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| **REQUEST FOR PROPOSAL(RFP)**  **logo** |
| **SINDH EMPLOYEES' SOCIAL SECURITY INSTITUTION**  **GOVERNMENT OF SINDH**  **January, 2016**  **AUTOMATION OF SESSI**  **“SINDHEMPLOYEES’ SOCIAL SECURITY INSTITUTION**  **(SESSI)”,** |

**SINDH EMPLOYEES' SOCIAL SECURITY INSTITUTION, GOVERNMENT OF SINDH**

**Aiwan**-e-Mehnatkash, SESSI Head Office, ST-17, Block- 6, Rashid Minhas Road, Gulshan-e-Iqbal, Karachi. Ph-0213-4960655

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# INTRODUCTION

In Pakistan, Social Security Scheme was launched on March 1, 1967, under West Pakistan Employees' Social Security Ordinance No. X of 1965, with the assistance of the International Labor Organization. The Sindh Employees' Social Security Institution (SESSI), however, came into being on July 1, 1970 when the Scheme was reorganized on provincial basis after the dissolution of One-Unit. Initially, the Scheme was designed for coverage of textile industry workers of Karachi and Hyderabad. On getting encouraging results later on the Scheme was extended to all other industries and commercial units.

SESSI is a service-oriented organization. The function of the Institution is unique in nature for the welfare of labor class. It aims at providing medical care facilities and cash benefits to the secured workers and their dependents.

 The general direction and superintendence of the affairs of the Institution vest in a tripartite Governing Body. In its functioning, the Institution is guided by such instructions on questions of policy as may be given to it from time to time by the Government.

Medical Care occupies the most significant place in the services of SESSI more than 70% of its budget is spent on providing medical care facilities to the secured workers and their dependents. The Scheme applies to the entire province of Sindh. However, administrative offices/ medical outlets are functioning in Karachi, Dhabeji, Nooriabad, KaluKohar, Kotri, Hyderabad, Tando Jam, Tando Adam, Mirpurkhas, Nawabshah, Shahdadkot, Shikarpur, Jacobabad, Larkana, Rohari and Sukkur. For providing the medical facilities there are currently 39 dispensaries, 5 medical centers and 4 hospitals.

Under Social Security Scheme secured workers are entitled to cash sickness benefit, injury benefit, maternity benefit, iddat benefit, disablement gratuity, disablement pension, ex-gratia grant and dependents get survivors' pension and death grant.

# Definitions

In this Contract, the following terms shall be interpreted as indicated hereunder:

“Bid” means a tender, or an offer by a, firm, company or an organization expressing willingness to undertake a specified task at a price, in response to an invitation by a Procuring Agency.

“Bidding Documents” means all documents provided to the interested bidders to facilitate them in preparation of their bids in uniform manner.

“Bidding Process” means the procurement procedure under which sealed bids are invited, received, opened, examined and evaluated for the purpose of awarding a contract.

“Contract” means an agreement enforceable by law and includes General and Special Conditions, Specifications, Drawings and Bill of Quantities

“Contractor” means a person, firm, company or organization that undertakes to execute works including services related thereto, other than consulting services, incidental to or required for the contract being undertaken for the works;

“Government” means the Government of Sindh.

“Procuring Agency” means,“Sindh employee’s Social Security Institution (SESSI)”,Government of Sindh

“Supplier” means a firm, company or an organization that undertakes to supply goods and services related thereto, other than consulting services, required for the contract.

“Services” means any object of procurement other than goods or works, and includes consultancy services;

“Response Time” means, the period starting from the first date of issuance of bidding documents up to last date of issuance of bidding documents.”

“Lowest Evaluated Bid” means a bid most closely conforming to evaluation criteria and other conditions specified in the bidding document, having lowest evaluated cost;”;

# INVITATION TO BID

Sindh Employees’ Social Security Institution (SESSI)”, Government of Sindh

(hereinafter referred to as Purchaser), invites sealed bids from eligible bidders for

**AUTOMATION OF (SESSI)”,**

**“SINDH EMPLOYEES’ SOCIAL SECURITY INSTITUTION**

**(SESSI)”,**

**GOVERNMENT OF SINDH**

SESSI invites proposal from the well reputed IT companies to implement to automate different processes of SESSI. Any system must not only meet the requirements mentioned in this Request for Proposal (RFP) and must also be flexible and scalable in order to meet its future business and technology needs.

To cope up with latest challenges and rapidly changing technology, system should be capable to provide quick access to information that enables to remain fluid and proactive with the decision-making process and responsive to constituents. System should be flexible in such a way that facilitate in collaboration and be productive.

The scope of work includes

* Financial Accounting System
* Security and Surveillance System
* Smoke Detection System
* Fire Suppression System
* Call Center
* Integration with other software/systems
* Data Center Preparation
* Operation and maintenance of complete system for 03 years
* Human Resource Capital Management

## Invitation to Bidders

Sind Employees Social Security Institute (SESSI),Government of Sindh, invites technical and financial proposals from reputable Companies for above stated systems.

## 

1. Tender Bids in sealed envelopes as per guidelines and information provided in this documentsare required. Interested bidders applying for bids should submit bids as per Single Stage Two Envelope Procedure of SPP Rules 2010(Amended 2013), as amended till date). . The interested bidder musthave valid NTN, GST, PST registration certificates as a precondition for their eligibility forparticipation in the bidding process.

2. The bidder must quote for the complete desired specifications. The incomplete bids will be rejected as non-responsive.

3. The bidder must quote their rates for Operation/ running of the complete system for 3 years after

Installation of the system.

4. The bidder must bid for the complete packages. Bidding for individual items will be rejected as non-responsive.

5. All bids received will be opened and evaluated in the manner prescribed in the evaluation criteria of bidding document.

6. Interested eligible bidders may obtain further information on the bid and collect the bidding

documents from the Under signed Address: “Sindh Employee’s Social Security Institution (SESSI)”,at office situated at Aiwan-e-MehnatKash, ST-17, Block-6, Gulshan-e-Iqbal, Karachi 75300,from thedate of advertisement during office Hours, i.e. from 9:00 am to 5:00 pm on payment of document fee of Rs. 2,000/- in the form of Pay order/Demand Draft in favor of “Sindh Employees’ Social SecurityInstitution (SESSI)”,

7. All bids must be accompanied by an earnest money/bid security of two percent (2%) of total bid amount, in the form of ‘pay order’, ‘demand draft’ and Call deposit’ in the name of “Sindh Employee’s Social Security Institution (SESSI)”, and must be accompanied with the bid”. Bid without earnest money/bid security of required amount and prescribed form shall be rejected.

8. “Sindh Employee’s Social Security Institution (SESSI)”, will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of bids.

9. The Bid prices and rates are fixed during currency of contract and under no circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.

10. The Procuring Agency shall have right of rejecting the tender as per Sindh Public Procurement Rules 2010(Amended 2013), as amended till date).

11. All quoted prices must include all applicable taxes, such as General Sales Tax, Income Tax, Provincial Sales Tax and/or etc. If not specifically mentioned in the bid, then it will be presumed that the prices include all the taxes. Purchaser will not be responsible and would not pay any additional amount in case of changing in tax rate by the Government of Sindh or Government of Pakistan.

12. Rights and obligations of the procuring agency and the contractor shall be governed by General and Special conditions of contract signed between the procuring agency and the contractor.

13. Execution/installation of all equipment of the bid would be at locations communicated to bidder at the time of award of contract or at the time of issuance of purchase order.

14. The success full bidder will run the project for 3 years from the date of completion of project and will hand over the project to SESSI and will trained the SESSI’s designated staff for smooth running of the system.

15. The following shall result in blacklisting of suppliers, contractors, or contractors, individually or collectively as part of consortium:

(a) Conviction for fraud, corruption, criminal misappropriation, theft, forgery, bribery or any other criminal offence;

(b) Involvement in corrupt and fraudulent practices while obtaining or attempting to obtain a procurement contract;

(c) Final decision by a court or tribunal of competent jurisdiction that the contractor or supplier is guilty of tax evasion;

(d) Willful failure to perform in accordance with the terms of one or more than one contract;

(e) Failure to remedy underperforming contracts, as identified by the procuring agency, where underperforming is due to the fault of the contractor or supplier.

16. Sind Employees Social Security Institution (SESSI), Government of Sindh, invites technical and Finance proposal from reputable Companies for Enhancement/Up gradation of its facilities. Scope of this RFP will be for establishing of Health facilities/Revenue Collection and up gradation ofSESSI.

Unit rate of each item to be quoted, the quantities will be finalized after detailed surveys. The quantity of each item will be communicated to the successful bidder at the time of signing of contract agreement or after signing of the contract agreement and a separate purchase order will be issued to the successful bidder in this respect.

16. An interested bidder, who has obtained bidding documents, may request for clarification of contents of the bidding documents in writing, and procuring agency shall respond to such queries in writing within three calendar days, provided they are received at least five calendar days prior to the date of opening of bids.

**----------------------------------------**

**VICE COMISSIONER**

Sindh Employee’s Social Security Institution (SESSI)”.

# General Terms & Conditions

* Bids not conforming to the terms, conditions and specifications stipulated in this RFP will be rejected.
* “Sindh Employees’ Social Security Institution (SESSI)”, Government of Sindh invites this tender under **single stage - two envelope procedure, under SPPRA 2010 (Amended 2013), as amended till date.**
* Proposal after due date and time will not be accepted for any reason. Proposals must not be sent by Facsimile or e-mail. Such submissions will not be accepted for any reason.
* Bid/Proposal shall comprise the technical and financial proposal.
* The bidder must bid for the complete package. Bidding for individual items will be rejected as non-responsive.
* All bids received will be opened and evaluated in the manner prescribed in the evaluation criteria of thisbidding document.

1. **Bid Security & Performance Security**

All bids must be accompanied by an earnest money/bid security of two percent (2%) of total bid amount, in the form of ‘pay order’, ‘demand draft’ and Call deposit’ in the name of “Sindh Employees’ Social Security Institution (SESSI)”, and must be accompanied with the bid”.

Bid without earnest money/bid security of required amount and prescribed form shall be rejected.

* Bid security of the unsuccessful bidders will be released by “Sindh Employees’ Social Security Institution (SESSI)”, after award of work or after expiry of bid validity period whereas the bid Earnest money of successful bidder will be converted in to performance security which shall not be exceed equivalent to 2**%** of contract price.
* The performance security of the successful bidder will be released after issuance of successful completion certificate by the Sindh Employees’ Social Security Institution (SESSI), Government of Sindh.
* All/any terms and conditions not specified here shall be dealt with reference to pertinent SPPRA Rules 2010(Amended 2013), as amended till date.

1. **Validity of the proposal**

All proposals and price shall remain valid for a period of 90 days from the closing date of the submission of the proposal. However, the responding organization is encouraged to state a longer period of validity for the proposal.

1. **Currency**

All currency in the proposal shall be quoted in Pakistani Rupees (PKR). The Bid prices and rates are fixed during currency of contract and under no circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.

1. **Withholding Tax, Sales Tax and other Taxes**

The responding organization is hereby informed that the Government shall deduct tax at the rate prescribed under the Tax laws of Pakistan, from all payments for supplies and services rendered by any responding organization who signs a contract with the Government. The responding organization will be responsible for all taxes on transactions and/or income, which may be levied by Government. If responding organization is exempted from any specific taxes, then it is requested to provide the relevant documents with the proposal.

1. **Compliance to Specifications**

The Responding Organization (RO) to provide information as per (Compliance sheet). RO may not propose any kind of refurbished equipment/instruments/devices in their technical proposals.

1. **Financial Capabilities**

The RO(s) shall describe the financial position of its organization. Income Statement or Report should be included in the detailed Technical proposal.

1. **Penalty Clause**

The Responding Organization (RO) should deliver & deploy the solution in 16 weeks or quote their own delivery period and provide 12 months support on account of maintenance. There will be penalty imposed on delay of per week @0.1% of work project value.

## OEM relationship and warranties

The responding organization (RO) should be authorized Partner if not a manufacturer, and should submit a letter from **the original manufacturer for this project adressing the client**

* All equipment should have 12 months warranty. All Software loaded on active equipment should have warranties for 12month against defects/bugs.
* The equipment supplied should be through verifiable by Manufacturer representative.
* The end user licenses, end user warranties and end user contracting support services will be in the name of Customer, for all the equipment and Software loaded on the equipment delivered during the course of the project.
* No refurbished/End of life and used equipment will be supplied during the course of the project.

**SPECIAL CONDITIONS:**

1. The quoted rates once offered by the firms will not be changed during the contract period.
2. The bidder shall quote their price both in figures and in words on free delivery basis to SESSI Facilities.
3. Distributor once nominated by the manufacturer / importer shall be for the whole contract period and manufacturer / importer cannot change its distributor during the contract period in any case. In exceptional cases the tendering authority may approve changes.
4. No manufacturer / importer shall authorize their distributor / agent / any firm or person to quote the same item, which the manufacturer is quoting itself in any tender. Failing those offers of both the manufacturer as well as other bidder shall be ignored.
5. The manufacturer/importer supply sub-standard, misbranded or contaminated item(s) etc., those will be replace by the contractor at his risk and cost. The supplier shall be responsible to provide the fresh stock of standard quality within 30-60, days against the rejected one. Otherwise amount equivalent to the supplied quantity of defective goods shall be deducted from their bills/earnest money and supplier may be black listed by the competent authority accordance with the offence and hence their performance security will be forfeited.
6. If goods are declared sub-standard the Manufacturer and their Distributor are equally responsible and are bound to supply fresh quantity free of cost.
7. The Technical evaluation carried out by the Committee shall be final.
8. The supplier must provide goods and their solutions within 60 days for local manufacturer and 120 days for importer from the date of issue of purchase order/signing of contract agreement however bidder have the rights to quotes its own delivery period.
9. Payment shall be made to supplier as prompt as supplies/Inspection are completed but not later than 30 days of supplies.

1. If any of the firm/supplier shall not supply the goods after getting award of contract, the whole performance security shall be forfeited and the bidder may be black listed.
2. Alternate offer shall be accepted. If the bidder purchase separate documents and submit prescribed earnest money along with their alternate offer.

**PURCHASER’S RIGHT TO VARY QUANTITIES**

The purchasing authority reserves the rights to increase / decrease or delete the quantities of goods at the time of award of contract and also reserves the right to enhance the quantity of goods originally specified in the schedule of requirement without any change in unit price or other terms and conditions of goods at any time during contract period.

**PURCHASER’S RIGHT TO ACCEPT ANY BID AND REJECT ANY OR ALL BIDS:**

The Competent authority reserves the right to purchase full or part of the store or ignore / scrap /

cancel the tender as per relevant rules of SPPRA-2010(Amended 2013),as amended till date.

**PERFORMANCE SECURITY:**

The successful bidders will have to deposit the requisite security in the shape of a Pay Order / Demand Draft at 2% value of the order amount and after the successful completion of stores the same will be released.

