

RAILTEL CORPORATION OF INDIA LIMITED

(A Govt. of India Undertaking)

Regd. & Corp. Off:-

**Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023**

**Hiring of Agency
For**

for PMC services to RCIL Customer

EOI No: RCIL/EOI/CO/ITP/2022-23/ IT services to RCIL Customer/06 dated 25-Aug-22

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NOTICE

RailTel Corporation of India Limited
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New
Delhi-110023

EOI Notice No: RCIL/EOI/CO/ITP/2022-23/ IT services to RCIL Customer/06 dated 25-Aug-22

RailTel Corporation of India Ltd.,(here after referred to as RailTel) invites EOIs from RailTel's Empaneled Partners for "PMC services to RCIL Customer".

The details are as under:

1	Last date for submission of EOIs by bidders	01.09.2022 before 15:00Hrs.
2	Opening of bidder EOIs	01.09.2022 at 15:30Hrs.
3	Number of copies to be submitted for scope of work	One
4	EMD	Rs. 2,00,000 /-
5	EOI Cost	Rs. 1,770/- (Incl. GST)

DD for EMD and EOI cost should be in the favor of **RailTel Corporation of India Limited** payable at Delhi.

Prospective bidders are required to direct all communications related to this Invitation for EOI document, through the following Nominated Point of Contact persons:

Contact: Naresh Kumar, DGM/IT
Email:naresh.kumar@railtelindia.com
Telephone: +91124 2714000
Mobile:+91 9717644088

- NOTE:**
- (i). All firms are required to submit hard copy of their EOI submissions, duly signed by Authorized Signatories with Company seal and stamp.**
 - (ii). The EOI response is invited from all empanelled partners of RailTel only.**
 - (iii). Eligible MSMEs are exempted from cost of EOI Documents and EMD, more details are given in clause 11.7 of EOI Document.**

1. RailTel Corporation of India Limited–Introduction

RailTel Corporation of India Limited (RailTel), an ISO-9001:2000 organization is a Government of India undertaking under the Ministry of Railways. The Corporation was formed in Sept 2000 with the objectives to create nationwide Broadband Telecom and Multimedia Network in all parts of the country, to modernize Train Control Operation and Safety System of Indian Railways and to contribute to realization of goals and objective of national telecom policy 1999. RailTel is a wholly owned subsidiary of Indian Railways.

For ensuring efficient administration across India, country has been divided into four regions namely, Eastern, Northern, Southern & Western each headed by Regional General Managers and Headquartered at Kolkata, New Delhi, Secunderabad & Mumbai respectively. These regions are further divided into territories for efficient working. RailTel has territorial offices at Guwahati, & Bhubaneswar in East, Chandigarh, Jaipur, Lucknow in North, Chennai & Bangalore in South, Bhopal, and Pune & Ahmedabad in West. Various other territorial offices across the country are proposed to be created shortly.

RailTel's business service lines can be categorised into three heads namely B2G/B2B (Business to Government and Business to Business) and B2C (Business to customers):

Licenses & Services

Presently, RailTel holds IP-1, NLD and ISP (Class-A) licenses under which the following services are being offered to various customers:

CARRIER SERVICES

1. National Long Distance: Carriage of Inter & Intra -circle Voice Traffic across India using state of the art NGN based network through its Interconnection with all leading Telecom Operators
2. Lease Line Services: Available for granularities from E1, DS-3, STM-1 & above
3. Dark Fiber/Lambda: Leasing to MSOs/Telco's along secured Right of Way of Railway tracks
4. Co-location Services: Leasing of Space and 1000+ Towers for collocation of MSC/BSC/BTS of Telco's

ENTERPRISE SERVICES

1. Managed Lease Line Services: Available for granularities from E1, DS-3, STM-1 & above
2. MPLS VPN: Layer-2 & Layer-3 VPN available for granularities from 64 Kbps to nx64 Kbps, 2 Mbps & above
3. Dedicated Internet Bandwidth: Experience the "Always ON" internet connectivity at your fingertips in granularities 2mbps to 155mbps

RETAIL SERVICES

Rail wire: Triple Play Broadband Services for the Masses. It is a pilot project undertaken by RailTel and currently services are offered out of Bangalore and nearby places.

2. Scope of Work

RailTel has received work order from Government Customer for ICT Project Management Consultant for Designing, Planning, Monitoring and Supervising the Implementation of State-of-the-Art ICT Infrastructure on turnkey basis at their newly built campus at Maidangarhi in New Delhi; followed by Monitoring and Supervision of Operations, Management and Maintenance of the implemented ICT infrastructure.

