **PARA WISE COMPLIANCE TO TECHNICAL SPECIFICATION MENTIONED AT SECTION-V**

**Each Item Wise (For all items mentioned at Section – V) in the format mentioned below**

**Item Name :**

**Make & Model:**

| Sl. | Parameter as per Technical Specification | *Complied<br>(Yes / No) | Page No. of the<br>relevant catalogue /<br>brochures /data<br>sheet |
|-----|------------------------------------------|-------------------------|---------------------------------------------------------------------|
|     |                                          |                         |                                                                     |
|     |                                          |                         |                                                                     |
|     |                                          |                         |                                                                     |
|     |                                          |                         |                                                                     |
|     |                                          |                         |                                                                     |

\*Furnish catalogue / brochures / data sheet of the item in support of the technical compliance.

**(Signature)**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**List of DHHs in Odisha**

| <b>Sl. No</b> | <b>District</b> | <b>Name of D.H.H</b>     |
|---------------|-----------------|--------------------------|
| 1             | Angul           | Angul                    |
| 2             | Balasore        | Balasore                 |
| 3             | Baragarh        | Baragarh                 |
| 4             | Bhadrak         | Bhadrak                  |
| 5             | Bolangir        | Bolangir                 |
| 6             | Boudh           | Boudh                    |
| 7             | Cuttack         | City Hospital, Cuttack   |
| 8             | Deogarh         | Deogarh                  |
| 9             | Dhenkanal       | Dhenkanal                |
| 10            | Gajapati        | Paralakhemundi           |
| 11            | Ganjam          | City Hospital, Berhampur |
| 12            | Jagatsinpur     | Jagatsinpur              |
| 13            | Jajpur          | Jajpur                   |
| 14            | Jharsuguda      | Jharsuguda               |
| 15            | Kalahandi       | Kalahandi                |
| 16            | Kandhamal       | Kandhamal                |
| 17            | Kendrapara      | Kendrapara               |
| 18            | Keonjhar        | Keonjhar                 |
| 19            | Khurda          | Khurda                   |
| 20            |                 | Capital Hospital, BBSR   |
| 21            | Koraput         | Jaypur                   |
| 22            | Malkangiri      | Malkangiri               |
| 23            | Mayurbhanj      | Baripada                 |
| 24            | NawarangPur     | NawarangPur              |
| 25            | Nayagarh        | Nayagarh                 |
| 26            | Nuapada         | Nuapada                  |
| 27            | Puri            | Puri                     |
| 28            | Rayagada        | Rayagada                 |
| 29            | Sambalpur       | Sambalpur                |
| 30            | Subarnapur      | Subarnapur               |
| 31            | Sundargarh      | Sundargarh               |
| 32            |                 | RGH                      |
|               | Total           | 32                       |

## List of HUBs

| Sl. No. | District  | Name of HUBs                                           |
|---------|-----------|--------------------------------------------------------|
| 1       | Cuttack   | Acharya Harihar Regional Cancer Centre                 |
| 2       | Ganjam    | M K C G Medical College Hospital                       |
| 3       | Sambalpur | V S S Institute of Medical Sciences and Research Burla |

# **COMMERCIAL PRICE BID FORMAT**

**(To be submitted in Price Bid Envelop)**

**Price Bid Format****Annexure-P**

(To be submitted in Price Bid Envelop)

**NAME OF THE WORK: - CANCER COMMAND CONTROL CENTRE (C4)**

| Sl.             | Description of work                                                 | Unit | Qty | Unit Price<br>(exclusive of GST)<br>(Rs.) | Total Price<br>(exclusive of GST)<br>(Rs.) | GST<br>(in % & Rs.) | Total Price<br>(inclusive of GST)<br>(Rs.) |
|-----------------|---------------------------------------------------------------------|------|-----|-------------------------------------------|--------------------------------------------|---------------------|--------------------------------------------|
|                 |                                                                     |      | (a) | (b)                                       | c = (a x b)                                | d                   | e = c + d                                  |
| <b>PART - 1</b> | <b>APPLICATION</b>                                                  |      |     |                                           |                                            |                     |                                            |
| 1               | Design, Development and Deployment of C4 App and SITC all inclusive | LS   | 1   |                                           |                                            |                     |                                            |
| <b>PART - 2</b> | <b>DATA CENTER</b>                                                  |      |     |                                           |                                            |                     |                                            |
| 1               | Server                                                              | Nos. | 3   |                                           |                                            |                     |                                            |
| 2               | AI Server                                                           | No.  | 1   |                                           |                                            |                     |                                            |
| 3               | 42U Rack                                                            | No.  | 1   |                                           |                                            |                     |                                            |
| 4               | 15 TB all flash storage                                             | Nos. | 1   |                                           |                                            |                     |                                            |
| 5               | TOR Switch                                                          | Nos. | 2   |                                           |                                            |                     |                                            |
| 6               | Linux Virtualisation for 96 core                                    | Nos. | 1   |                                           |                                            |                     |                                            |
| 7               | Linux OS for 96 core                                                | Nos. | 1   |                                           |                                            |                     |                                            |
| 8               | Database Software                                                   | Nos. | 1   |                                           |                                            |                     |                                            |
| 9               | Next-Generation Firewall                                            | Nos. | 2   |                                           |                                            |                     |                                            |
| 10              | Backup Solution                                                     | Nos. | 1   |                                           |                                            |                     |                                            |
| 11              | SDWAN gateway device                                                | Nos. | 36  |                                           |                                            |                     |                                            |
| 12              | End point security                                                  | Nos. | 202 |                                           |                                            |                     |                                            |