**CONTACTING THE PROCURING AGENCY:**

No Bidder shall contact the Procuring Agency on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. Any effort by a Bidder to influence the Procuring Agency in its decisions on bid evaluation, bid comparison, or Contract Award will result in the rejection of the Bidder’s bid and subsequent black listing. Canvassing by any Bidder at any stage of the Tender evaluation is strictly prohibited.

**Template for UNDERTAKING on Rs.100/- Non Judicial Stamp Paper**

I/we read / understand the conditions specified in the tender inquiry and undertake:

That I/we shall remain bound to supply any item as an additional quantity at the same rate on which said item I/we have supplied during the contract period.

That I/we agree whether our tender accepted for total, partial or enhanced quantity for all or any single item.

I/we also agreed to supply and accept the said item at the rates for the supply ofcontracted quantity within the stipulated period shown in the contract.

I/we undertake that, if any of the information submitted in accordance to thistender inquiry found incorrect, our contract may be cancelled at any stage on ourcost and risk.

I/we undertake that, I/we have never been black listed.

**The technical offer must be submitted with the following documents**

There will be a two-stage technical evaluation. **Preliminary evaluation** of technical bids will be done on the basis of following parameters:

1. RO or Lead bidder should be a Pakistani Company **OR** a branch office of a Multinational Corporation having local presence
2. Comply with specifications mentioned in this RFP.
3. Bidder should be in IT business from last 5 years at minimum.
4. Bidder should have at least one project reference covering all solutions areas written in RFP.
5. Bidder should have at least one reference for Deploying Data Canter.
6. Bidder should propose all equipment strictly compliant with technical specification; no optional item will be accepted.
7. At least one PMP (Project Management Professional) should be a part of RO Project team.
8. The responding organization (RO) should be a manufacturer or authorized Partner, **from the original manufacturer**.
9. The responding organization (RO) is required to submit the **Manufacturer Authorization Letter** in the favour of the client.
10. Financial proposals will only be considered only for those bidders who are short listed in technical evaluation.

Following are needed to be mentioned in proposals Financial Strengths, General Standing in the business and market, list of clients and achievements, registration and affiliations etc. The Technical and Financial Bids shall be evaluated on the basis of following parameters:

Company Profile with complete address, telephone No. Fax. No. and e-mail address and contact person.

1. Evidence of Relevant experience.
2. Affidavit that the firm is not blacklisted;
3. Document Fee and Bid Security of the specified form and amount as per Tender Document in a separate sealed envelope.
4. Bid must be signed, named and stamped by the authorized person of the firm along with authorization letter
5. Valid NTN, GST, PST and any other valid Tax Registration Certificate required by law in force.
6. In case of joint venture, names, company profiles, NTN, GST, PST Registration Certificates and authorization letter of the JV Partner on Stamp Paper of the prescribed denomination to bid shall

be required.

1. Drawings / brochures of the products offered.
2. Complete schedule of supply& installation is to be provided.
3. Ability to provide after sales support.
4. A comparative sheet may be attached in the format indicating compliance of essential tender requirements in the format given below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No** | **Tender Requirement** | **Compliance** | **Non- Compliance** |
| 1. | Bid submitted in prescribed format with required technical documents |  |  |
| 2. | Bid for complete package |  |  |
| 3. | Delivery schedule compliance |  |  |
| 4. | Support & Maintenance compliance |  |  |
| 5. | Technical skills compliance |  |  |

# 

# Selection Criteria:.. Single stage two-envelop procedure under SPP Rules 2010 (Amended 2013), as amended till date

will be used for the final selection of the vendor for the Automation of SESSI“ Sindh Employee’s Social Security Institution (SESSI)”, Government of Sindh.Bid / Proposal shall comprise one single envelope containing the technical &financial proposal separately sealed and required information mentioned in General Terms & Conditions. All bids received will be opened and evaluated in the manner prescribed in the evaluation criteria of bidding document.

Instructions for Responding Organizations

**Communication**

Enquiries regarding this tender document shall be submitted in writing/email to:

**Vice Commissioner ,Sindh Employees’ Social Security Institution (SESSI) @ vc.sessi@gmail.com.**

**Mode of Delivery and Address**

Proposals should be submitted on or before 20-03-2016 at **02:00**PM at the address given below:

**Vice Commissioner “Sindh Employees’ Social Security Institution (SESSI)”, Government of Sindh at his office situated at Aiwan-e-MehnatKash, ST-17, Block-6, Gulshan-e-Iqbal, Karachi 75300**

Proposals shall be delivered by hand or courier so as to reach the address given above by the last date indicated for submission. **PROPOSALS RECEIVED BY FAX OR EMAIL SHALL NOT BE ACCEPTED.**

**Submission of Proposal**

The bidder must bid for the complete package. Bidding for individual items from the package will be rejected as non-responsive. Proposals can be submitted on or before 20-03-**2016at 02:00 PM** at the office of Vice Commissioner,Sindh Employees’ Social Security Institution (SESSI),at Aiwan-e-MehnatKash, ST-17, Block-6, Gulshan-e-Iqbal, Karachi 75300,Bid / Proposal shall comprise one single envelope containing the technical &financial proposal and required information mentioned in General Terms & Conditions.

**Opening of Proposals**

The technical proposal submitted against the subject tender document will be opened by the Procurement Committee of Sindh Employees’ Social Security Institution (SESSI),at Aiwan-e-MehnatKash, ST-17, Block-6, Gulshan-e-Iqbal, Karachi 75300,on 20**thMarch 2016at 03:30 PM**in the Committee room,in presence of all the bidders, or their representatives, who may choose to be present.

**Evaluation and Comparison of Technical and Financial Bids**

Bid / Proposal shall comprise one single envelope containing the technical &financial proposal and required information mentioned in General Terms & Conditions. All bids received will be opened and evaluated in the manner prescribed in the evaluation criteria of bidding document.

**Mandatory Clause**

* The interested bidder must have valid NTN, GST, PST registration certificates as precondition for their eligibility for participation in the bidding process.
* The bidder must partner of principle/manufacture/Importer/Distributor for equipment quotedand their allied peripherals.
* The bidder must provide the Manufacturer Authorization Letter addressing the SESSI in favor of Bidder or its Joint Venture Partner.

# Basis of Evaluation and Comparison of Bid

The financial bid of only those bidders will be opened who qualify the following evaluation criteria against the tender. The financial bid of disqualified/non-compliant bidders will be returned unopened.

|  |  |  |  |
| --- | --- | --- | --- |
| **S.#** | **Evaluation Parameter** | **Marks** | **Description** |
| **1.1** | **Company Profile** | **200** |  |
| 1.1.1 | Years in business  Company Profile | 15 | 5 year in business.  (Please attach evidence) |
| 1.1.2 | Bidder’s Business Partners | 15 | At least 3 year partnership with Principal(s)  (Please attach evidence) |
| 1.1.3 | Bidder’s Certification | 20 | At least 3 year ISO 9001 Certifications |
| 1.1.4 | Company Size | 50 | Bidder must have at least 50 regular employee's registered with EOBI / SESSI and their monthly contributions must be paid to EOBI / SESSI  (Please attach evidence) |
| 1.1.5 | Team Member Certifications  [10 marks for each certified professional] | 100 | Must have at least  3 Microsoft Certified resources on proposed Solution. . (attach certificate)  2 Certified Solution Consultant (attach certificate)  1 Certified DBA (Provide Certificate)  2 PMP (attach certificates)  2 Certified Data Center Specialist (attachdegrees) |
| **1.2** | **Relevant Experience** | **350** | Domain Knowledge at Pakistan and International level. |
| 1.2.1 | Similar Nature Project in Pakistan in Government Sector  [35 marks for each project] | 175 | That bidder has successfully completed five (05) projects for implementation of same nature projects in Government sector locally. |
| 1.2.2 | Similar Nature Project internationally  [35 marks for each project] | 175 | That bidder has successfully completed five (05) projects for implementation of same nature projects internationally. |
| **1.3** | **Development Strategy** | **300** | Framework and strategy |
| 1.3.1 | Development & Deployment Methodology | 100 | Define framework and strategy that will be used to structure, plan, and control the process of developing and deployment of this specific system. It should include specific deliverables that will be created and completed during the project. |
| 1.3.2 | Presentation Before the Competent Authority | 200 | The successful bidder or technical evaluation has to present its complete plan of Automation of SESSI before the competent authority. |
| **1.4** | **Financial Capabilities** | **150** |  |
| 1.4.1 | Financial Capabilities in last 3 years  More than 500 million revenue in total  ( 150 marks)  More than 250 million and less than 500 million revenue in total 100 marks)  More than 125 million and less than 250 million revenue  (50 marks) | 150 | Provide 3 years audited financial statements |
| **Total Marks** | | **1000** | **(Technical Proposal + Financial Proposal)** |

Note

1: Firm must get 80% i.e. 800/1000 marks in Technical Proposal for qualifying as per above mentioned criteria.

2: For verification of above information, the procuring agency or its nominee(s) may visit the  
premises of the firm at any time during evaluation process and will take necessary action in

case of false presentation of documents.

**Preliminary Evaluation Checklist**

Bidders are required to furnish relevant information required in the evaluation criteria in theprescribed Technical Evaluation Forms provided in the document

**Joint Ventures**

Bids submitted by a joint venture of two or more companies or partners shall comply with the following requirements:

a) The Bid, and in case of successful Bid, the Contract form, shall be signed by the lead bidder duly nominated by all the JV partners;

b) One of the partners shall be authorized to be Incharge; and this authority shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;

c) The partner Incharge shall be authorized to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners of the joint venture;

d) all partners of the joint venture shall be liable jointly and severally for the executing of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Bid Form and the Form of Agreement (in case of a successful Bid); and

e) Ssolution The JV Agreement for this project entered into by the joint venture partners on stamp paper duly attested by Notary Public shall be submitted with the Bid.

## Training

The responding organization (RO) should arrange local training for Staff (Four Persons) on proposed. RO should provide the detail course contents and timeline trainings.

## Documents Establishing the Conformity of Proposed Solution to Bidding Documents

1. The Bidder shall furnish, as part of its bid, documents establishing the conformity to the Bidding Documents of the proposed solution that the Bidder proposes to supply and install under the Contract.
2. Delivery schedule for items in BOQ would be communicated at the time of singing of the contract.
3. Bids for sub-systems or portions or part-solutions of the solution shall not be accepted.
4. The documentary evidence of conformity of the proposed solution to the Bidding Documents shall be in the form of written descriptions, literature, diagrams, certifications, and client references, including:
5. Detailed description of the essential technical and performance characteristics of each component making up the proposed solution;
6. Detailed drawings, design parameters, design calculations, put-up sheets and outputs of any tools used for capacity planning and designing of the entire solution;
7. An item-by-item commentary on the Purchaser's Technical Requirements, demonstrating the substantial responsiveness of the proposed solution offered to those requirements. In demonstrating responsiveness, the commentary shall include explicit cross-references to the relevant pages in the supporting materials included in the bid. Whenever a discrepancy arises between the item-by-item commentary and any catalogues, technical specifications, or other pre-printed materials submitted with the bid, the item-by-item commentary shall prevail;
8. Data Sheets of all equipment’s and software’s offered;
9. Preliminary Project Plan as required by the Purchaser and stated in the RFP;
10. Written confirmation that the Bidder shall accept responsibility for the successful integration and inter-operability of all components of the proposed as required by the Bidding Documents.
11. The bidder shall categorically confirm the specification of RFP in all respects.
12. Bids submitted without the above desired confirmation and documents may be rejected straight away.

# Special Instructions

* Incomplete applications will not be considered.
* Any firm, which furnishes wrong information, will be liable for legal proceeding and if any contract is awarded, the same will be cancelled.
* Sindh Employees’ Social Security Institution (SESSI), reserves the right to accept or reject any or all proposals without assigning any reason thereof.
* The financial bid must be filled in prescribed form without any alteration/over writing.
* Conditional tenders/bids will not be acceptable.
* Sindh Employees’ Social Security Institution (SESSI), reserves the right to increase or decrease the scope of work / number of items without assigning any reason under relevant provisions of SPPRA Rules 2010(Amended 2013), as amended till date)..
* Only companies registered with Sales Tax, Income Tax & Sindh Revenue Board Departments shall be eligible to participate in the tender (proof of registration is required).
* Every page of this tender document should be signed and sealed by the bidder.

# Contacting the Purchaser

Any effort by a bidder to influence the Purchaser in the Purchaser's decisions in respect of bid evaluation or Contract award will result in the rejection of the bidder's bid.

# Purchaser's Right to Accept the Bid or Reject the Bid

The Purchaser reserves the right to accept or reject the bid and to annul the bidding process at any time prior to award of Contract, without thereby incurring any liability to the bidder or any obligation to inform the bidder of the grounds for the Purchaser's action as per SPP Rules, 2010.

# SCOPE OF WORK:

## Financial Accounting Solution

SESSI requires a system which can help to modernize their workplaces, operate transparently, meet compliance requirements, and maintain fiscal accountability. Proposed system should provide a comfortable and rich user experience to get familiarity with system. SESSI targets to achieve organization wide accountability means proactively tracks revenues, expenditures and personnel resources against defined budget objectives with Anticipation and avoid budget overruns before funds are committed.

The core functions of system required are as under;

* General Ledger
* Chart of Accounts
* Account Receivable
* Accounts Payable
* Supply Chain Management
* Budget Preparation and Control
* Bank & Cash Management
* Automated Account& Bank Reconciliation
* Setup Taxation
* Cash Disbursement
* Cash Flows
* Financial & Accounting Reports
* Management Dashboard
* Human Resource Management
* Payroll

Core Functional requirements in Financial System are:

* Built in Business Intelligence Tools for Business Growth Analysis
* Executive Dashboard on Mobile/Tablets
* Bulk Transaction Upload / Download
* EDI ( Electronic Data Interchange )
* Alerts - customized as per user’s requirements
* Key Performance Indicator (KPI) definition

### General Ledger

* Provides a centralized way for collecting and analyzing financial information.
* General entry can be created directly or can be made from other application modules.
* Manage journal transaction enquiries and reports.
* Define the structure of General Ledger accounts and its sub accounts.
* Allow reversing and auto-reversing entries.
* Create a General Ledger journal and post multiple journals.

### Chart of Accounts

* Create a chart of accounts
* Create and categories main accounts
* Identify main account types
* Create financial dimensions and dimension sets
* Configure account structures, create advanced rule structures, and create organisational units and hierarchies
* Create fiscal calendars, years and periods, create date intervals, create reason codes, define journal names

### Account Receivable

* System should allow to create partial and full payment of one invoice.
* System should flag late payments & send notifications on overdue invoices.
* Maintain extensive customer profile information
* The ability to print customer statements
* Manage Accounts Receivable daily and periodic procedures
* System allows to set flexible terms of payment and cash discounts
* Auto Recondition of ledgers

### Accounts Payable

* Create vendor invoices, create invoice journals, generate vendor payments, and manage vendor post-dated cheques.
* The system should allow to keep track of all purchases and outgoing expense.
* Feature to have Pre-payment capability.
* System should provide feature to set different policies.
* Easily reconcile payables to general ledger.
* Vendor self-service portal

### Budget Preparation and Control

* Set up and maintain budgets and forecasts.
* Budget Approval
* Seamless integration with other modules.
* Compare planned budget vs. actual data for current and prior years.