RailTel requires to select a suitable associate who can provide assistance to RailTel for PMC project execution through experienced IT manpower. The detailed scope of work is provided under Annexure-1.

The following resource types shall be provisioned by the Consultant with suggested minimum engagement durations (which may be staggered as per need):

S.No.	Resource Types	Required Qualifications & Experience	Suggested Minimum Engagement Duration
1.	Project Manager – 1 No.	Should be BE/BTech and have 11 years experience or BE/BTech with MBA and 8 years experience. Experience: Should have led the Consulting / Implementation team in at least 2 relevant Smart campus/Smart city projects	100%
2.	Smart Campus Architect – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience. Experience: Should have worked as a solution architect in 2 relevant smart city/smart campus projects	20%
3.	Smart Applications Expert – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience. Experience: Should have designed & lead implementation of one relevant application development project	20%
4.	Non-IT Infra Specialist – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience Experience: Should have designed/implemented at least one DC non IT infra design project	20%

5.	Subject Matter Experts (SME's) (for Surveillance and other areas) – Minimum 2 Nos.	Should be BE/BTech with minimum 5 years of experience & Experience: Should have designed/ implemented at least one relevant solution e.g., Centralized Command Control Center or IBMS Project	20%
6.	Support Resources (for SCADA, telephony, PA systems, CAD/CAM designer, contract manager, acoustic and AV systems, etc.) – Minimum 3 Nos.	Should be working in similar role since the last three years	20%

Note : RailTel reserves the right to ask for details regarding the proof of age, qualification and association of the proposed personnel with the firm.

3. Language of Proposals

The proposal and all correspondence and documents shall be written in English. The hardcopy version will be considered as the official proposal.

4. Payment terms

4.1. “Quarterly Payment at the end of each quarter after satisfactory services from selected bidder.

4.2. Firm shall submit tax invoice for payment processing.

5. Schedule of Rates (SOR)

Bidder has to Quote the rate in the below mention format:

S N	It resource Description	Qty.	Man Month Rate	Total Cost (Excl of Taxes)	Total Tax (GST)	Total Cost (Inclusive of Taxes)
1	Project Manager	1				
2	Smart Campus Architect	1				
3	Smart Applications Expert	1				
4	Non-IT Infra Specialist	1				
5	Subject Matter Experts (SME's) (for Surveillance and other areas)	1				
6	Support Resources (for SCADA, telephony, PA systems, CAD/CAM designer, contract manager, acoustic and AV systems, etc.)	3				
Total Monthly Cost						

Total Monthly IT resource cost (Including Tax) in words : _____

6. Evaluation criteria

Evaluation will be done for **SOR Total** on lowest offer quoted by the bidder.

7. RCIL's Right to Accept/Reject Bids

RCIL reserves the right to accept or reject any bid and annul the bidding process or even reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or without any obligation to inform the affected bidder or bidders about the grounds for RailTel's action.

8. Bidding Document

The bidder is expected to examine all instructions, forms, terms and conditions and technical specifications in the bidding documents. Submission of bids, not substantially responsive to the bidding document in every aspect will be at the bidder's risk and may result in rejection of its bid without any further reference to the bidder.

All pages of the documents shall be signed and stamped by the bidder including the closing page in token of his having studied the EOI document and should be submitted along with the bid.

9. Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of 180 Days from the date of opening of EOI.

10. Bidding Process (Single Packet System)

The bidding process will consist of single packet system. The detailed technical proposal i.e. the including 'Price Bid' shall be submitted in sealed envelope.

11. Bid Earnest Money (EMD)

11.1. The tenderer shall furnish a sum as given in EOI Notice as Earnest Money in the form of Demand Draft from any scheduled bank in India in favour of "RailTel Corporation of India Limited" payable at Delhi which should remain valid for 45 days beyond the bid opening date.

11.2. The EMD may be forfeited if a bidder withdraws his offer or modifies the terms and conditions of the offer during validity period and in the case of a successful bidder, if the bidder fails to accept the Letter of Acceptance (LOA) and fails to furnish performance bank guarantee (security deposit) in accordance with clause 12.

11.3. Offers not accompanied with valid Earnest Money shall be summarily rejected.

11.4. Earnest Money of the unsuccessful bidder will be discharged / returned as promptly as possible but not later than 30 days after the expiry of the period of offer / bid validity prescribed by the Purchaser.