|                 |                                                         |      |    |  |  |  |  |
|-----------------|---------------------------------------------------------|------|----|--|--|--|--|
| <b>PART - 3</b> | <b>DISASTER RECOVERY</b>                                |      |    |  |  |  |  |
| 1               | Server                                                  | Nos. | 1  |  |  |  |  |
| 2               | 15 TB all flash storage                                 | Nos. | 1  |  |  |  |  |
| 3               | TOR Switch                                              | Nos. | 1  |  |  |  |  |
| 4               | Next-Generation Firewall                                | Nos. | 1  |  |  |  |  |
| <b>PART - 4</b> | <b>C4</b>                                               |      |    |  |  |  |  |
| 1               | Infra Set Up for 15 Manpower                            | LS   | 1  |  |  |  |  |
| 2               | Desktop with Monitor (23.8" or Higher)                  | Nos. | 15 |  |  |  |  |
| 3               | Headset with Mic                                        | Nos. | 15 |  |  |  |  |
| 4               | IP Phone / Soft Phone                                   | Nos. | 15 |  |  |  |  |
| 5               | Network Switch (24-Port)                                | Nos. | 1  |  |  |  |  |
| 6               | Structured LAN Cabling (Including RACK and accessories) | LS   | 1  |  |  |  |  |
| 7               | UPS (Online) 10 KV                                      | Nos. | 1  |  |  |  |  |
| 8               | Video Wall / Dash Board Display                         | Nos. | 1  |  |  |  |  |
| 9               | Centralized Call-Centre Software                        | Nos. | 1  |  |  |  |  |
| 10              | Multi-Function Printer (60 PPM)                         | Nos. | 1  |  |  |  |  |
| 11              | Infra Setup for Command Control with 15 Manpower Setup  | Lot  | 1  |  |  |  |  |

|                 |                                                                |      |     |  |  |  |  |
|-----------------|----------------------------------------------------------------|------|-----|--|--|--|--|
| <b>PART - 5</b> | <b>TERTIORY HUB</b>                                            |      |     |  |  |  |  |
| 1               | Desktop with Monitor (23.8" or Higher)                         | Nos. | 27  |  |  |  |  |
| 2               | Barcode Scanner                                                | Nos. | 6   |  |  |  |  |
| 3               | Multi-Function Printer (33 PPM or Higher)                      | Nos. | 6   |  |  |  |  |
| 4               | Network Switch (24-Port)                                       | Nos. | 3   |  |  |  |  |
| 5               | Online UPS 6 KV                                                | Nos. | 3   |  |  |  |  |
| 6               | Structured LAN Cabling (Including RACK and accessories)        | LS   | 3   |  |  |  |  |
| 7               | Infra Setup for Command Control Control with 10 Manpower Setup | Lot. | 3   |  |  |  |  |
| <b>PART - 6</b> | <b>DISTRICT HQ. HOSPITAL</b>                                   |      |     |  |  |  |  |
| 1               | Desktop with Monitor (23.8" or Higher)                         | Nos. | 160 |  |  |  |  |
| 2               | Barcode Scanner                                                | Nos. | 32  |  |  |  |  |
| 3               | Multi-Function Printer (33 PPM or Higher)                      | Nos. | 32  |  |  |  |  |
| 4               | Network Switch (24-Port)                                       | Nos. | 32  |  |  |  |  |
| 5               | Online UPS 6 KV                                                | Nos. | 32  |  |  |  |  |
| 6               | Inverter with Battery for Electric Backup                      | Nos. | 32  |  |  |  |  |
| 7               | Structured LAN Cabling (Including                              | LS   | 32  |  |  |  |  |