### Account Reconciliation

* Account reconciliations should support the appropriate accounting principles.
* Automates and standardizes the reconciliation process.
* Add unprecedented transparency and visibility to the financial process.
* Flexible balance rules with automated checklist.
* Ability to reconcile all accounts.

### Setup Taxation

* Prepare and setup flexible and multidimensional tax setup.
* Provide feature to use tax codes, tax groups, and item tax groups to manage taxes.
* Make some items on an invoice taxable, and others non-taxable. Calculate different tax amounts based on the type of item.
* Tax Calculations

### Cash Disbursement

* Flexible cash disbursement and full check reconciliation
* Record and track all the cash payments.
* Availability of cash receipts and disbursements reports

### Cash Flows

* Easily manage cash flows.
* Cash flow forecast and analysis.
* Cash flow statements.
* Quickly track the flow of working capital during an accounting / financial period.
* Provide feature to include budget in cash flow.

### Financial Reports

* The system should provide either a built-in reports or integrate with an industry standard reporting system.
* The system must provide standard financial and management reports.
* The system must be capable of the production of the annual accounts report

### Dashboard

* System should have intuitive and rich interface dashboard.
* Dashboard should provide holistic view of all accounting information.
* Allow role-based access to dashboards.

## Call Centre

Contractor shall also be responsible to supply, install and commission One complete Solution of Call Center which includes modular approach to address customer to enrich customer experience across different interaction channels like Inbound/Outbound Calling with Interactive skill based routing, Outbound Preview & Manual Dialing, Voice Recording of Calls answered by Agents and Reporting; details of which are given in the Bill of Quantities of this bidding document/RFP.

Vendor would be responsible to care and look after the electrical equipment & supplies. Penalty would be imposed on vendor to makeup the loss; in case of finding carelessness in equipment handling and misuse of the provided equipment.

Vendor shall be responsible for support and maintenance for a period of One Year for Call Center Solution.

Any unforeseen requirement for the implementation and maintenance of the project would be core responsibility of vendor.

SLA, if required, will be signed as per criteria of SESSI

## Human Resource Management

Human resource module should able to keep track of employee job history that is, personal information, grades, promotions, transfers, termination. Use of unique identification to identify a particular employee. Human Resource data could be shared and available to other Government of Sindh department as per request and with given permissions. The IT Officer / Administrator of any particular department will have the access to modify / update the data of currently approved personnel at a particular department.

Following features should be offered by HR module:

* New Job Creation Process
* Recruitment Process
* Employee Profiling
  + Personal Information
  + Address Information
  + Family tree
  + Roaster information
  + Payment Structure
  + Document Attachment
  + Card Information
  + Bank Information
  + Passport Information
  + Education / Skill set information
  + Health history
* Time & Attendance
  + Shift information
  + Schedule Information
  + Late Policies
  + Overtime Policies
  + Employee specific Schedule
  + Define yearly holidays
* Training Process
* Appraisal Process (Annual Confidential Report)
* Promotion Process
* Travel Management
* Disciplinary Action Process
* Retirement Process
* Honorarium/Incentive Process
* Transfer Process
* Severance Process
* House Rental Process
* Leave Process
* Promotion Process
* Medical Reimbursement Process
* Welfare Funds
* Service Book
* Public Relation
* Employee self service
* Document management for routine office correspondence.
* Notification
* HR Reports

### Payroll

An automatic payroll system that facilitate to comply with legal and tax requirements and simplifies the process of paying employees. Payroll processing and financial reconciliation should be simplified and streamlined to improve accuracy and compliance with financial reporting requirements. The system should provide complete payroll picture information that helps to run payroll efficiently and compliantly. It reduces administrative costs, save time, and manages employee information effectively.

Following features should be offered by Payroll module:

* Automate payroll deductions including taxes
* Attendance Processing
  + - Via Bio Matrices
    - Via Mobile Phones
    - Via Locations base services
    - Via Bulk Transactions.
* Leave Management
* Payroll Processing
* Payslip
* Allowances & Benefits
* Loan Management
* Earning & Deductions
* Overtime Management
* Social Security Contribution / EOBI contribution
* Final Settlement / End Of Service
* Generate reports

## Integrations

Since integrations play a vital role to get insight and halt the duplication of information, Bidder have to do close integration within proposed solution as well as with available digital data of SESSI registered workers, factories, hospitals, etc. whereas business application based on .Net framework. Advantage of integration is that SESSI will have full control over data and there would not be any dependency on external services like Hospital Management System, Employee and Employer’s registrations and contribution module. etc. Most importantly this will be a scalable solution which SESSI can later extend to serve other needs of the enterprise.

Responsive bidder has to make sure integration of proposed solution with existing applications of Sindh Employee’s Security Institution.

## Data Center Preparation

Bidders have to prepare data centre as per EIA/TIA Standards in Karachi.

**Decontamination Services for Data Center Environment at SESSI Data Center before the installation of Air Purification System.**

Data Center Decontamination Services must be performed by professional data Center decontamination Services Company with its **track record of such works (share copies of Purchase order) required**  in performing these services in Pakistan and must be we aware of global data center decontamination practices & standards.

1. Must employ technicians that have a comprehensive experience in data center cleaning.
2. All **equipment, supplies, and chemicals** are designed and recommended for data center cleaning as per **ISO 14644-1** standard.
3. Must use pH neutral and static dissipative chemicals to maintain floor material integrity.
4. Only HEPA / ULPA Filter equipment’s should be used to control over contaminant levels.
5. Engineers must wear clean room suits, shoes, head covers, masks all in accordance of clean room standard.
6. Cleaning Schedule

|  |  |
| --- | --- |
| One Time Actions Plan | Debris removal Access floor maintenance (HEPA vacuum decontamination by Lint Free mop & pH neutral chemical)  Room Surface decontamination (HEPA & pH neutral chemical)  Hardware decontamination (HEPA)  Roof Top decontamination (HEPA & pH neutral chemical)  Subfloor void decontamination (HEPA vacuum decontamination by Lint Free mop & pH neutral chemical) |

1. Services Overview: technicians should perform these services separately, or in combinations, that are designed to keep computer room running at peak performance. These services are:
2. Racks De-Contamination
3. Roof Tops Ceiling De-Contamination
4. Access Floor De-Contamination
5. Under-floor Plenum Cleaning
6. Room Surface De-Contamination
7. Exterior Hardware Cleaning
   * Use proven techniques to remove dirt, dust, and other contaminants from controlled environment. Not only the ones we can see, but more importantly the hidden ones that we can't see. Must deploy trained technicians which use specialized, environmentally friendly cleaning solutions – time tested for use on the materials used in the manufacture of modern technical equipment. Must engage HEPA filtered vacuums which are certified to 0.3 microns and remove even the smallest of micro-particles from facility. Every possible step must be adopted to guard against damage or disruption to data center operation.

8. Automatic Shoe Cover dispenser should be supplied along with the Air Purification Unit and decontamination services to control / prevent contaminants entering the data center via shoes. Automatic Shoe Cover dispenser must have the high volume capacity to hold up to 110 pairs of shoe covers. **Body Material should be of stainless steel, painted steel and high-impact ABS plastic. It should be hands free operation, which requires no electricity.**

**Data Center Air Purification System**

A self-contained, air cleaning system, move-able unit that re-circulates the air in data centers, free of corrosive gases. The system is will be used for controlled environments containing sensitive computer electronics and electrical equipment in Data Center. The air should be passed through adsorbent media; harmful corrosive gases are captured and should be permanently bound.

1. System to operate 24x7x365
2. Unit should have Variable Speed Fan
3. **Unit Size should be not more than 68 inches in height or one rack sized i.e. 42U**
4. **Unit should be transportable / moveable**
5. Low energy consumption and noise
6. **The system is an in-room housing containing a blower, particulate and gaseous filtration, and the unit should provide protection for up to 5000 square feet (approximately 500 M2).**
7. **Variable control of airflow up to 1000cfm (1700 CMH)**
8. Low EMF brushless AC blower motor
9. **Amount of absorbent media should be 4 cubic feet (113 liters) filled in low pressure holding frames**
10. This should allow a user to choose the media whose performance characteristics are particularly suited for targeted contaminant gases.
11. MERV 7 (G4) Dust Pre filter
12. **Adsorbent media should be a 50 percent/ 50 percent blend of 8 potassium**

**permanganate based media and Sulphasorb acid gas removal media designed for the removal of corrosive gases.**

1. MERV 14 (F8) Dust Final Filter
2. System to be designed and assured to meet ISA class G1.
3. **Differential pressure gauges to indicate dust ﬁlter changes**

**Copper Cabling Solution for Data**

The proposed solution should consist the following:

* Cat-6 UTP Cable 23AWG, in Box of 1000 ft
* Single/Dual Shutter Face Plate (as per site requirement) with Single Cat-6 UTP Tool-less I/O
* 19" Rack Mountable 24 Port Patch Panel, modular type loaded with 24 Nos. Cat-6 UTP Tool-less I/O's
* 19" Rack Mountable Front Cable Manager
* Factory finished Cat-6 UTP Patch Cord, 1meter and 3 meter
* Channel, PVC pipe etc for laying of cables
* Installation including fixing of pipe/channel, cable laying, testing, tagging with Fluke Report and Performance Warranty Certificate from Manufacturer
* Complete Solution including racks, PDU and cable managers must be from a single manufacturer

**Cabling Component Specifications**

The cabling system should meet all the performance requirements of the existing and known forthcoming national and international cabling standards up to and including Class E link and Category 6 hardware (ISO/IEC 11801 and EN 50173) requirements. The cabling system must be covered under a performance warranty by the manufacturer for 25 years with local presence of the principal or its representative

.

**Copper I/O’s**

The copper jacks must comply with EN 60603-7 and EN 28877 and be of the insulation displacement type. They must be capable of terminating 0.50 to 0.65 solid and 7 x 0,15 to 0,20 mm stranded wires. The jacks have the following features:

* Keystone fixing;
* Complete Tool less assembly preferred
* Capable of being wired to both 568B and 568A
* Flexible cable entry
* Category 6 compliant

The jacks must have following characteristics:

|  |  |  |
| --- | --- | --- |
| **Electrical Characteristics** | | |
| Compressive Strength | DC: 1000V(AC750V) 1min, no breakdown or arcing phenomena | |
| Rated Current(A) | 1.5AMP | |
| Insulation Resistance | ≥200 mΩ | |
| Contact Resistance | ≤1 mΩ | |
| Continuation Reactance | 20 mΩ | |
| **Physical Characteristics** | | |
| IDC | | Phosphor bronze |
| Golden Pin | | Phosphor bronze with gold plating 50μ |
| IDC Plug Insertion | | ≥1000 |
| Insertion Life Span | | ≥250 |
| AWG | | 22~26AWG |
| Wiring | | T568A/ T568B |

**Wall Outlets**

Wall outlets must be available to suit the local needs with one or two keystone jacks or sockets (as per site requirement). The wall outlets should be fully shuttered and must be able to accept the I/O’s and must have space for visibly labeling each jack or socket

**Patch Panels**

19” panels must be available to take 24 copper jacks connections per 1U. Other connection densities must be available:

Copper: 16, 24, 48 per panel

The panels must be designed for keystone fitting of the jacks/sockets

The copper panels must have integrated rear cable management and tie down points for copper cable.

|  |  |
| --- | --- |
| **Structure** | |
| Material | Cold rolled steel powder spray treatment |
| Size | 482.6\*97\*44.5mm |
| Port | 24 |
| Plastic | ABS |
| Cable Slot | Removable |
| Color | Black |
| Cable Management | Rear Cable Management to be included with the Patch Panel |

**Patch-cord Organization**

1U Patch Front Cable Management, metal type (SPCC), for Patch Cords must be used between patch panel and switches for proper and effective cable management inside the rack.

**Patch Cables**

Patch cables must be factory terminated100 Ohm RJ-45 copper patch cords and shall be Category 6 compliant. The EMC level should also match – for UTP cables UTP patch cords should be used to ensure system compliance.

The copper patch cords must be made from stranded wires for full flexibility. They must comply with ISO 11801. The patch cords must be available in a range of lengths to facility easy patch cord management.

|  |
| --- |
| **Electrical Characteristics** |
| Impedance | 100±15Ω |
| DC Resistance Unbalance | ≤2.5% |
| Dielectric Strength DC between Conductors | 1.0Kv, 1Min no breakdown |
| Delay Distortion | ≤50ns/100m |
| Propagation Delay | ≤555ns/100m |
| Working Capacitance | ≤5.6nF/100m |
| Insulation Resistance | ≥5000MΩ/km +20℃ DC (100-500)V |

|  |  |
| --- | --- |
| **Mechanical Characteristics** | |
| Elongation of the Conductor | ≥15% |
| Insulation Elongation | ≥300% |
| Insulation Tensile Strength | ≥16MPa |
| Sheath Tensile Strength before Aging | ≥13.5MPa |
| Sheath Tensile Strength after Aging | ≥12.5MPa |
| Sheath before and after aging Tensile Strength Change Rate | ±20% |
| Elongation of the Sheath Before Aging | ≥150% |
| Elongation of the Sheath After Aging | ≥125% |
| Change Rate of Elongation of the Sheath before and after the Aging | ±20% |
| Insulated Cores Disconnected and Mixed Line | No disconnected and mixed line |

**Copper Cable**

Copper cable will be 100 Ohm impedance. The cable will be category 6 in UTP to match the system specification. The cable is to be a 4Pair cable with 23AWG copper conductor.

|  |  |
| --- | --- |
| **Mechanical Characteristics** | |
| Elongation of Conductor at Break | ≥15% |
| Elongation of Insulated Material at Break | ≥300% |
| Tensile Strength of Insulated Material | ≥16MPa |
| Tensile Strength of Jacket before Aging | ≥13.5MPa |
| Tensile Strength of Jacket after Aging | ≥12.5MPa |
| Variation Rate of Tensile Strength of Jacket | ±20% |
| Elongation of Jacket at Break before Aging | ≥150% |
| Elongation of Jacket at Break after Aging | ≥125% |
| Variation Rate of Elongation of jacket at break | ±20% |
| Break & Mix between Wires | No break & mix between wires |

|  |  |
| --- | --- |
| **Electrical Performance** | |
| Impedance | 100±15Ω |
| Single Conductor DC Resistance | ≤9.50Ω/100m |
| DC Resistance Unbalance | ≤2.5% |
| Dielectric Strength DC Between Conductors | 1.0Kv,1min no breakdown |
| Delay Distortion | ≤45ns/100m |
| Propagation Delay | ≤536ns/100m |
| Working Capacitance | ≤5.6nF/100m |
| NVP | 68% |
| Insulation Resistance | ≥5000MΩ/km +20℃ DC (100-500)V |