11.5. The successful bidder's EMD will be discharged after the first payment to selected bidder and after deduction of Security deposit amount as per clause 12.

11.6. Earnest Money will bear no interest.

11.7. For Micro and Small Enterprises (MSEs)

11.7.1. Certain benefits/preferential treatment shall be extended to the registered MSEs as per guidelines issued in the latest notification of Ministry of MSME/ Government of India.

11.7.2. MSEs who are interested in availing themselves of these benefits will enclose with their offer the proof of their being MSE registered with any of the agencies mentioned in the notification of Ministry of MSME.

11.7.3. The MSEs must also indicate the terminal validity date of their registration

11.7.4. Failing 11.7.2 and 11.7.3 above, such offers will not be liable for consideration of benefits detailed in the notification of Government of India.

12. Security Deposit / Performance Bank Guarantee (PBG)

- 12.1. The successful bidder has to furnish security deposit of Rs. 5 Lakh in the form of Performance Bank guarantee with validity upto contract period plus 2 months, the same should be submitted within 30 days of issue of LOA/PO, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO. This PBG should be from a Scheduled Bank and should cover warranty period plus two months for lodging the claim. The performance Bank Guarantee will be discharged by the Purchaser after completion of the supplier's performance obligations including any warranty obligations under the contract.
- 12.2. The Performa for PBG is given in Form No. 1. If the delivery period gets extended, the PBG should also be extended appropriately.
- 12.3. The security deposit/PBG shall be submitted to Corporate Office & will bear no interest.
- 12.4. A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in interest of bidder to obtain RailTel's Bank IFSC code, Its branch and address and advise these particulars to the BG Issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.
- 12.5. The security deposit/Performance Bank Guarantee shall be released after successful completion of Contract, duly adjusting any dues recoverable from the successful tenderer. Security Deposit in the form of DD/Pay Order should be submitted in the favour of "Railtel Corporation of India Limited" payable at New Delhi Only.
- 12.6. Any performance security upto a value of Rs. 5 Lakhs is to be submitted through DD/Pay order / online transfer only.

13. Deadline for Submission of Bids

Bids must be submitted to RCIL at the address specified in the preamble not later than the specified date and time mentioned in the preamble. If the specified date of submission of bids being declared a holiday for RCIL, the bids will be received up to the specified time in the next working day.

14. Late Bids

Any bid received by RCIL after the deadline for submission of bids will be rejected and/or returned unopened to the bidder.

15. Modification and/or Withdrawal of Bids

Bids once submitted will be treated, as final and no modification will be permitted. No correspondence in this regard will be entertained.

No bidder shall be allowed to withdraw the bid after the deadline for submission of bids.

In case of the successful bidder, he will not be allowed to withdraw or back out from the bid commitments. The bid earnest money in such eventuality shall be forfeited and all interests/claims of such bidder shall be deemed as foreclosed.

16. Details of Financial bid

- a. The financial bid should clearly bring out the cost of the work with detailed break-up of taxes.
- b. The financial bid must be submitted as per proforma under clause No.:5 “Schedule of Rates”

17. Clarification of Bids

To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the bidder for clarification. The response should be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

18. Variation in Contract

+/-25% variation may be operated on SOR during the period of Project Schedule with the approval of competent authority with similar terms and procedure as specified in the agreement.

19. Bidder's Information

S.No.	ITEM	Details
1.	Full name of bidder's firm	
2.	Full address, telephone numbers, fax numbers, and email address of the primary office of the organization / main / head / corporate office	
3.	Name, designation and full address of the Chief Executive Officer of the bidder's organization as a whole, including contact numbers and email Address	
4.	Full address, telephone and fax numbers, and email addresses of the office of the organization dealing with this tender	
5.	Name, designation and full address of the person dealing with the tender to whom all reference shall be made regarding the tender enquiry. His/her telephone, mobile, Fax and email address	
6.	Bank Details (Bank Branch Name ,IFSC Code, Account number)	
7.	GST Registration number	

20. Format for statement of Deviation

The following are the particulars of deviations from the requirements of the Instructions to bidders:-

S.NO	CLAUSE	DEVIATION	REMARKS (Including Justification)

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21. Period of Association/Validity of Agreement

The Consultant is to be engaged for a period of 36 months + 24 months defect liability period, which can be further extended based on extension from customer and after approval of RailTel's competent authority.