|                      |                                                               |      |    |  |  |  |  |
|----------------------|---------------------------------------------------------------|------|----|--|--|--|--|
|                      | RACK and accessories                                          |      |    |  |  |  |  |
| 8                    | Infra Setup for Command Control Control with 5 Manpower Setup | Nos. | 32 |  |  |  |  |
| <b>PART - 7</b>      | <b>SUPPORT (C4)</b>                                           |      |    |  |  |  |  |
|                      | Help Desk Support Associate                                   | Nos. | 12 |  |  |  |  |
|                      | Technical Support Associate                                   | Nos. | 2  |  |  |  |  |
|                      | Project Manager                                               | Nos. | 1  |  |  |  |  |
| <b>PART - 8</b>      | <b>SUPPORT (Hubs)</b>                                         |      |    |  |  |  |  |
|                      | Help Desk Support Associate                                   | Nos. | 6  |  |  |  |  |
|                      | Technical Support Associate                                   | Nos. | 2  |  |  |  |  |
|                      | Project Manager                                               | Nos. | 1  |  |  |  |  |
| <b>PART - 9</b>      | <b>SUPPORT (Spokes)</b>                                       |      |    |  |  |  |  |
|                      | Help Desk Support Associate                                   | Nos. | 4  |  |  |  |  |
|                      | Project Manager                                               | Nos. | 1  |  |  |  |  |
| <b>GRAND TOTAL:-</b> |                                                               |      |    |  |  |  |  |

In Word : (Rupees .... ..)

**Note:** Amount mentioned in word only will be considered if the discrepancy between figure & word. Bidders are requested to quote the amount and write properly.

**Signature of the Bidder with Seal**

**BANK GUARANTEE FORM FOR EMD**

[The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

To

The Director of Public Health,  
Health & Family Welfare Department (H&FW Dept.),  
Govt. of Odisha, Bhubaneswar

Whereas (insert the name of the bidder) (hereinafter called the "Bidder") has submitted its proposal dated (insert date) for the work \_\_\_\_\_ (hereinafter called the "Proposal") against the RFP (Insert RFP reference number) issued by Director of Public Health, Odisha (hereinafter called "Authority").

Know all persons by these presents that we (insert name of the bank) of (insert address of the bank) (Hereinafter called the "Bank") having our registered office at (insert regd. office address of bank) are bound unto <insert the name and address of the procuring authority> (hereinafter called the "Authority") in the sum of (insert guarantee amount) for which payment will and truly to be made to the said Authority, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this \_\_\_\_ day of \_\_\_\_\_ 2026 \_\_\_\_.

The conditions of this obligation are:

If the Bidder withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this Bid.

If the Bidder having been notified of the acceptance of his Bid by the Authority during the period of its validity: -

    Fails or refuses to furnish the performance security for the due performance of the contract. or

    Fails or refuses to accept/execute the contract. or

    If it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged

We undertake to pay the Authority the above amount upon receipt of its first written demand, without the Authority having to substantiate its demand, provided that in its demand the Authority will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition(s).

This guarantee will remain in force up to \_\_\_\_\_ *[(till the date), 6 months from the date of bid submission]* and any demand in respect thereof should reach the Bank not later than the above date.

Our..... branch at..... (Name & Address of the .....branch) is liable to pay the guaranteed amount depending on the filing of claim and any part thereof under this Bank Guarantee only and only if you serve upon us at our ..... branch a written claim or demand and received by us at our .....branch on or before Dt.....otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

Signature of the Authorised Officer of the Bank

Name and Designation of the Officer

Seal, Name & Address of the Bank and the Branch

**Format for Consortium Agreement**

*(On stamp paper of Rs.100/- to be purchased in the name of executants companies or as required by the jurisdiction in which executed) – to be submitted in Technical Bid Envelop*

THIS Consortium Agreement executed on this ..... day of..... by:

M/s. .... an organization incorporated under the act of

..... and having its registered office at ..... (hereinafter called the “**Lead Member**” which expression shall include its successors); and

M/s. .... an organization incorporated under the act of .....and having its registered office at..... (hereinafter called the “**Second Member**” which expression shall include its successors)

The Lead Member, the Second Member shall collectively hereinafter be called as the “Consortium Members” for the purpose of submitting a proposal (hereinafter called as “Proposal”) to Director of Public Health, Odisha (hereinafter called “DPH-Odisha”) in response to Request for Proposal Document (hereinafter called as “RFP” Document) no.....Dated..... to select a bidder for the work .....

AND WHEREAS this RFP document stipulates that a Consortium of maximum two organizations, meeting the requirements stipulated in the RFP document may submit a proposal signed by Lead Member of the Consortium Members so as to legally bind all the Members of the Consortium who will be jointly and severally liable for the performance and all obligations there under to DPH-Odisha. A duly signed Consortium Agreement shall be attached to the Proposal.