# Bill of Quantities

## Data Centre

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Main Data Center Site BoQ** | | | | | | | |
| **Raised Flooring for Data & Power  Room - Cement Infill Floor Tiles** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Supply and Installation of Raise Floor inside Data Room and Power Room Area including stringer and pedestals installed at a height of 10". To be charged as per actual | | 1 | | | Sq. Ft | |
| 2 | Wiring Inlet for Cables entrance for racks | | 1 | | | Nos. | |
| 3 | Tile Lifter | | 1 | | | Nos. | |
| 4 | Decontamination Services for Data Center Environment | | 1 | | | Solution | |
| 5 | Data Center Air Purification System   1. **Airflow: 1000 CFM** 2. **1.5 HP MOTOR** 3. **2" PREFILTER 35%** 4. **4" FINAL FILTER 95%**   **4X MEDIA CARTRIDGES, 1 CUFT EA** | | 1 | | | Solution | |
| **Data Centre Grounding and Bonding Solution** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
|  | Grounding & Bonding of **04 Racks** inside Data Centre comprising of: | |  | | | | |
| 1 | Supply and Installation of Copper Bus bar kit (Per Rack) | | 1 | | | Job | |
| 2 | Supply and installation of U clamps used under the raise floor | | 1 | | | Job | |
| 3 | Supply and installation of Bonding Kit (for Each Rack and Bus Bar) | | 1 | | | Nos. | |
| 4 | Supply and installation of Copper Grounding Wire | | 1 | | | Ft | |
| 5 | Supply and installation of Bus Bar for Wall | | 1 | | | Job | |
| 6 | Telecommunication Earth pit to be provided inside the Data Center | | 1 | | | Job | |
| **Room Environment Monitoring System** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Room Environment Monitoring System. The unit shall have a built-in GSM module and shall be equipped with following sensors: | | 1 | | | Nos. | |
| Temperature and Humidity | |
| Power | |
| Water Leakage Sensor, Cable length not more than 5-6 ft | |
| **Racks for Network and Communication Equipment** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | 42U 800 x 1000 Rack fully loaded with side panels, cable managers, blank panels, etc. having back and front mesh door Rack should have four wheels and casters. | | 1 | | | Nos. | |
| 2 | 08 Socket PDU, Flat Pin (Same make as that of Cabling Brand) | | 1 | | | Nos. | |
|  |  | |  | | |  | |
| **Supply & Installation of Access Control & Video Monitoring Solution** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Supply and Installation of RFID Proximity Access Control System with Ethernet Interface including Magnetic Door Lock. One unit each shall be installed at the entrance for NOC, Data Room and Power Room respectively. Installation should be complete in all respects including data/power cabling | | 1 | | | Nos | |
| 2 | Supply and Installation of IP Cameras for Monitoring. One unit each Shall be installed for monitoring inside NOC, Data Room and Power Room respectively. Installation should be complete in all respects including data/power cabling. One year warranty. As per RFP specs | | 1 | | | Nos | |
| **Fire Detection & Suppression System for Data Room** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Supply of Fire Detection System for Data Room, comprising of Optical Smoke Detectors, Fire Extinguishing Control Panel and Electrical Wiring | | 1 | | | Job | |
| Supply of Fire Suppression System, NOVEC 1230 Type for Data Room including Cylinder, Electric & Manual Actuator, Piping for Fire Suppressing System and Nozzles | |
| **Fire Detection & Suppression System for UPS Room** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Supply of Fire Detection System for UPS Room, comprising of Optical Smoke Detectors, Fire Extinguishing Control Panel and Electrical Wiring | | 1 | | | Job | |
| Supply of Fire Suppression System, NOVEC 1230 Type for UPS Room including Cylinder, Electric & Manual Actuator, Piping for Fire Suppressing System and Nozzles | |
| **Supply & Installation of Electrical DB & Wiring** | | | | | | | |
| **S.No** | **Description** | | **Quantity** | | | **Unit** | |
| 1 | Supply and Installation of Electrical Distribution Box for Incoming Mains & UPS Output Distribution, to be installed inside the UPS Room. DB shall have Ammeter, Volt Meter and LED Indicator. | | 1 | | | Nos. | |
|  | Raw Power Distribution shall comprise of Circuit Breaker for Incoming Power, UPS Input Power, Input Power for A/C's and Lights, Fire Extinguishing Control Panel and NOC Users. | |  | | |  | |
| 2 | Supply and Installation of Electrical Distribution Box for UPS Power Distribution to Racks, Cameras, Access Control and other UPS Load, Ammeter, Volt Meter and LED Indicator. | | 1 | | | Nos. | |
|  | UPS Output Distribution shall comprise of Circuit Breaker for UPS output Power, PS Power for Racks and NOC Users. | |  | | |  | |
| 3 | Emergency Lights | | 1 | | | Nos. | |
| 4 | Supply & Installation of 32 Amp Industrial Power Sockets (Single Phase) including Electrical Cabling from UPS DB to each rack. | | 1 | | | Nos. | |
| 5 | Lights inside  Data Center, UPS Room installed on Ceiling each with 2 x 2 LED | | 1 | | | Nos. | |
| 7 | Sequential A/C Control for AC's inside Data Room. Control shall be configured so that one split AC remains operational for 12 Hours and the other one of remaining 12 Hours | | 1 | | | Nos. | |
| 8 | Sequential A/C Control for AC's inside UPS Room. Control shall be configured so that one split AC remains operational for 12 Hours and the other one of remaining 12 Hours | | 1 | | | Nos. | |
| 9 | Supply & Install branded Electrical Cabling for AC Units, Lights, Access Control, NOC Users, UPS Input and Output from DB's (PAKISTAN CABLE) | | 1 | | | Nos. | |
| 10 | Supply & Installation of Emergency Shut Down Switch | | 1 | | | Nos. | |
| 11 | Online UPS 30kVA with Standard Backup Time of at least 15 minutes. Preferable standby time would be 30 minutes. | | 1 | | | Nos. | |
|  | *Electrical Main Cable shall be provided at the Main DB inside the Datacenter/UPS Room* | |  | | | | |
| **Supply & Installation of Cable Trays for Data & Electrical Cables** | | | | | | | |
| **S.No** | **Description** | **Quantity** | | | **Unit** | | |
| 1 | Supply & Installation of Rack Cable tray 6" x 4" Under Raised Floor for Data Cabling (to be charged as per actual) | 1 | | | Ft | | |
| 2 | Supply & Installation of Cable tray 12" x 4" for Power Cabling under raised flooring (to be charged as per actual) | 1 | | | Ft | | |
| **Civil & Glass Works** | | | | | | | |
| **S.No** | **Description** | **Quantity** | | | **Unit** | | |
| 1 | Supply & Installation of Glass Door for Entrance inside NOC Room and from NOC Room inside the Data Room Area - dimensions 3' width x 7' height. Glass used shall be 12mm glass. | 1 | | | Nos. | | |
| 2 | Glass Partitioning Works & Civil Works | 1 | | | Job | | |
| 3 | Paint Works inside Data Room, UPS Room and NOC Room comprising of Fire Protection paint on all Walls. | 1 | | | Job | | |
| 4 | PVC 1” for cabling | 1 | | | Ft | | |
| 5 | Duct / Channel 40 x 40 | 1 | | | Duct | | |
| 6 | Duct / Channel 16 x 38 | 1 | | | Duct | | |
| 7 | Duct / Channel 16 x 25 | 1 | | | Duct | | |
| **Cooling Solution** | | | | | | | |
| **S.No** | **Description** | **Quantity** | | | **Unit** | | |
| 1 | Supply and Installation of 4 Tons Perimeter precision HAVC Unit inside Data Room, complete with fixing of outer units and piping | 1 | | | Nos. | | |
| 2 | Supply and Installation of 2 Tons Wall Mounted Split Air Conditioning Unit inside UPS Room, complete with fixing of outer units and piping | 1 | | | Nos. | | |
| 3 | Supply and Installation of 2 Tons Wall Mounted Split Air Conditioning Unit inside NOC Room, complete with fixing of outer units and piping | 1 | | | Nos. | | |
| **Data Cabling** | | | | | | | |
| **S.No** | **Description** | **Quantity** | | | **Unit** | | |
| 1 | Rack to Rack Cabling comprising of following: |  | | | | | |
| *a.* | Cat-6A 10G Compliant Cabling (to be charged as per actual) | 1 | | | Meters | | |
| *b.* | 24 Port Patch Panels 10G Compliant | 1 | | | Nos. | | |
| *c.* | Cat-6A 10G Complaint Patch Cords, 1meter | 1 | | | Nos. | | |
| *d.* | Cat-6A 10G Complaint Patch Cords, 3meter | 1 | | | Nos. | | |
| *e.* | Cat-6A 10G Complaint Patch Cords, 10meter | 1 | | | Nos. | | |
| 2 | Data Cabling for NOC Room Users Comprising of Cat-6 UTP Cable, each set of One Face Plate with back box having two Cat-6 UTP I/O's and two multi power socket | 1 | | | Set | | |
| 3 | Data Cabling for end Users Comprising of Cat-6 UTP Cable, each set of One Face Plate with back box having single Cat-6 UTP I/O's and two multi power socket | 1 | | | Set | | |
| **NOC Room** | | | | | | | |
| **S.No** | **Description** | **Quantity** | | | **Unit** | | |
| 1 | Furniture for NOC Room Users Comprising of 3 Nos. Table Top and 3 Nos. Chairs | 1 | | | Job. | | |
| 2 | 46" LCD TV for monitoring of NMS and Data Center Alerts | 1 | | | No. | | |
| **Access Switches** | | | | | | | |
| 4 | Supply and Installation of access switches having Ethernet ports of : 24 10/100/1000 Ports ,2 Ports for Uplink RJ45 or SFP based 10/100/1000, Switching capacity 12.8 GbpsGbps , Flash Memory 128 and DRAM 256 ,Rack Mounting ,Enterprise Class Intelligent services delivered to the Network Edge ,IOS Support Lan Level and Part Replaced should be on next working day. | 1 | | | No | | |
| 5 | Supply and Installation of access switches having Ethernet ports of : 12 10/100/1000 Ports ,2 Ports for Uplink RJ45 or SFP based 10/100/1000, Switching capacity 12.8 GbpsGbps , Flash Memory 128 and DRAM 256 ,Rack Mounting ,Enterprise Class Intelligent services delivered to the Network Edge ,IOS Support Lan Level and Part Replaced should be on next working day. | 1 | | | No | | |
| 6 | Supply and Installation of access switches having Ethernet ports of : 8 10/100/1000 Ports ,2 Ports for Uplink RJ45 or SFP based 10/100/1000, Switching capacity 12.8 GbpsGbps , Flash Memory 128 and DRAM 256 ,Rack Mounting ,Enterprise Class Intelligent services delivered to the Network Edge ,IOS Support Lan Level and Part Replaced should be on next working day. | 1 | | | No | | |
| **Wireless Access Point** | | | | | | | |
| 7 | Supply and installation of Access points controller based should support 3x3 MIMO with two spatial stream, MRC, 802.11a/g beamforming, 20 and 40-Mhz Channels, PHY data rates up to 300 Mbps (40 MHz with 5Ghz), Packet Aggregation: A-MPDU(tx/rx) and A-MSDU (tx/Rx), DFS, CSD support and part replacement should be on next working day. | 1 | | | No | | |
| **Wireless Controller** | | | | | | |
| 8 | Supply and installation of wireless LAN Controller should support up to 75 access points and up to 1000 clients, quick and easy deployment access point  can be connected directly to wireless LAN controller via two POE ports, High performance, wire Network speed and non-blocking performance of 802.11n And 802.11ac network which support up to 1Gbps throughput, Rack mounting, should include all required software and part replacement should be on next working day. | 1 | | No | | |

## ICT Services / HR

|  |  |
| --- | --- |
| **S.No.** | **Item Description** |
| 1. | Data Centre, Network and Application operation services (5 Days x 8 Hours) with relevant degree and 4-5 years experience covering all proposed solution’s operations. Vendor can proposed the team covering all technology areas. |
| 2. | End user IT Support Engineers, Database administrator, data entry operators for (5 Days x 8 Hours) operations on different SESSI location (Vendor has proposed monthly rate and SESSI will hire the services as per requirements. |