22. Rate Contract

The selected bidder shall be able to provide the resources as per SOR as per project requirement. Initially there shall be requirement of 6 – 8 resources and subsequently the resources can change as per project requirement. Hence a Rate contract shall be issued to the selected bidder for providing IT resources to RailTel as per project requirement.

- 22.1. RailTel shall issue Sub PO for actual resource requirement based on Rate contract.
- 22.2. RailTel shall provide 7 days notice to selected bidder for termination of particular resource from project engagement.
- 22.3. In case of additional resource requirement, firm shall be able to provide the requisite resource within 7 days of Sub PO issued by RailTel against Rate Contract.

23. Other Terms and Condition

1. Bidders are requested to quote their best prices considering the fact that price negotiation, if required with the vendor will be passed on to the selected bidder.
2. Unless otherwise specified all prices quoted must remain firm except for statutory variation in taxes and duties during contractual delivery period. Any increase in taxes and duties after expiry of the delivery period will be to vendor account.
3. Quotations should preferably be typewritten and any correction or over- writing should be initialed. Rates to be indicated both in words and figures.
4. Sealed quotations in envelope superscribing tender enquiry number and due date of opening must be sent by Registered or Speed Post or to be dropped in the Tender Box specified for the purpose. Quotations received after specified date and time are liable to be rejected.
5. Quotation should be valid for a minimum period of 180 days from the date of opening of EOI.
6. Printed conditions on the back side of the offers will be ignored.
7. Any increase in taxes and duties after expiry of the delivery period will be to supplier's account. This will be without prejudice to the rights of RCIL for any other action including termination.
8. RCIL shall have the right to terminate the contract by giving 30 days notice without assigning any reasons thereof. However, in the event of any breach of terms of the contract, RCIL will have right to terminate the contract by written notice to the Seller.
9. FORCE MAJEURE: Any delay or failure to perform the contract by either party caused by acts of God or acts of Government or any direction or restriction imposed by Government of India which may affect the contract or the public enemy or contingencies like strikes, riots etc. shall not be considered as default for the

performance of the contract or give rise to any claim for damage. Within 7 days of occurrence and cessation of the event(s), the other party shall be notified. Only those events of force majeure which impedes the execution of the contract at the time of its occurrence shall be taken into cognizance.

10. In case of any dispute or difference arising out of the contract which can not be resolved mutually between RCIL and vendor, it shall be referred to a Sole Arbitrator to be appointed by the CMD, RCIL.
11. The Arbitration and Conciliation Act, 1996 and rules made there under shall apply to the Arbitration Proceedings.
12. The contract shall be governed by and construed according to the laws in force in India and subject to exclusive jurisdiction of the Courts of Delhi only.
13. RCIL may place the order in full or partial manner based on customer requirement.
14. List of Documents to be submitted for bidding
 - Covering Letter
 - Format for statement of deviation (clause no.-20)
 - Format for providing Bidder's information (clause no.-19)
 - Commercial Offer
 - Signed and Stamped EOI document
 - Any other relevant document
 - Tender Cost and EMD
 - GST Registration Certificate
 - MSME Certificate

24. Delivery timelines : Selected bidder is required to adhere the project delivery timelines as approved between RailTel and its customer.

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Format for COVERING LETTER

COVERING LETTER (To be on company letter head)

EoI Reference No: **RCIL/EOI/CO/ITP/2022-23/ IT services to RCIL Customer/06 dated 18-Aug-22**

Date:

To,

DGM/IT
RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

Dear Sir,

SUB: Participation in the EoI process

Having examined the Invitation for EoI document bearing the reference number _____ released by your esteemed organization, we, undersigned, hereby acknowledge the receipt of the same and offer to participate in conformity with the said Invitation for EoI document.

If our application is accepted, we undertake to abide by all the terms and conditions mentioned in the said Invitation for EoI document.

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for EoI document, are true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our EoI is liable to be rejected.

We hereby Submit EMD amount of Rs. _____ issued vide _____ from Bank _____.

OR

We hereby confirm that Our Firm MSME Number is _____ with validity date _____ and our Firm is eligible for exemption as per clause number 11.7.