NOW THIS AGREEMENT WITNESSETH AS UNDER:

In consideration of the above premises all the Parties to this Consortium Agreement do hereby agree as follows:

1. M/s..... shall act as Lead Member for and on behalf of Consortium Members. The said Consortium Members further declare and confirm that we shall jointly and severally be bound and shall be fully responsible unto DPH-Odisha for the successful performance of the obligations under the Request for Proposal (RFP) and resulting Agreement(s) submitted / executed by the Lead Member in the event of the selection of Consortium as Agency.
2. That M/s..... which is the **Lead Member** of the Consortium shall invest and have at least 51% stake in the Consortium for the contract Period as specified in the RFP document..
3. In case of any breach of the stipulations of the RFP Document by the Lead member, Consortium Members along with the Lead Member do hereby agree to be fully responsible to carry out all the obligations and responsibilities under the RFP and resulting Agreement(s).
4. If DPH-Odisha suffers any loss or damage on account of any breach in the stipulation of the Agreements to be entered into by the Consortium Members, upon its selection as Agency pursuant to RFP (the "Agreements") or any shortfall in the performance of the Transaction or in meeting the performances guaranteed as per the RFP and the Agreements, the Consortium Members hereby jointly and severally undertake to promptly make good such loss or damages caused to DPH-Odisha on its demand without any demur or contest. It shall not be necessary or obligatory for DPH-Odisha to proceed against the Prime Bidder before proceeding against or dealing with the other Member(s).
5. The financial liability of the Consortium Members to the DPH-Odisha, with respect to any of the claims arising out of the performance or non-performance of obligations under the RFP and the resulting Agreement(s) shall not be limited so as to restrict or limit the liabilities of any of the Members and the Members shall be jointly and severally liable to DPH-Odisha.

6. It is expressly agreed by the Members that the sharing of responsibilities and obligations amongst the Members shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members to the DPH-Odisha. It is clearly understood that the Prime Bidder shall ensure performance under the Agreements and if one or more Consortium Members fail to perform its / their respective obligations under the Agreement(s), the same shall be deemed to be a default by all the Consortium Members.
7. It is also understood by all Consortium Members that the RFP Document stipulates various obligations as well as terms and conditions related to the Transaction during Proposal stage or thereafter during the subsistence of the RFP documents i.e. the Agreements.
8. This Consortium Agreement shall be construed and interpreted in accordance with the laws of India and the Courts of Bhubaneswar shall have the exclusive jurisdiction in all matters arising there under.
9. We, the Consortium Members do hereby agree that we shall be jointly and severally responsible for furnishing the Bank Security. It is also hereby agreed that Lead Member shall, on behalf of the Consortium submit the EMD in the form of DD/Banker's Cheque / Bank Guarantee drawn in favour of DDO, Director of Public Health, payable at Bhubaneswar (hereinafter called as "EMD" from a Nationalized/Scheduled Commercial Bank for the value and in the currency as specified by DPH-Odisha.
10. It is further agreed that this Consortium Agreement shall be irrevocable and shall continue to be enforceable till the same is discharged by DPH-Odisha. It shall be effective from the date first mentioned above for all purposes and intents.
11. The responsibilities of all the members of the Consortium for this Project would be as stated in the table below:

| <b>Member of Consortium</b> | <b>Responsibilities</b> |
|-----------------------------|-------------------------|
| Lead Member                 |                         |
| Second Member               |                         |

IN WITNESS WHEREOF, the Members to the Consortium Agreement have through their authorized representatives executed these presents and affixed common seal of their companies, on the day, month and year first mentioned above.

|                                                                     |                                                                                                   |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Common Seal of.....<br>has been affixed in my/our presence pursuant | For and on behalf of <b>Lead Member</b><br>M/s.....<br>(Signature of authorized representative)   |
|                                                                     | For and on behalf of <b>Second Member</b><br>M/s.....<br>(Signature of authorized representative) |

WITNESS

1.....

(Signature)

Name.....

Designation.....

2.....

(Signature)

Name.....

Designation.....

**FORMAT FOR BANK GUARANTEE FOR PERFORMANCE SECURITY**

(to be furnished by the **selected Service Provider** at the time of signing of contract)

To

The Director of Public Health,  
Health & Family Welfare Department (H&FW Dept.)  
Govt. Of Odisha, Bhubaneswar.

WHEREAS.....(Name and address of the Service Provider)  
(Hereinafter called "service provider" has undertaken, in pursuance of contract No..... dated  
..... (herein after "the contract") for the work \_\_\_\_\_.

AND WHEREAS it has been stipulated by you in the said contract that the service provider shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give such a bank guarantee on behalf of the service provider;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the service provider, up to a total of..... (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the service provider to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the service provider before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the service provider shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to \_\_\_\_\_ months [(62 months: Max. contract Period 60 months + 2 months] from the date of signing of contract i.e. up to..... (Indicate date)

.....  
(Signature with date of the authorized officer of the Bank)

..... Name

and designation of the officer

.....  
Seal, name & address of the Bank and address of the Branch