## 

## BOQ Infrastructure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Parameter** | **Functionality** | **Unit** | **Qty** |
| **1** | Converge / Unified Storage | 1. Offered Storage array shall be a true converge / unified storage with a single Microcode / operating system instead of running different Microcode / Operating system / Controllers for File, block and object services respectively. 2. Offered Storage array shall be end-to end 12Gbps enabled which means that both Front-end Fiber channel ports and Back-end engines shall be operated at minimum 12Gbps speed. | **Each** | **1** |
| Operating System & Clustering Support | The storage array should support industry-leading Operating System platforms including: *Windows 2012*, VMware, Sun Solaris, HP-UX, IBM-AIX and Linux. |
| Capacity & Scalability | 1. The Storage Array shall be offered with 48TB Capacity using 1800 GB drives. 2. Storage shall be scalable to minimum of 430TB using 1800GB drives. |
| Cache | 1. Offerd Storage Array shall be given with minimum of 64GB cache in a single unit.  2. Cache shall be used only for Data and Control information. OS overhead shall not be done inside cache.  3. Offered Storage array shall also have additional support for Flash Cache using SSD / Flash drives. Both File services as well as Block operations shall be able to utilize flash cache. Minimum of 500GB Flash cache hall be supported. 4. If Flash cache is not supported inside the storage array then vendor shall ensure that offered storage array shall be scalable to minimum of 128GB DRAM cache without any replacement or upgrade of controllers. |
| Processing Power | 1. Offered Storage architecture shall be based on purpose built ASIC, XOR engine so that there shall be no load on the storage CPU during Raid Parity calculations.  2. In case vendor doesn’t have above ASIC functionality then additional 16GB read and write cache shall be provided per controller pair to balance the performance. |
| Architecture & Processing Power | Controllers shall be true active-active so that a single logical unit can be shared across all offered controllers in symmetrical fashion, while supporting all the major functionalities like Thin Provisioning, Data Tiering etc.. |
| No Single point of Failure | Offered Storage Array shall be configured in a No Single Point of configuration including Array Controller card, Cache memory, FAN, Power supply etc. |
| Disk Drive Support | Offered Storage Array shall support dual-ported 300 / 900 / 1200 / 1800GB hot-pluggable Enterprise SAS hard drives, Minimum of 400GB SSD Drives along with nearline SAS drives of 2TB / 4TB / 6TB drives. |
| Raid Support & Virtualization | 1. Offered Storage Subsystem shall support Raid 0, 1 , 1+0, 5 and Raid 6.  2. Offered storage array shall have native virtualization support so that Raid 1. Raid 5, Raid 1+0, Raid 6 can be carved out from a logical space instead of dedicating separate physical disks for each application.  3. Every supplied disk shall be able to participate into multiple and different raid sets simultaneously.  4. In case vendor does not have above functionality, then 20% additional raw capacity shall be provided for each type of disk to balance out the capacity utilization. |
| Data Protection | Incase of Power failure, Storage array shall have de-stage feature to avoid any data loss. |
| Protocols | Offered Storage array shall support all well-known protocols like FC, ISCSI, FCOE, SMB 3.0, NFS V4, NDMP etc. |
| Host Ports and Back-end Ports | 1. Offered Storage shall have minimum of 4 host ports for connectivity to servers running at 16Gbps speed.  2. Offered storage shall also support additonal Quad 10Gbps IP ports or 8 x 1Gbps IP ports for file services operations.  3. Offered storage shall have two additional IP ports for the the storage based replication. 4. Offered storage shall have 16 number of SAS Back-end lanes running at 12Gbps speed. |
| Global Hot Spare | 1. offered Storage Array shall support distributed Global hot Spare for offered Disk drives. 2. Global hot spare shall be configure as per industry practice. |
| Performance and Quality of service | 1. Shall have capability to use more than 30 drives per array group or raid group for better performance. 2. Storage shall be provided with Performance Management Software. 3. Offered storage array shall support quality of service for critical applications so that appropriate and required response time can be defined for application logical units at storage. It shall be possible to define different service / response time for different application logical units. 4. Quality of service engine shall allow to define minimum and maximum cap for required IOPS / bandwidth for a given logical units of application running at storage array. 5. It shall be possible to change the quality of service Response time (In both milliseconds as well as Sub-milliseconds), IOPS, bandwidth specification at real time. |
| Thin Provisioning and Space Reclaim | 1. Offered storage array shall be supplied with Thin provisioning and Thin Re-claim to make the volume thin for an extended period of time for complete array supported raw capacity.  2. Thin Re-claim (Zero Page reclaim) inside storage subsystem shall be automatic in nature and there shall be no need to run any utility inside storage for same. 3. Thin Re-claim inside storage shall not cause any overloading of Storage CPU and shall be able to claim the Zero pages even during peak load without any performance impact 4. For effective capacity utilization, thin reclaim maximum unit shall be 16KB. Vendor shall provide the documentary proof for same. 5. Offered storage array shall be tightly integrated with VMware so that Eager zero disks layout can be used with thin provisioning and thin re-claim. |
| Maintenance | Offered storage shall support online non-disruptive firmware upgrade for both Controller and disk drives. |
| Snapshot / Point in time copy / Clone | 1. Offered Storage shall have support to make the snapshot and full copy (Clone) on the thin volumes if original volume is created on thick or vice-versa. 2. The storage array should have support for both controller-based as well as file system based snapshots functionality (At-least 1024 copies for a given volume or a file store). 3. Storage array shall have functionality to re-claim the space from Thin Provisioned Deleted snapshot automatically. Vendors shall provision at-least 20% additional space over and above the actual requirements, if space re-claim from thin provisioned deleted snapshot is not possible automatically. |
| Quota Management and Antivirus Scanning | 1. For file services operations, offered storage shall support both user level as well as file level hard and soft quota.  2. For file services operations, offered storage shall support integration with industry leading antivirus vendors like Symantec and MacAfee. |
| Storage Array Configuration & Management Software | 1. Vendor shall provide Storage Array configuration and Management software.  2. Software shall be able to manage more than one array of same family. |
| Storage Tiering | 1. Offered storage shall support dynamic migration of Volume from one Raid set to another set while keeping the application online.  2. For effective data tiering, Storage subsystem shall support automatically Policy based Sub-Lun Data Migration from one Set of drive Tier to another set of drive tier. |
| Remote Replication | 1. The storage array should support hardware based data replication at the array controller level across all models of the offered family. 2. The Storage array shall also support three ways (3 Data Centers) replication to ensure zero RPO in native fashion without using any additional replication appliance.  3. Replication shall support incremental replication after resumption from Link Failure or failback situations. |
| **2** | **SAN Switch** | Minimum Dual SAN switches shall be configured where each SAN switch shall be configured with minimum of 8 Ports scalable to 24 ports, Required scalability shall not be achieved by cascading the number of switches and shall be offered within the common chassis only, Should deliver 8 Gbit/Sec Non-blocking architecture with 1:1 performance for up to 24 ports in a energy-efficient fashion, Should protect existing device investments with auto-sensing 4, 8, and 16 Gbit/sec capabilities,  The switch shall support different port types such as FL\_Port, F\_Port, E\_Port, EX\_Port. Should provide enterprise-class availability features such as redundant and hot pluggable components like power supply and FAN, Non disruptive Microcode/ firmware Upgrades and hot code activation. The switch shall provide Aggregate bandwidth of 768 Gbit/sec end to end. Switch shall have support for web based management and should also support CLI. The switch should have USB port for firmware download, support save, and configuration upload/download. Offered SAN switches shall be highly efficient in power consumption. Bidder shall ensure that each offered SAN switch shall consume less than 100 Watt of power. Switch shall support POST and online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SPAN port). Switch shall support POST and online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SPAN port)., Offered SAN switch shall support services such as Quality of Service (QoS) to help optimize application performance in consolidated, virtual environments. It should be possible to define high, medium and low priority QOS zones to expidite high-priority traffic , The switch shall be able to support ISL trunk up to 128 Gbit/sec between a pair of switches for optimal bandwidth utilization and load balancing. SAN switch shall support to restrict data flow from less critical hosts at preset bandwidths. It should be possible to isolate the high bandwidth data flows traffic to specific ISLs by using simple zoning, The Switch should be configured with the Zoning and shall support ISL Trunking features when cascading more than 2 numbers of SAN switches into a single fabric. Offered SAN switches shall support to measure the top bandwidth-consuming traffic in real time for a specific port or a fabric which should detail the physical or virtual device. | **Each** | **1** |
| **3** | **Blade Chassis** | Blade Chassis with capacity to holds up to 16 server or higher blades with redundant network and storage interconnects. Should include a shared, multi-terabit high-speed midplane for wire-once connectivity of Up to 4 redundant interconnect I/O fabrics (Ethernet, Fibre Channel, InfiniBand, iSCSI, SAS, etc.) supported simultaneously within the enclosure. With Thermal Logic technology to minimize power consumption and reduce cooling. With 8 hot-plug Active Cool 200 Fans and 4 Active Cool 200 Fan kits. With Onboard Administrator management module.server blades to network and shared storage with power through a pooled power backplane.Onboard Administrator Module should be capable of Robust, multiple enclosure setup and control. Reports asset and inventory information for the devices in the enclosure. Reports thermal and power information, including real-time actual power usage per server and per enclosure. Front-mounted Insight Display for easy management within the unnelling. Should Provide integrated access to interconnect bay device management ports from the single Blade System Onboard Administrator cable. Single sign-on capability for all devices in the enclosure Role-based security locally and/or with LDAP directory services. Provides a wizard-based initial setup process for easy configuration. | **Each** | **1** |
| **4** | **Blade Servers** | Blade Server with Intel® C610 Series Chipset and dual Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W with 128GB (4 x 32GB) DDR4 2133MHz RDIMMs, 1 x 10Gb 2-port Ethernet FLB, Two (2) I/O expansion mezzanine slots, 1 x smart array with 1GB Flash-Backed Write Cache (FBWC) supporting RAID 0 and RAID 1, 2 x 1.6TB SAS SSD, Redundant Power and Cooling | **Each** | **1** |
| **5** | **Antivirus Solution** | VirusScan Enterprise, VirusScan Command Line, Endpoint Protection for MAC, Host Intrusion Prevention for Desktops, Desktop Firewall, SiteAdvisor Enterprise with Web Filtering, Device Control, Drive Encryption, File & Removable Media Protection, Management of Native Encryption, VirusScan for Linux, Security for Email Servers with AntiSpam, Security for Microsoft SharePoint, VirusScan Enterprise for Storage, Enterprise Mobility management and Endpoint Intelligence Agent. Enterprise Mobility Management to be used on one additional mobile device. Management system included: Policy Orchestrator. | **Each** | **1** |
| **6** | **Microsoft Server** | Microsoft Windows 2012 Standard Server License | **Each** | **1** |
| **6.1** | **Microsoft Server DataCenter** | Microsoft Windows 2012 Datacenter edition | **Each** | **1** |
| **7** | **Main Firewall** | Firewall having at least memory of 2 GB or higher, with 2 or higher 10 GbE SFP+ interfaces,1 GbE SFP interfaces, 12 or more 1 GbE Copper interfaces, 1 x 1GbE Copper Management interfaces, Expansion Slot (Rear), SD Card, USB, Firewall inspection throughput 3.4 Gbps or higher, Full DPI throughput 500 Mbps or higher, Application inspection throughput 1.1 Gbps, IPS throughput 1.1 Gbps or higher, Anti-malware inspection throughput 600 Mbps or higher, IMIX throughput 900 Mbps or higher, SSL Inspection and Decryption (DPI SSL) 300 Mbps or higher, VPN throughput 1.5 Gbps or higher, Connections per second 20,000 per second or lower, Maximum connections (SPI) 325000 or higher. 50 VPN Software clients | **Each** | **1** |
| **8** | **Branch Firewall** | Firewall having at least memory of 1 GB or higher, 10 or more 1 GbE Copper interfaces, 1 x 1GbE Copper Management interfaces, Expansion Slot (Rear), 2 USB, Firewall inspection throughput 1.5 Gbps or higher, Full DPI throughput 500 Mbps or higher, Application inspection throughput 1.1 Gbps, IPS throughput 1.1 Gbps or higher, Anti-malware inspection throughput 500 Mbps or higher, IMIX throughput 900 Mbps or higher, SSL Inspection and Decryption (DPI SSL) 300 Mbps or higher, VPN throughput 1.5 Gbps or higher | **Each** | **1** |
| **9** | **Branch Server** | 1 u rack mount server with Intel® C610 Series Chipset and dual E5-2643v3 or higher processor, 32 GB RAM, dual power supply, 2 TB useable capacity on RAID 5 | **Each** | **1** |
| **10** | **Core Switch** | Interface Requirements:   * Should support atleast 96 x 1G(Copper/Fiber) ports * Should support atleast 32 x SFP+ ports * Should support atleast 24 x 40G ports * Should support atleast 4 x 100G ports * Should support virtual switching fabrics, where two or more switches perform as a single L2 switch and L3 router; switches do not have to be co-located and can be part of a disaster-recovery system. Should support minimum 4 switches * Should support minimum switching capacity of 7.7 Tbps   General Requirements   * Should support ISSU to provide an upgrade of the entire chassis or an individual task or process, with zero packet loss * Should virtualize a physical switch into multiple logical devices, with each logical switch having its own processes, configuration, and administration * All switching and routing should be performed in the I/O module * Should support Jumbo Frames * Should protect against unknown broadcast, unknown multicast, or unicast storms with user-defined thresholds * Should provide back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations * Should support IEEE 802.1p prioritization * Should support Class of Service (CoS), setting 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 * Should support Bandwidth shaping * Port-based rate limiting, provides per-port ingress-/egress-enforced increased bandwidth * Classifier-based rate limiting, uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port * Traffic policing * Weighted random early detection (WRED)/random early detection (RED) * supports strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), and WRED * All hot-swappable modules * Virtual Router Redundancy Protocol (VRRP) * Device Link Detection Protocol (DLDP) * IEEE 802.3ad LACP * supports graceful restart for OSPF, IS-IS, BGP, LDP, and RSVP * Ultrafast protocol convergence (sub second) with standard-based failure detection—Bidirectional Forwarding Detection (BFD) * IPSec – provides secure unnelling over an untrusted network such as the Internet or a wireless network; offers data confidentiality, authenticity, and integrity between two network endpoints * Generic Routing Encapsulation (GRE) * SNMPv1, v2, and v3 * Netflow/sFlow/jFlow * Remote monitoring (RMON) * FTP, TFTP, and SFTP support * Network Time Protocol (NTP) * Monitoring tools that unnell network performance and service quality by sending test packets, and provides network performance and service quality parameters such as jitter, TCP, or FTP connection delays and file transfer rates; allows a network manager to determine overall network performance and to diagnose and locate network congestion points or failures * IEEE 802.1AB Link Layer Discovery Protocol (LLDP) * provides independent primary and secondary operating system files for backup while upgrading * Supports up to 4,096 port-based or IEEE 802.1Q-based VLANs * Bridge Protocol Data Unit (BPDU) unnelling * Port mirroring * supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) * Internet Group Management Protocol (IGMP) and Multicast * IEEE 802.1ad QinQ and selective QinQ * Isolation at data link layer with private VLANs * Should support Staci/RIP/OSPF/BGP/IS-IS * Should support RIPng/OSPFv3/IS-IS for Ipv6/BGP+ * Should support Policy based routing * Unicast Reverse Path Forwarding (uRPF) * Multiprotocol Label Switching (MPLS) * Multiprotocol Label Switching (MPLS) Layer 3 VPN * Multiprotocol Label Switching (MPLS) Layer 2 VPN * Virtual Private LAN Service (VPLS) * Super VLAN * Provides an important element for the transition from Ipv4 to Ipv6; allows Ipv6 packets to traverse Ipv4-only networks by encapsulating the Ipv6 packet into a standard Ipv4 packet; supports manually configured, 6-to-4, intra-site-automatic-tunnel-addressing-protocol (ISATAP) tunnels, and Ipv6 VPN provider-edge router tunnel * supports ACLs for both Ipv4 and Ipv6; ACLs are used for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources; rules can either deny or permit traffic to be forwarded; rules can be based on a Layer 2 header or a Layer 3 protocol header; rules can be set to operate on specific dates or times * RADIUS/TACACS+ * Secure shell (SSHv2) * DHCP snooping * IP Source Guard * ARP attack protection * Port security * IEEE 802.1X – provides port-based user authentication with support for Extensible Authentication Protocol (EAP) MD5, TLS, TTLS, and PEAP with choice of AES, TKIP, and static or dynamic WEP encryption for protecting wireless traffic between authenticated clients and the access point * provides simple authentication based on a user’s MAC address; supports local or RADIUS-based authentication * LLDP-MED (Media Endpoint Discovery) * Protocol Independent Multicast (PIM) * Multicast Source Discovery Protocol (MSDP) * Internet Group Management Protocol (IGMP) * Multicast Border Gateway Protocol (MBGP) * Multicast Listener Discovery (MLD) protocol * Multicast VLAN, Voice VLAN | **Each** | **1** |