Authorized Signatory

Name

Designation

Form No. 1
PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND
(On Stamp Paper of Rs one hundred)

(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited, having its registered office at 6th Floor, IIIrd Block, Delhi Technology Park, Shastri Park, Delhi-110053 (Herein after called RailTel) having agreed to exempt (Hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Purchase Order No.....dated.....made between.....and..... for (hereinafter called “the said Agreement”) of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs.(Rs only). We (indicate the name of the Bank) hereinafter referred to as “the Bank”) at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.
2. We, Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the

Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs

3. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Tenderer(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Tenderer(s) shall have no claim against us for making such payment.
4. We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the We shall be discharged from all liability under this Guarantee thereafter.
5. We, (indicate the name of Bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) / Tenderer(s).

(indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the day of 2022

for

(indicate the name of the Bank)

Witness

1. Signature
Name

2. Signature
Name



Annexure -1

3.1 Background

The ICT Consultant proposed to be selected shall be end to end responsible, but not limited to the details contained in this document, for all the ICT activities for the proposed RCIL CUSTOMER campus at Maidangarhi in New Delhi, such as detailing business / functional and technical specifications, working out best in class sustainable & scalable architectures / technologies, solutions and components (including providing of comparisons of different solutions with costs), detailed designing and preparing BOQs, working out budgets for all the ICT infrastructure items that are stated herein and as needed for any world class University or otherwise to be implemented in RCIL CUSTOMER campus. The ICT Consultant will also be framing RFQs/ RFPs for engagement of System Integrator(s) (SI), defining transition and steady state operational requirements including KPIs and SLAs, working out various kinds of plans / schedules, integration requirements of campuswide ICT solutions and components, carrying out activities around quality assurance, test and acceptance(of System Integrator supplied infrastructure), own continuous interaction and coordination with all discipline owners such as of utilities, trunk infrastructure (including civil contractors) for enhancing value by way of bringing in ICT and / or automation packages for various campuswide utilities and other units, integration, optimisation, etc., assuming role of ICT implementation assurer and optimizer for RCIL CUSTOMER by way of providing continuous oversight,

monitoring, control and project management for successful implementation of end to end ICT and other connected services required for completion of the project.

In conjunction to above paragraph, the objective is to build ICT infrastructure for a world class, state of the art infrastructure in conformity with international standards (including but not limited to ISO/IEEE/ITUs) for such infrastructure, and not limited to requirements, systems, solutions, components etc. that are contained in this document. The Consultant is obliged to include as part of scope of this RFQ all the ICT end to end requirements and the corresponding solutions, systems and services in its scope for RCIL CUSTOMERs campus, though not defined herein, but will be needed for a new age / state of the art and world class institution. Any incidental activities needed for the completeness and / or successful implementation of smart ICT infrastructure will be carried out by

the Consultant as part of scope of this RFQ.

The objective is to build RCIL CUSTOMER campus by implementing world class, state of the art ICT Infrastructure & Services in conformity with international standards (including but not limited to ISO/IEEE/ITUs), encompassing numerous systems and integrating underlying information technology solutions and components while maximizing the value for RCIL CUSTOMER.

The ICT initiative for RCIL CUSTOMER is to build a smart, socially and technologically attractive, sustainable world class institution.

The selected Consultant shall create a level playing field for all ICT solutions, components, elements, etc. for RCIL CUSTOMER campus for the SI applicants by evolving a common frame work containing detailed design & architecture, as much as creating a low level blue print of all the systems, subsystems, hardware, software, components etc. involved along with other details such as BoQ, cost estimates, etc. The details MUST be worked out objectively to the last level with no room for any assumptions and / or subjectivity and / or qualifiers and / or caveat statements (All elements must be comfortably measurable and implementable).

The selected Consultant will have to coordinate at their own initiative and as required with other design and construction professionals who are responsible for construction of the university campus infrastructure/ buildings.

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3.2 Campus Construction Phases

RCIL CUSTOMER campus construction over approximately 93.68 Acres at Maidangarhi in New Delhi is spread across several Packages and have total built up area of 5.18 Lacs Sq.m. approximately. Package - I and Package - II are already completed and Package - III is in process with 78% progress. Future packages will be awarded after sanction of DPR/budget by Government of India.

The copy of master plan of proposed RCIL CUSTOMER campus is attached with this RFP document along with the details of building areas proposed in different construction packages. In Package - I, construction of boundary wall and site office has already been completed in January 2016. In Package - II, construction of five buildings (Faculty of Life Science and Earth Science (LSES), three faculty and staff housing blocks, Club and Guest House) started in June 2016 and have been completed in December 2020. In Package - III, construction work for seven buildings (Faculty of Art Design and Conventional Center, Faculty of Physics Chemistry Math IT, Faculty of Law and Humanity, Administration Building, Institute of South Asian Studies, Library Building, Utility building and the External Development) started in January 2017 and is scheduled to be completed by end of 2022. The remaining buildings shall be planned in Package - IV and work will be started after sanctioning of DPR/budget by the Government of India.

4.1 Resource Deployment

The following resource types shall be provisioned by the Consultant with suggested minimum engagement durations (which may be staggered as per need):

S.No.	Resource Types	Required Qualifications & Experience	Suggested Minimum Engagement Duration
1.	Project Manager – 1 No.	Should be BE/BTech and have 11 years experience or BE/BTech with MBA and 8 years experience. Experience: Should have led the Consulting / Implementation team in at least 2 relevant Smart campus/Smart city projects	100%
2.	Smart Campus Architect – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience. Experience: Should have worked as a solution architect in 2 relevant smart city/smart campus projects	20%

3.	Smart Applications Expert – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience. Experience: Should have designed & lead implementation of one relevant application development project	20%
4.	Non-IT Infra Specialist – Minimum 1 No.	Should be BE/BTech with minimum 5 years of experience Experience: Should have designed/implemented at least one DC non IT infra design project	20%
5.	Subject Matter Experts (SME's) (for Surveillance and other areas) – Minimum 2 Nos.	Should be BE/BTech with minimum 5 years of experience & Experience: Should have designed/implemented at least one relevant solution e.g., Centralized Command Control Center or IBMS Project	20%
6.	Support Resources (for SCADA, telephony, PA systems, CAD/CAM designer, contract manager, acoustic and AV systems, etc.) – Minimum 3 Nos.	Should be working in similar role since the last three years	20%

The Age of proposed personnel should not be more than sixty (60) years on the Proposal Due Date. RCIL CUSTOMER reserves the right to ask for details regarding the proof of age, qualification and association of the proposed personnel with the firm.

Scope of Work

RCIL Customer intends to appoint an ICT consultant for its upcoming campus project at Maidangarhi, New Delhi. The size of plot is approximately 93 Acres. The objective is to build the campus by implementing world class ICT Infrastructure in conformity with the international standards (including but not limited to ISO/IEEE/ITUs), encompassing numerous systems and integrating underlying information technology solutions and components while maximizing the value for RCIL CUSTOMER but not being limited to requirements, systems, solutions, hardware, software, components etc. that are contained in this document. This ICT initiative of RCIL CUSTOMER is meant to build a smart, socially and technologically attractive, sustainable modern institution.

Role of Consultant

The ICT Consultant shall be end to end responsible, but not limited to the details contained in this document, for the smart campus ICT infrastructure at the proposed RCIL CUSTOMER campus. **The ICT consultant will, among others, provide the following:**

- (a) Suggest best available IT integrated solutions for RCIL CUSTOMER campus along with cost comparisons.

- (b) Detailing business / functional and technical specifications, working out best in class sustainable architectures / technologies, solutions and components (including providing of comparisons of different solutions with costs).
- (c) Detailed designing and evolving BoQs, working out budgets for all the ICT infrastructure items that are stated herein and as needed for any world class University or otherwise to be implemented in RCIL CUSTOMER campus.
- (d) Framing RFQs/ RFPs for engagement of System Integrator(s) (SI), defining transition and steady state operational requirements including KPIs and SLAs.
- (e) Working out various kinds of plans / schedules, integration requirements of campuswide IT solutions and components.
- (f) Supervising the IT related works and coordination between the existing contracts and the system integrator(s).
- (g) Carrying out quality assurance, test and acceptance
- (h) Own continuous interaction and coordination with all discipline owners such as of utilities, trunk infrastructure (including civil contractors) for enhancing value by way of bringing in ICT and / or automation packages for various campuswide utilities.
- (i) Assuming role of ICT implementation assurer and optimizer for RCIL CUSTOMER by way of providing continuous oversight, monitoring, control and project management for successful implementation of end to end ICT and other aforementioned infrastructure for the campus.
- (j) Working out details objectively to the last level with no room for any assumptions and / or subjectivity and / or qualifiers and / or caveat statements (All elements must be comfortably measurable and implementable).
- (k) Coordinating at their own initiative and as required with other design and construction professionals (Architects, Project Management Consultant and Contractors) who are responsible for construction of the University campus infrastructure/ buildings.
- (l) Also reviewing the currently proposed ICT related detailed designs & technologies for the campus under Package-II and Package-III.
- (m) Ensuring that the entire ICT Infrastructure to be deployed shall be in conformity with the international standards (including but not limited to ISO/IEEE/ITUs standards).
- (n) Ensuring that the procurement / system integration is as per GOI guidelines on the subject, since the capital is being provided by GOI.