| **12** | **Tape Library** | Offered Tape Library shall support Native data capacity of 120TB (uncompressed) expandable to 300TB 2.5:1compressed).  Tape Library shall provide web based remote monitoring capability. The Tape Library unit shall be configured with FC LTO Gen6 Tape Drives. Tape Library shall be configured with Single FC LTO6 drive scalable to Six FC LTO6 drives either within the same frame or by cascading another frame. Offered tape library shall be offered with minimum of 48 Cartridge slots and shall be further scalable to 140 slots either within the same frame or by cascading another frame.Tape Drive Architecture in the Library shall conform to Ultra3 SCSI standards. Offered LTO6 drive in the Library shall conform to the Continuous and Data rate matching technique for higher reliability. Offered LTO6 drive in the library shall offer optional WORM support and embedded AES 256 bit encryption. Offered Library shall be provided with a hardware device like USB key, separate appliance etc. to keep all the encrypted keys in a redundant fashion. Offered LTO6 drive shall have native speed of 160MB/sec and a compressed speed of 400 MB/sec for 2.5:1 compression. Offered tape Library shall have partitioning support so that each configured drive can have their owned partition and slots. Tape Library shall provide native Fiber connectivity to SAN Environment. For optimal Performance. Tape Library shall provide native 8Gbps FC interface connectivity to SAN switches. Tape Library shall be offered with minimum of 48 slots and barcode reader. Tape library shall support removable magazine and mail slot. Tape Library shall have GUI Front panel. Tape Library shall have option for redundant power supply. Tape Library shall be supplied with software which can predict and prevent failures through early warning and shall also suggest the required service action.  Offered Software shall also have the capability to determine when to retire the tape cartridges and what compression ratio is being achieved. | **Each** | **1** |
| **13** | **Backup Software** | The proposed Backup Solution should be available on various OS platforms such as Windows and UNIX platforms and be capable of supporting SAN based backup / restore from various platforms including TRU64 UNIX, HP-UX, Linux, Open VMS, NetWare and Windows.   1. Proposed backup solution shall be offered with Cluster license of server. 2. Proposed backup solution shall support industry leading cluster solution such as MSCS, MC Service Guard, Veritas Cluster etc. 3. Proposed backup solution shall have same GUI across heterogeneous platform to ensure easy administration. 4. The proposed Backup Solution should support tape Mirroring running concurrently with primary backup. e.g. With the primary volume Backup 4 additional tape copies can be created simultaneously without the need to duplicate 4 copies after the main backup. 5. The proposed backup solution should allow creation of additional backup copies, run concurrently with primary backup, within the same Library or over the network to another tape library/stand alone drive of different format medium (e.g. Ultrium to SDLT etc..) to allow easy valuating operation. 6. The proposed Backup Solution supports the capability to write up to 32 data streams to a single tape device or multiple tape devices in parallel from multiple clients to leverage the throughput of the Drives using Multiplexing technology. 7. The proposed backup solution support de-multiplexing of data cartridge to another set of cartridge for selective set of data for faster restores operation to client/servers. 8. The proposed backup solution should allow creating tape clone facility after the backup process. 9. Offered Backup software shall support granular recovery for Microsoft share point 2007 so that single document, Directories or entire site directly from the share-point GUI without taking the help of backup administrator. 10. The proposed Backup Solution has in-built calendar based scheduling system and supports Clustering the Backup Server and Media Server on Windows and Unix. 11. Backup solution shall be configured in such a fashion that no extra license for Client and media servers is required while moving from LAN to SAN based backup. 12. The proposed backup solution shall be offered with unlimited client and Media (Both Cluster and standalone) or at least 100 Client and Media license (Both Cluster and standalone) for SAN based backup and LAN based backup. 13. The proposed Backup Solution Software has inbuilt Java / Web based GUI for centralized management of backup domain. 14. Backup Software shall support encryption and all encryption keys shall be stored on to backup server for effective management. 15. Backup software shall provide import and export facility of encryption keys for protection. 16. The proposed solution also supports advanced Disk staging. 17. The proposed Backup Solution has in-built media management and supports cross platform Device & Media sharing in SAN environment. It provides a centralized scratched pool thus ensuring backups never fail for media. 18. Backup Software shall support Synthetic backup so that Full backup can be constructed directly from the disk based incremental backups. 19. Backup software shall also support disk based Incremental Forever or Virtual full backup whereas every incremental backup shall be equivalent to Full backup without actually copying the actual data blocks of previous full backup. 20. Backup Software is able to rebuild the Backup Database/Catalog from tapes in the event of catalog loss/corruption. 21. The proposed Backup Software shall offer OPEN File Support for windows. 22. The proposed Backup Solution has certified “Hot-Online” backup solution for different type of Databases such as Oracle, MS SQL, Sybase etc 23. Backup software shall also support Microsoft Share point Portal server & shall have integration with Microsoft Data Protection Manager. 24. The solution shall provide with the unlimited or at-least 100 licenses for Bare Metal restore for windows servers. 25. The Proposed backup solution shall provide granularity of single file restore. 26. The Proposed backup solution shall be designed in such a fashion so that every client/server in a SAN can share the robotic. 27. Backup Solution shall be able to copy data across firewall. 28. Backup Solution shall support automatic skipping of backup during holidays. | **Each** | **1** |
| **14** | **Bulk Paper Scanner** | |  |  | | --- | --- | | Scan Speed | Up to 60 ppm/120 ipm (black and white, grayscale, color 200 ppi; black and white, grayscale 300 ppi); up to 45 ppm/90 ipm (color 300 ppi) | | ADF Capacity | Up to 100 Pages | | Scanning Type | Flatbed, ADF | | Scan Resolution, Hardware | Up to 600 x 600 dpi | | Scan Resolution, Optical | Up to 600 dpi | | Bit Depth | 24 bit | | Duty Cycle, Daily | Up to 5,000 pages | | Scan Size, Max | 8.5 x 34 in | | Single Pass Duplex Scanning | Yes | | Multifeed detection | Ultrasonic | | File Formats | JPG, TIFF, MTIFF, PDF (image-only, searchable, high-compressed and AES encrypted), PDF/A, TXT, Unicode TXT, RTF, HTML | | Digital Sending Features | Embedded OCR software; Send to Email; Send to Internet and LAN Fax; Save to Network Folder; Save to USB drive; Address Book Management: network (LDAP), local, personal; Quick Sets; Image Preview and Page Edit; Job Notification; Send to Me; Admin-controlled email fields | | Connectivity | Hi-Speed USB Host (rear), Hi-Speed USB Host (walk-up), 10/100/1000 Ethernet, Hardware Integration Pocket (HIP) Hi-Speed USB | | **Each** | **01** |
| **15** | **Data Archiving** | Provide both scanning and media conversion services in an efficient and accurate manner. The objective for these services is to:   Provide media conversion services and records retention  Provide for on-line access to electronic records  Eliminate the cost associated with the storage of the original “hard copy” media  Contractor shall provide all labour, materials, tools and equipment required for Scanning, Indexing and Imaging Service for SESSI requesting services. | **Per Page** | **1** |
| **16** | **RFID Cards Printer, Laminator & Cleaning Kit** | Dual Sided Card Printing Capacity ,HDP Dye Sublimation, Resin Thermal Transfer300 dpi ( 11.8 dots /mm ), Up to 16.7 million/256 shades per pixel, Full Color, YMCK, Standard Holographic with Thermal transfer over laminate, .25 mil thick, Print Speed ; 38seconds per card/95 cards per hour ( YMC with transfer ), Accepted Card Sizes CR80 (3.375"L x 2.125"W/85.6mmLx 54mm W), Print Area ,over the edge on CR80 cards, Input Hopper Card capacity 100 Cards(.030"/.762mm),Output Hopper Card 200 cards, Memory 16MB RAM. Accessories should include printing material of RFID Cards | **Each** | **1** |
| **17** | **RFID Cards** | Contactless Smart Card Access Control Credential  The contactless smart card shall be a passive device, with an operating frequency of 13.56 MHz, and shall meet ISO 15693 and ISO 14443B2.  The card shall contain a 64 bit unique serial number.  The contactless smart card shall have the following available memory configurations:  **16 Kbits (2 Kbytes) EEPROM memory configured with 16**  The contactless smart card shall support programming and updating of custom applications  The contactless smart card shall meet the following physical characteristics:  Dimensions, per ISO 7810: 2.125” x 3.375” x 0.030” (53.98mm x 85.60mm x 0.76mm).Weight: 0.20 oz. (5.7 g)  Material and construction: PVC card materials. Card surface shall be glossy and of a material compatible with direct to card dye-sublimation or thermal transfer printing. Card construction shall meet durability requirements of ISO 7810.  Internal antenna configuration shall allow a single slot punch on the vertical (short) side of card.  The card may be marked with an external ID number, either in inkjet or laser-etched numbering, that may match the internal programmed ID number. If the external number does not match the internal number, a cross-reference list is provided to detail the internal/external numbering sequences.  Operating Temperature: -40oF to 158oF (-40oC to 70oC)  Operating Humidity: 5% to 95% relative humidity non-condensing.  Warranty of contactless smart cards shall be lifetime against defects in material and workmanship.  PVC material, weight 5.5g  Must have unique communication protocol with RFID Readers | **Each** | **1** |
| **18** | **Personal Biometric Plus RFID Reader** | Read & Write Contactless Bio Smart Card Reader  Provide surface mounting style 13.56 MHz contactless smart card readers suitable for minimal space mounting configurations as shown on the project plans.  Contactless smart card readers shall comply with ISO 15693, ISO 14443A (CSN), and ISO 14443B and shall read credentials that comply with these standards.  The fingerprint reader shall read a fingerprint template(s) from an ***iCLASS*** credential and verify with a live finger placed on the fingerprint sensor, once verified, a pre-programmed access control identification number is transmitted back to the host panel, giving an audible and visual indication of a successful authentication.  The fingerprint module shall have the ability to withstand up to 10 k volts of EDS and continue uninterrupted operation  Using serial communication lines the reader shall have the ability to write transactions to ***iCLASS*** credentials.  A 3x4 keypad which can provide supplemental PIN operation. The keypad shall provide the most popular industry formats including 4 bit or 8 bit bursts for every key press.  Contactless smart card readers shall output credential data in compliance with the SIA AC-01 Wiegand standard as follows:  Reads standard proximity format data from cards and outputs data as encoded.  Data security with ***iCLASS*** cards shall use 64-bit authentication keys to reduce the risk of compromised data or duplicate cards. The contactless smart card reader and ***iCLASS*** cards shall require matching keys in order to function together. All RF data transmission between the card and the reader shall be encrypted, using a secure algorithm. Card readers shall be provided with keys that are compatible with the ***iCLASS*** cards.  The contactless smart card reader shall provide the ability to change operational features in the field through the use of a factory-programmed command card. Additionally, firmware may be updated by flashing the reader. Command card operational programming options shall include:  Output configurations  LED & Audio configurations  Keypad configurations  Contactless smart card readers shall provide the following programmable audio/visual indication:  LCD display provides user feedback of reader operation  An audio transducer shall provide various tone sequences to signify: access granted, access denied, power up, and diagnostics.  A high-intensity light bar shall provide clear visual status (red/green/amber) that is visible even in bright sunlight.  Typical contactless smart card read range shall be:  2” – 3” (5.0 – 7.6 cm) using ***iCLASS*** card.  1” (2.5 cm) using ***iCLASS*** Key  1” (2.5 cm) using ***iCLASS*** Tag  1” – 1.5” (2.5 – 3.8 cm) using ***iCLASS*** Prox  1” – 2” (2.5 – 5.0 cm) using MIFARE Card (card serial number only)  Contactless LCD smart card reader shall meet the following physical specifications:  Dimensions: 8.34” x 4.17” x 2.30” (21.18cm x 10.59 cm x 5.84 cm)  Weight: 20oz (283.4 g)  Material: UL94 Polycarbonate  Two-part design with separate mounting plate and reader body.  Color: Black  Contactless smart card readers shall meet the following electrical specifications:  Operating voltage: 9 – 12 VDC, reverse voltage protected. Linear power supply recommended.  Current requirements: (average/peak) 350/520mA @ 12 VDC  Contactless smart card readers shall meet the following certifications:  UL 294  Canada/UL 294  FCC Certification  Canada Radio Certification  EU and CB Scheme Electrical Safety  EU – R&TTE Directive  CE Mark (Europe)  C-Tick (New Zealand/Australia/Taiwan)  Contactless smart card readers shall meet the following environmental specifications:  Operating temperature: 32 to 113 degrees F (0 to 45 degrees C)  Operating humidity: 5% to 95% relative humidity non-condensing  Cable type: 5-conductor #22 AWG w/overall shield  Standard reader termination: Double row terminal strip  Warranty of contactless smart card bio reader shall be one year warrantee against defects in materials and workmanship.  Country of Origin: USA or EURO only | **Each** | **1** |
| **19** | **Camera for taking workers pictures** | |  |  | | --- | --- | | Interface | USB 2.0 | | Image properties | Digital zoom | | File format (still) | JPEG | | Frame rate | 30 fps | | Maximum resolution (still) | 5184x3456 pixels | | Maximum resolution (video) | 1920x1080 | |  |  | | **Each** | **1** |
| **20** | **Laptop** | Processor Intel® Core™ i5 (3.10/2.1 GHz, 6 MB L3 cache, 4 cores)  Chipset Mobile Intel® HM76 Express  Memory 4 GB 1333 MHz DDR3 SDRAM upgradeable to 16 GB  Memory slots 2 SODIMM  Internal drive 750 GB SATA II (7200 rpm)  Optical drive DVD+/-RW SuperMulti DL  Display 15.6" diagonal LED-backlit HD anti-glare (1366 x 768)  Graphics Integrated: Intel® HD Graphics 4000  I/O ports 2 USB 2.0 or higher  1 HDMI 1 stereo microphone in 1 AC power 1 RJ-45 1 headphone/line-out 1 VGA  Slots 1 Media Card Reader  Function keys for volume mute, volume up, volume down, play, rewind, and fast-forward of video and audio files; Stereo headphone/line out, Stereo microphone in  Network interface Realtek Ethernet (10/100/1000)  Wireless Intel 802.11a/b/g/n with Bluetooth 4.0 Combo  Battery 65W Smart AC adapter (integrated)  Battery type 9-cell Li-Ion  Warranty 1-year warranty  Operating system Windows 8 | **Each** | **1** |
| **21** | **Portable Fingerprint registration device** | |  |  | | --- | --- | | Display | 3.5-inch TFT Screen | | Fingerprint Capacity | 10,000 | | Card Capacity | 30,000 (ID Card) | | Transaction Capacity | 200,000 | | Fingerprint Sensor | Optical Sensor | | Communication | TCP/IP, USB-host ; Optional with Wi-Fi, GPRS,3G (WCDMA) | | Standard Functions | ADMS, Work-code, DST, Self-Service Query, Automatic Status Switch,  T9 Input, Photo-ID, 9 Digit User ID, SMS, ID Card | | Optional Functions | HID /Mifare Card | | Protection Grade | IP65 | | Power Supply | 12V 3A DC; Built-in Backup 7600 mAh Battery | | Operating Temperature | 0 oC- 45 oC | | Operating Humidity | 20%-80% | | Dimension | 225 x235x125(mm) HxWxD | | **Each** | **1** |
| **23** | **RFID device for exit only** | 2.8-inch touch screen, color display with graphical UI for easy operation •Shall have Up to 24 user-defined schedules that can be activated on a daily bell alert (optional) • Shall offer Prompt audio acceptance or rejection signals for valid or invalid fingers • Shall be Compact and lightweight, small size for 86mm (L) x 86mm (H) socket installation • Shall have TCP/IP or RS485 communication for various networking environments • Shall Supports USB flash drive for offline data management  • Shall have Built-in auxiliary input with enhanced flexibility to link with wired detector or emergency switch • Shall offer Up to 15 multi-verification methods to enhance security level • Shall offer Standard access control features such as Time zone, Holiday, A&C Group, Unlock combination etc. • Shall be with Duress Alarm offers effective protection against duress by threats • Shall be Tamper proof switch and multiple alarm outputs | **Each** | **1** |
| **24** | **Communication Rack** | Capacity: 42U  Width x Depth: 800 x 800  Static loading: 1000 Kg  Degree of protection:IP20  Double-section rear door  Pedestal with 4 removable panels  Side door lock and high-density vented door  Mounting rail with U mark  Silver cable ring installed in the mounting ring  Welded frame with strong structure  2 x PDU - Socket Quantity: 8, Cable with plug: 13A plug, Control Function: 16A master switch, Cable Specification: 3 x 1.5 mm2 x 2M, Mounting Length: 459 mm / 573 mm | **Each** | **1** |