5.1 Technical Services

The ICT consultant will provide assistance in developing the Information and Communication Technology strategy that would among other things, feed into the design of the University campus and shall include, but not be limited to, detailed designing of customized architecture of ICT diverse sub-systems, integrating with hardware, packaged / specifically customized software / applications and communications equipment, campus wide utilities/infrastructure, sensors, etc. in conformity with the international standards (including but not limited to ISO/IEEE/ITUs standards).

Technical services will be aligned to suitably empower RCIL CUSTOMER to make an informed decision on, but not limited to, the following ICT aspects.

5.1.1 Network & Communication

I. Networking

- (a) Passive optical networking (PON) for LAN. LAN points within all buildings, except hostels.
- (b) Wi-Fi mesh for all faculty, admin, library and hostel buildings. Wi-Fi hotspots to be created in some open public areas.
- (c) Residential areas to have a wired connection to each unit and extension via Wi-Fi within the unit.
- (d) Architecture that is fault tolerant – hot redundancy in network pathways and devices. No single point of failure on the network.
- (e) Provisioning for multiple (at least two) internet bandwidth service providers (at least 1GBPS each).
- (f) Plan for a network capable of supporting a minimum of 2000 users with multiple devices (PC, laptop, mobile) scalable up to 6000 users.
- (g) Single sign-on implementation for all online services. Include BYOD support & controls for network access.

II. Data center: Plan for a modular data center that supports expansion across the floor via addition of self-contained container units.

III. Unified communications:

- (a) Infrastructure to have services integration across various communication applications for ease of access; e.g. IP Telephony, IPTV, Fixed-Mobile convergence, presence information, digital signage communications, video-on-demand, data sharing, unified messaging.

- (b) VoIP infrastructure for all buildings. Device at all employee desks, security & reception counters.
- (c) IPTV for hostels, residences, select offices (President, VPs, Registrar, Directors).
- (d) Digital signage network across campus for notice board locations, lift lobbies, building reception areas.
- (e) Public Address Solution (separate from fire safety system) – deployment in corridors of all buildings / classrooms / public areas

5.1.2 Security & Public Safety

I. Access Control:

We need to secure access to common back-office operational areas such as accounts, administration, examinations / evaluation, admissions.

Suitable access control mechanisms are to be deployed at:

- i. University entrance gates (students & employees swipe/touch cards to open barriers / turnstiles)
- ii. Entrance of any building (swipe / contact / biometric / metal detectors)
- iii. Entrance of any lab; except common computer labs
- iv. Entry of any server room, data center, NOC or command center

In addition, the options to deploy access control via

- mobile devices, and
- electronic locks

needs to be examined for feasibility and scope.

II. Visitor Management:

- i. Visitor data will be captured. Visitors will register at the entrance of the campus and will be assigned a temporary ID (for person and vehicle if needed).
- ii. The Visitor Management solution should allow automation of the entire process of registering a visitor, printing a badge and capturing detailed information by scanning an ID (such as a driver's license, business card or passport).
- iii. The solution should be capable of tracking the visitor within the premises and the time spent in the campus.
- iv. Provision of baggage scanners with IP connectivity at Entrance gates

III. Parking management:

- (a) Visitors will park in designated parking areas which do not require card swiping. Employees & students will swipe their access card at designated parking areas.

- (b) The system should be capable of providing live information on vacant/occupied slot(s) and also capable of giving an alarm in case of long parking (say for more than 48 hours)
- (c) Need to consider bicycle parking as well.

IV. Surveillance, Monitoring & Analytics:

- (a) Integrated CCTV systems with night-vision and with smart analytics to be deployed in:
 - i. Corridors of all buildings (dome cameras)
 - ii. Select public open spaces on campus (ptz)
 - iii. Campus perimeter (ptz)
- (b) Various types of Analytics need to be defined, e.g., People counting, Directional Alert (going the wrong way), Object left behind at a scene, Object taken from a scene, Noise Cancellation, Activate a display of the camera that has motion, Thumbnail Searching, Face Detection, OCR Detection, Change of Camera View, Speed of vehicle alert, Licence plate recognition, Digital Back Light Compensation, Loitering Alert

V. Standard Operating Procedures:

Field operations guide to be developed for Emergency response to fire / earthquake. Incorporate evacuation plan, assembly areas, etc.