## Bill of Quantity for Call Centre

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Item** | **Unit** | **Qty** |
| 1. | **Experience Center Solution**  **Core Component:**   1. Inbound Voice with Computer Telephony Integration (CTI) Application = 5 Nos., Web Chat/Email/SMS = 2 Nos., Supervisor/Team Lead = 2. Quality Monitoring (Call Recording, Archive, Search and replay, Real-time monitoring, Recorded calls to be retained for a period of six months. 200 Calls per day, Screen capture data to be retailed for 60 days, Recording can be saved on network storage or DVD and Retention period is 6 months.) 3. 30 Channel SIP Trunk PRI with all required modem will be responsibility of RO 4. Wallboard Display including 48 Inch LED with required software application and mounting accessories = 1 Nos. 5. Call Center Hardware consist of Server for CMS/CRM/SMS Application’s (having Processor: 2.93 GHz 6-core, RAM: 32 GB, HDD: 2 TB Usable Space, DVD-RW and LAN: Dual NIC 10/100/1000 Mbps) with License Operating System (OS) and Server for Call Recording/Archiving (having Processor: 2.93 GHz 6-core, RAM: 32 GB, HDD: 2 TB Usable Space, DVD-RW and LAN: Dual NIC 10/100/1000 Mbps) with License Operating System (OS) including six month retention. Contractor should provide Operating System (OS), Database, supported virtualization if required and appropriate & compatible solution with proposed Call Center. 6. Call Center Requirement,  * Branded call center solution – American or European origin. * Support SIP/ H.323 protocol * Proposed Server hardware should be capable of supporting up to 20 agents, without requiring additional RAM / HDD etc. * Design should provide 99.9 percent uptime * Virtualization support desired * Proposed solution should not have any third party component for core contact center functionality. All components of Contact Center Solution must of same brand, except Servers/ switches or customized application * All Licenses should be permanent and need not to renew subscription periodically. * Skill-based routing of voice, email, web chat, SMS and support for video interactions. * System is required to provide flexible call treatment like Queue Music, Music on hold, expected wait time and position in queue. * Unified Real-time reporting display * Unified historical reporting of all media types * Should offer tools to create customized reports * Context sensitive user interface capable of delivering customer contextual data * Single point of web-based administration of entire contact center * Graphical Contact Center and Self-Service Workflow designer * Third party application integration through a combination of CTI, SOA and Web Services  1. Agent Hardware consist of Personal Computer (having Processor: Intel Core i3 2.4 Ghz, RAM: 4 GB, LAN: 10/100/1000 Mbps, DVD/RW & HDD: 500 GB) with License Operating System (OS), Keyboard, Mouse, 21 Inch LED Display & Headset (Good Quality) = 5 Nos; UPS for Agent Hardware (having Rectifier Type: IGBT, Input Voltage Range: Single Phase 120 VAC to 276 VAC, Input Power Factor: Single Phase 0.99, Communication Interface: USB, Form Factor: Mini tower, Capacity (kVA/kW): 6 / 4.8, Transfer Time (Power Failure): No transfer time and on-line operation, Surge Protection: IEC / EN 61000-4-5, Protection Level: IP20, Backup Time: Standard (5 to 10 mins.) and includes all allied software’s.) = 1 Nos; Wall mounted 4U Communication Rack with fans = 1 Nos; Networking Switch 16 Port with allied peripheral and essential LAN Cabling = 2 Nos. Contractor should provide the appropriate and compatible solution with proposed Call Center. | Solution | 1 |
| 2. | **Complaint Management System (CMS)/ Customer Resource Management (CRM)**   1. Complaint Management System (CMS) should consist of,  * Complaint logging interface - with possible integration with 3rd party application should be opened in one window * Complaint handling agent interface * Complaint handling Team Lead interface * Complaint Management system Administration Module * Reporting Module with flexibility to add / subtract components on reports * Complaint Management Agent interface:   + Should have record of login time, complaints handled, average complaint time etc.   + Complaint resolving and comments text fields.   + Complaint forwarding, pushing / pull controls * Complaint Handling Team Lead Interface:   + Over view of all active agents   + Performance KPI performance and complete reporting   + Ability to transfer a complaint   + Chat ability with in the agents * Complaint Management System - Administration Module   + Work code defining screen   + Custom work code forms   + Work flow defining screen   + TAT define & TAT for respective nodes in work flow   + User Management * Reporting Module   + Real time reporting for every KPI   + Modelled standard reports for quality and performance evaluations * Integration with 3rd party software should be available via web services, or standard communication protocols.  1. Customer Resource Management (CRM) should consist of,  * Connectivity and interface with provisioning and fulfilment systems * Connectivity and interface with 3rd Party services and offerings * Customer and Visitor leads and Complaints * Management and Supply Chain Management System * Inventory Management * Dashboard for central tracking systems * Customer central repository * Web services and connectivity, cross communication via standard protocols * Central Reporting Screen, with ability to customize and export reports and data for sourcing to warehouse/ reporting platforms. * Ability to have custom forms for information gathering * Ability to create and maintain separate forms for different purposes within the organization. * Ability to have custom rules and work flows for all actions that can be triggered * Hardware flexibility and ability to add nodes depending on nodes and load * Mobile devices interfaces * User Management * Integration with Email server * Integration with SMS Gateway and server * Project Management Module * Social Media Integration * Ability to integrate with modern day APIs, such as Google Maps etc. * Single Window operations * Enterprise architecture compliant and standard maintenance * Flexible to have multiple backend databases | Solution | 1 |
| 3 | **Microsoft Dynamics CRM client license (Professional Cals)** | 1 | No |
| 4 | **Configuration, Customization and integration of existing Microsoft Dynamics CRM customer care module.** | 1 | Job |
| 5 | **Glass Partition and Allied Work**  Glass Partition consist of fixing of glass partition with glass door size 10' x 7' x 10' with labor and material. Furniture and fixture of L shape counter for 4 persons having size 10’ x 7’ with 4 x executive chairs and 1 x 1.5 Ton Air Conditioner with voltage stabilizer. | Solution | 1 |
| 6 | **Training**  Local training on proposed solution for 12 persons (Please quote on each individual basis) | Job | 1 |
|  |  |  |  |

## Bill of Quantity for IP Surveillance

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Description** | **Unit** | **Quantity** |
|  | **Dome Camera**  2.1 Megapixel full HD  Image Sensor 6.4 mm (1/2.8 Type) CMOS Mount Type / Lens 4 mm F2.0 Min. Illumination Colour: 0.07 lux @F2.0 (1/30 sec, 50 IRE) B/W : 0 lux @ IR LED on Day / Night ICR (Auto / Day / Night) WDR Digital (Dynamic Range Enhancer) IR LEDs 14 IR Distance 20 m  Focus Manual, Image Enhancement Mirror / V-Flip / BLC / DRE / AGC / Brightness / White balance / DNR / Color saturation / Sharpness / Privacy mask Video Compression H.264 (High profile supported) / MJPE Max. Resolution 1920 x 1080 / 1280 x 720 / D1 (704 x 480) / CIF (352 x 240) Max. Frame Rate 30 fps @ 1920 x 1080 Video Analytics Motion detection, Tampering detection Ethernet RJ-45 10/100BASE-T Security Password protection, HTTPS (SSL, TLS), IP filtering, IEEE 802.1X Protocol IPv4/6 - TCP, UDP, HTTP, HTTPS, RTP, RTSP, DHCP, ICMP, QoS, UPnP IPv4 - FTP, SMTP, NTP, ARP, SNMPv1/v2c/v3, DDNS(LG) Power Source DC12V / PoE | Each | 1 |
|  | **Indoor Bullet Camera**  2.1 Megapixel HD 30 fps  Image Sensor 6.4 mm (1/2.8 Type) CMOS Mount Type / Lens 4 mm F2.0 Min. Illumination Colour: 0.07 lux @F2.0 (1/30 sec, 50 IRE) B/W : 0 lux @ IR LED on Day / Night ICR (Auto / Day / Night) WDR Digital (Dynamic Range Enhancer) IR LEDs 24 IR Distance 30 m  Focus Manual, Image Enhancement Mirror / V-Flip / BLC / DRE / AGC / Brightness / White balance / DNR / Color saturation / Sharpness / Privacy mask Video Compression H.264 (High profile supported) / MJPE Max. Resolution 1920 x 1080 / 1280 x 720 / D1 (704 x 480) / CIF (352 x 240) Max. Frame Rate 30 fps @ 1920 x 1080 Video Analytics Motion detection, Tampering detection Ethernet RJ-45 10/100BASE-T Security Password protection, HTTPS (SSL, TLS), IP filtering, IEEE 802.1X Protocol IPv4/6 - TCP, UDP, HTTP, HTTPS, RTP, RTSP, DHCP, ICMP, QoS, UPnP IPv4 - FTP, SMTP, NTP, ARP, SNMPv1/v2c/v3, DDNS(LG) Power Source DC12V / PoE | Each | 1 |
|  | **Outdoor Bullet Camera**  2 Megapixel Outdoor Bullet CameraImage Sensor 6.4 mm (1/2.8 Type) CMOS Mount Type / Lens 4 mm F2.0 Min. Illumination Colour: 0.05 lux @ F1.2 (1/30 sec, 50 IRE) B/W : 0 lux @ IR LED on Day / Night ICR (Auto / Day / Night) WDR Max. 108 dB IR LEDs 32 IR Distance 30 m  Focus Auto, Image Enhancement Mirror / V-Flip / BLC / DRE / AGC / Brightness / White balance / DNR / Color saturation / Sharpness / Privacy mask Video Compression H.264 (High profile supported) / MJPE Max. Resolution 1920 x 1080 / 1280 x 720 / D1 (704 x 480) / CIF (352 x 240) Max. Frame Rate 60 fps @ 1920 x 1080 Video Analytics Motion detection, Tampering detection Ethernet RJ-45 10/100BASE-T Security Password protection, HTTPS (SSL, TLS), IP filtering, IEEE 802.1X Protocol IPv4/6 - TCP, UDP, HTTP, HTTPS, RTP, RTSP, DHCP, ICMP, QoS, UPnP IPv4 - FTP, SMTP, NTP, ARP, SNMPv1/v2c/v3, DDNS(LG) Power Source PoE / AC24V / DC12V | Each | 1 |
|  | **PTZ Dome Camera**  2.1 Megapixel Full HD 30x IR Network PTZ Dome Camera Image Sensor 1/2.8" Progressive Scan CMOS  Pixels 2.0 Mega  Min. Illumination Color : 0.05 Lux @ (F1.4, AGC ON) B/W : 0.005 Lux @ (F1.4, AGC ON) ; 0 Lux with IR Shutter Speed 1/10 ~ 1/10,000  Day/Night Auto (ICR) / Color / B/W  WDR Digital WDR , S/N Ratio >55dB  White Balance Auto / Manual , Gain Control Auto / Manual  Backlight Compensation Off / BLC / WDR, Focal Length 4.3~129mm, 30x  Zoom Speed Approx 3s (Optical)  Angle of View 58.9˚~2.1˚ (Wide~Tele)  Min. Object Distance 300~1500mm (Wide~Tele)  Max. Aperture Ratio F1.4 (Wide) / F4.6 (Tele)  Focus Control Auto / Manual / Semi-Automatic  IR LED 12pcs, IR LED Array IR Distance 120~180m  IR Intensity Automatically adjust according to zoom ratio Pan/Tilt Range 360˚ Endless / -20˚~90˚ (Auto Flip)  Pan/Tilt Speed Pan Manual speed : 0.1˚~200˚/s ;  Pan Preset speed : 220˚/s Tilt Manual speed : 0.1˚~150˚/s, Pan Preset speed : 200˚/s  Proportional Zoom Pan / Tilt speed can be adjusted automatically according to zoom multiples, Preset 255, Patrol 8 Patrols scheme, up to 32 presets per patrol  Power-off Memory Power-off memory / Power-on recovery Auto Guard Patrol / Preset / Pan scan / Tilt scan / Frame scan / Random scan / Panorama scan PT Limit Manual / Scan / Pan  3D Positioning PTZ control with mouse click and drag Compression Format H.264Video Image Resolution Main stream : 1080p / Secondary stream : D1  Frame Rate Main stream : 1080p@30fps / Secondary stream : D1@30fps Bitrate 64kbps~8Mbps Network Protocol TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP/RTCP, RTSP, PPPoE, FTP, VSIP  User Interface IPC Control Client / Web IPC Control Ethernet 10/100M, RJ45 Interface Power 24VAC / 3A (Power Adaptor included Stand PTZ Dome Camera Stand for Pole | Each | 1 |
|  | **Network Video Recorder 64 Channel**  IP Camera Input 64 channel  Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF Compression Format H.264  Protocols Onvif, RTSP, KEDACOM  Incoming Bandwidth Max 640Mbps Local Display 2 x HDMI, 1 x VGA, simultaneously output different content Multi Screen Display Local monitor (Main/Secondary) Function E-PTZ / Scheme / Polling / TV-Wall (optional with decoder) Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF Mode Manual / Continuous / Schedule / Event (Pre / Post) Search Mode Date & Time (Calendar) / Event Playback Local monitor : 16 x 1080p@30fps Client : 8 x 1080p@30fps  Function Slow forward / Fast forward / Loop / Single Frame / E-PTZ Max. Internal HDDs 16 x 3.5’’ HDD (up to 4TB/each) Raid RAID 0 / 1 / 5 / 6 / 10 , External IP SAN (iSCSI), up to 10 x IP SAN, Max. 100T Audio Function Bi-directional audio / Dumb / Mute / Broadcasting Operation System Embedded Linux , User Management Admin / User Log Management User login / User operation / Alarm / Backup / UpdateNetwork Protocol TCP / IP, UDP, HTTP, DHCP, DNS / DDNS, RTP / RTCP, RTSP, PPPoE, FTP, SNTP, VSIP Output Bandwidth 512Mbps Function NAT / Socks5 / Multiple network access / Packet loss recovery / Auto network organizingEthernet 3 x Gigabite network port, RJ45, interface Video Out 2 x HMDI (1 HDMI up to 4K x 2k, 1 HDMI up to1920 x 1080@60Hz) 1 x VGA (up to 1920 x 1080@60Hz)  Audio In / Out 1 x RCA Line in / 1 x RCA Line out, Alarm In / Out 2 x Inputs / 2 x Outputs  Control 2 x RS485, USB 2 x USB 2.0, 2 x USB 3.0  Power 100 ~ 240V AC, 50 ~ 60Hz / Redundant Power Supply (the second power is option) 4TB x 8 Surveillance SATA Hard Disk Software Video Management Suite (VMS) Cameras KVM Switcher 16 Ports KVM Switch | Each | 1 |
|  | **Network Video Recorder 24 Channel**  IP Camera Input 24 channel  4CIF camera 8ea Analog-IP Switch condition - Basic : Analog 16ch + IP 8ch/4CIF, Minimum Analog Video Input : 8ea -, IP Camera Input : (Min) 8ea/4CIF, (Max) 16ea/4CIF Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF Function E-PTZ / Scheme / Polling / TV-Wall (optional with decoder) Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF,  Mode Manual / Continuous / Schedule / Event (Pre / Post) Search Mode Date & Time (Calendar) / Event Playback Local monitor : 16 x 1080p@30fps Client : 8 x 1080p@30fps  Function Slow forward / Fast forward / Loop / Single Frame / E-PTZ Max. Internal HDDs 16 x 3.5’’ HDD (up to 2TB/each) Network Protocol TCP / IP, UDP, HTTP, DHCP, DNS / DDNS, RTP / RTCP, RTSP, PPPoE, FTP, SNTP, VSIP Output Bandwidth 512Mbps Function NAT / Socks5 / Multiple network access / Packet loss recovery / Auto network organizing Ethernet 3 x Gigabite network port, RJ45, interface Video Out 2 x  Control 2 x RS485, USB 2 x USB 2.0, 2 x USB 3.0  Power 100 ~ 240V AC, 50 ~ 60Hz / Redundant Power Supply (the second power is option) 2TB x 4 Surveillance SATA Hard Disk Software Video Management Suite (VMS) Cameras KVM Switcher 8 Ports KVM Switch | Each | 1 |
|  | **Network Video Recorder 12 Channel**  4CIF camera 8ea Analog-IP Switch condition - Basic : Analog 8ch + IP 8ch/4CIF , Minimum Analog Video Input : 4ea -, IP Camera Input : (Min) 8ea/4CIF, (Max) 12ea/4CIF Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF Function E-PTZ / Scheme / Polling / TV-Wall (optional with decoder) Resolution QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF,  Mode Manual / Continuous / Schedule / Event (Pre / Post) Search Mode Date & Time (Calendar) / Event Playback Local monitor : 16 x 1080p@30fps Client : 8 x 1080p@30fps  Function Slow forward / Fast forward / Loop / Single Frame / E-PTZ Max. Internal HDDs 16 x 3.5’’ HDD (up to 2TB/each) Network Protocol TCP / IP, UDP, HTTP, DHCP, DNS / DDNS, RTP / RTCP, RTSP, PPPoE, FTP, SNTP, VSIP Output Bandwidth 512Mbps Function NAT / Socks5 / Multiple network access / Packet loss recovery / Auto network organizing Ethernet 3 x Gigabite network port, RJ45, interface Video Out 2 x  Control 2 x RS485, USB 2 x USB 2.0, 2 x USB 3.0  Power 100 ~ 240V AC, 50 ~ 60Hz / Redundant Power Supply (the second power is option) 2TB x 4 Surveillance SATA Hard Disk Software Video Management Suite (VMS) Cameras KVM Switcher 8 Ports KVM Switch | Each | 1 |
|  | **Digital Video Recorder 8 Channel** 4CIF CAMERA 8EA \* ANALOG-IP SWITCH CONDITION - BASIC : ANALOG 8CH + IP 8CH/4CIF - MINIMUM ANALOG VIDEO INPUT, IP CAMERA INPUT : 8EA/4CIF, 12EA/4CIF \* MAX. RESOLUTION - UP-TO 3,Max. HDD Capacity up to 2TB per HDD | Each | 1 |
|  | **SMART LED TV 48”**  Type Smart LED TV  Screen Size48 Inch  Resolution 1,080 Full HD  Full HD Resolution, Wide Color Enhancer Plus, Clear Motion Rate 120  Smart TV, Smart Hub, Smart Apps, S-Recommendation  Quad Core Processor, Full Web Browser, Smart View 2.0  Screen Mirroring, Anynet+, ConnectShare™ Movie,  DIRECTV® Ready, Eco Senso In / Out HDMI x 4 / USB x 3 / Component / Composite / Digital Audio | Each | 1 |
|  | **SMART LED TV55”**  Type Smart LED TV  Screen Size 55 Inch  Resolution 1,080 Full HD  Full HD Resolution, Wide Color Enhancer Plus, Clear Motion Rate 120  Smart TV, Smart Hub, Smart Apps, S-Recommendation  Quad Core Processor, Full Web Browser, Smart View 2.0  Screen Mirroring, Anynet+, ConnectShare™ Movie,  DIRECTV® Ready, Eco Senso In / Out HDMI x 4 / USB x 3 / Component / Composite / Digital Audio | Each | 1 |
|  | **SMART LED TV65”**  Type Smart LED TV  Screen Size 65 Inch  Resolution 1,080 Full HD  Full HD Resolution, Wide Color Enhancer Plus, Clear Motion Rate 120  Smart TV, Smart Hub, Smart Apps, S-Recommendation  Quad Core Processor, Full Web Browser, Smart View 2.0  Screen Mirroring, Anynet+, ConnectShare™ Movie,  DIRECTV® Ready, Eco Senso In / Out HDMI x 4 / USB x 3 / Component / Composite / Digital Audio | Each | 1 |
|  | **SMART UPS 5KVA** Smart-UPS On-Line 5 kVA Power rating 5,000 VA/4,500 W Nominal output voltage 230 V (220 V, 240 V, 208 V user selectable) Output frequency 50/60 Hz ± 3 Hz (auto sense) Topology Double-conversion Online Output connections Hardwire three-wire (1 PH + N + G) or (2 PH + G) Battery type Maintenance-free sealed lead-acid battery with suspended electrolyte, leak proof Interface ports Embedded Network Management with Environmental Monitoring which includes an RJ-45 with Status LEDs (10/100 Base-T), Serial (RJ45), USB (Type B), and Smart Slot Control panel High Resolution Graphical LCD display. | Each | 1 |
|  | **SMART UPS 2KVA**  Smart-UPS On-Line 2 kVA Nominal output voltage 230 V (220 V, 240 V, 208 V user selectable) Output frequency 50/60 Hz ± 3 Hz (auto sense) Topology Double-conversion Online Output connections Hardwire three-wire (1 PH + N + G) or (2 PH + G) Battery type Maintenance-free sealed lead-acid battery with suspended electrolyte, leak proof Interface ports Embedded Network Management with Environmental Monitoring which includes an RJ-45 with Status LEDs (10/100 Base-T), Serial (RJ45), USB (Type B) | Each | 1 |
|  |  |  |  |
| **Service level Agreement** | | | |
| 1 | **Support and Maintenance**  Three year support, warranty and maintenance of whole BoQ from date of commissioning which is extendable upon mutual agreement. | Job | 1 |

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| --- | --- | --- | --- |
| **S. No.** | **ICT SERVICES/Human Resource** |  |  |
| 1 | **I.T. Support Engineer** |  | 1 |
| 2 | **Database Administrator** |  | 1 |
| 3 | **Data Entry Operator** |  | 1 |
| 4 | **Network Engineer** |  | 1 |
| 5 | **System Engineer** |  | 1 |
| 6 | **System Administrator** |  | 1 |

BID FORM

To,

Vice Commissioner,

Sindh Employees’ Social Security Institution (SESSI),

Government of Sindh

Aiwan-e-MehnatKash, ST-17, Block-6,

Gulshan-e-Iqbal,

Karachi 75300

Sir,

**SUBJECT:TENDER FOR "AUTOMATION OF SESSI", GOVERNMENT OF SINDH**

Having examined the bidding documents, the receipt of which is hereby duly acknowledge, for the above Contract, we, the undersigned, offer to supply, deliver, test and impart training in conformity with the said bidding documents for the Total Bid Price Pak Rupees (in figures in words)

or such other sums as may be ascertained in accordance with the Price Schedule attached hereto and made part of this bid.

We undertake, if our bid is accepted, to complete the works in accordance with the Contract Execution Schedule.

If our Bid is accepted, we will provide the performance security in the sum equivalent to 2% of the Contract Price for the due performance of the Contract.

We agree to abide by this Bid for the period of ninety (90) days from the date fixed for bid opening of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof in your Notification of Contract Award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest-priced or any Bid that you may receive.

Dated this\_\_\_\_\_\_\_\_\_\_day of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2016

WITNESS BIDDER

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 

# Technical Evaluation Forms

**FORM A1**

**COMPANY PROFILE**

**NUMBER OF YEARS IN BUSINESS**

Date: ----------------------

*All bidders are requested to complete the information in this form. Nationality information is also to be provided for foreign owners or applicants who are forming part of the Joint Ventures as required under the bye-laws as a Partnership/Joint Venture.*

|  |  |  |
| --- | --- | --- |
| 1. | Name of firm or consortium of firm (Legal Name):  *(In case of Joint Venture (JV), please also provide legal name of each partner)* | |
| 2. | Nature of Business:  *(Whether the firm is a Corporation, Partnership, Trust etc., show documentary evidence of required nature in business for every year)* | |
| 3. | Head Office Address: | |
| 4. | Telephone  Fax numbers:  E-mail address: | |
| 5. | Place of Incorporation/Registration:  Year of incorporation/registration: | |
| 6. | Applicant’s authorized representative:  Telephone  Fax numbers:  E-mail address: | |
| 7. | NATIONALITY OF OWNERS. | |
| Name: | Country: |

Note:Please attach relevant document such as certificate of incorporation / registration**FORM A2**

**COMPANY’S PROFILE**

Regular employees on company payroll for last one year.

**(Please attach authenticated pay roll certificates)**

(Attach Separate sheet for each full time technical staff)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Position** | | | | |
| **Personnel information** | **Name** | | **Date Of Birth** | |
|  | **Professional qualifications** | | | |
|  | **Technical/Professional Certifications** | | | |
| **Experience** | **Name Of Employer** | | | |
|  | **Position** | **From** | | **To** |
|  |  |  | |  |
| **Present Employment Record** | **Job Title:** | | | |
|  | **Period with firm:** | | | |
|  | **Telephone:** | | **Email:** | |
|  | **NTN:** | |  | |
|  | **Mail Address:** | |  | |

Note:

Please attach relevant document such as degree(s), certificate(s) and any other deemed necessary as proof of claims in CVs.

**FORM B1**

**SPECIFIC EXPERIENCE**

Completed projects as per above evaluation criteria of "**Automation of SESSI"Sindh Employee’s Social Security Institution (SESSI).**

**(Attach successful completion certificate)**

*Use a separate sheet for each contract / Consultancy*.

|  |  |
| --- | --- |
| 1. | Name of Contract: |
|  | Country: |
| 2. | Name of Procuring Agency, Telephone and Fax Number: |
| 3. | Procuring Agency Address: |
| 4. | Nature of works and special features relevant to the contract:  :....................................................................................................................  .................................................................................................................... |
| 5. | Contract Role (Tick One):  (a) Sole (b) Sub-partner (c) Partner in a Joint Venture |
| 6. | Value of the total contract (in specified currencies) at completion, or at date of award for current contract:  Currency…………. Currency…………… Currency……………………. |
| 7. | Equivalent in Pak/ Rs.: |
| 8. | Date of Award: |
| 9. | Date of Completion: |
| 10. | Specified Requirements: |

Note:

Please attach relevant document such as completion certificate and any other document deemed necessary as proof of claims

**FORM B2**

**GENERAL EXPERIENCE**

Completed projects as per above evaluation criteria of "**Automation of SESSI" Sindh Employee’s Social Security Institution.**

(Please attach successful completion certificate)

*Use a separate sheet for each contract / Consultancy*.

|  |  |
| --- | --- |
| 1. | Name of Contract: |
|  | Country: |
| 2. | Name of Procuring Agency, Telephone and Fax Number: |
| 3. | Procuring Agency Address: |
| 4. | Nature of works and special features relevant to the contract:  :....................................................................................................................  .................................................................................................................... |
| 5. | Contract Role (Tick One):  (a) Sole (b) Sub-partner (c) Partner in a Joint Venture |
| 6. | Value of the total contract (in specified currencies) at completion, or at date of award for current contract:  Currency…………. Currency…………… Currency……………………. |
| 7. | Equivalent in Pak/ Rs.: |
| 8. | Date of Award: |
| 9. | Date of Completion: |
| 10. | Specified Requirements: |

Note:

Please attach relevant document such as completion certificate and any other document deemed necessary as proof of claims

**FORM C1**

**QUALITY**

ISO 9001 or equivalent credentials

(Please attach credentials)

*Use a separate sheet for each credentials*.

|  |  |
| --- | --- |
| 1. | Name of Certificate: |
| 2. | Grant Date: |
| 3. | Expiration Date: |
| 4. | Accreditation body: |
| 5. | Last date of audit/inspection: |
| 6. | Next due date of audit/inspection: |

Note:

Please attach relevant document such as certificates and any other document deemed necessary as proof of claims

**FORM C2**

**QUALITY**

Technical/Management credentials

(Please attach credentials)

*Use a separate sheet for each credentials*.

|  |  |
| --- | --- |
| 1. | Name of Credential: |
| 2. | Credential Number: |
| 3. | Grant Date: |
| 4. | Expiration Date: |
| 5. | Accreditation body: |
| 6. | Last date of renewal: |

Note:

Please attach relevant document such as certificates and any other document deemed necessary as proof of claims

**FORM D1**

**FINANCIAL CAPABILITIES**

**ANNUAL TURNOVER**

**(Attach relevant authenticated audited statement)**

Date: ----------------------

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **YEAR** | **AVERAGE TURNOVER** | **INCOME TAX PAID** |  | **LIQUID ASSETS BALANCE** |
| **2014-15** |  |  |  |  |
| **2013-14** |  |  |  |  |
| **2012-13** |  |  |  |  |

Note:

Please attach relevant document such as authenticated audited statements and any other document deemed necessary as proof of claims