VI. Situation Awareness Platform:

Every sensor, alarm and communication end point to be unified to ensure that some individuals, select groups or entire populations are able to read, hear and see what's happening and do the right things in response to any alarm or alert.

VII. Alarms:

Fire alarm system for all buildings. Integrated specific fire suppression systems as per usage of area – sprinklers, foam, gas, etc. Lift alarm system for all lifts. Fire & lift alarms should be integrated with the Campus Command Center.

5.1.3 Smart Education

(a) Smart class rooms:

Classrooms to be provisioned with

- (a) biometric attendance at classroom door
- (b) smart boards, projection system with network projection capability through portal
- (c) schedule display screen outside classroom
- (d) dedicated optical fibre core/bandwidth for multimedia streaming, VoD, etc.

(b) Video Conferencing:

Provisioning of video conference facilities in one seminar / class room in every Faculty and wherever decided by RCIL CUSTOMER.

(c) Library automation:

Adoption of appropriate automation solutions for the library.

(d) Scheduling of Classrooms:

A system for timetabling and optimizing on classroom utilization and delivery of schedules to display screens outside classrooms.

5.1.4 Governance & Campus Operations

(a) Campus community relationship management:

An integrated system of engaging students, employees & alumni through various touch points like helpdesk, mobile app, portal. The systems will primarily target issue resolution around various areas that the University community members may encounter – such as registration issues, program choices, campus infra issues, counselling, etc. In addition, will provide a portal based framework for available services and student – administration interactions. Some of this is part of the Student Self Service framework of the ERP currently being deployed. A single window clearance system for students needs to be integrated into this platform.

(b) Smart Cards:

Multiple use smart cards will be used on campus for identity (works as an ID card), access control (campus, building, lab), library (issue/return), payments (pay fines, pay for meals, buy on campus shops, etc). Card access will be logged so that a complete transaction record of every card presented to any of the card readers can be reviewed if required – regardless of whether the access is granted or not.

(c) Integrated administrative operations:

A platform to integrate University functioning. For some areas ERP modules are in place, for others they need to be identified:

- (a) Administration aspects: Accounting, Procurement and contract management, Asset and SLA management, Document management (mostly part of current ERP).
- (b) Event management: Seminars, Summits, Exhibitions, Cultural events
- (c) Resource utilization optimization: System to book physical resources / space, creating and managing training schedules

5.1.5 Integrated Command Center

- (a) The University should have an automated Command, Control and Intelligence Platform that integrates with all Smart Components that may be deployed on campus. Among other things this would integrate the university's access control and alarm systems with CCTV camera network. It would have system analytics that allow one person to quickly and effectively monitor multiple cameras from one fixed location. The platform will allow for increased ability to view CCTV cameras by laying out camera locations on a map.
- (b) The platform would also encompass, centralized event management with historic and real time data analysis Dashboards (e.g. Dashboards for Energy, Water, Traffic, Parking, Public Safety Events).
- (c) The facility for Network Operations Center to manage the campus networks: data, voice and video would be integrated into the command center environment.
- (d) The automated Command, Control and Intelligence Platform should be HOT redundant and the system/data should be resumed without human interface with 100 % back-up.
- (e) Automated Command, Control and Intelligence Platform should be fully scalable considering future expansion in the campus.

5.1.6 Utilities

- (a) Have a Smart metering architecture for utilities in residential areas (electricity, water, gas).
- (b) Energy management systems for lighting and HVAC control in all buildings.
- (c) Water quality monitoring for STP treated and potable water.
- (d) Monitoring of Smart bins in public spaces / residential areas/ Hostels.
- (e) Integration of all Utility sensors such as those provided for lifts, fire alarm system, HVAC, substation, WTP, STP etc., into the command center environment.

5.2 Review of currently proposed design / technologies for the Campus

Constructions of few buildings are in progress under PKG-II and PKG-III. Some of the above features/ services have already been included in existing PKG-II and PKG-III. The ICT consultant has to review the currently proposed ICT related detailed designs & technologies for the campus under PKG-II and PKG-III and suggest modifications/amendments as needed with a focus on the areas mentioned hereinafter.

[Conduiting & cabling for telephone, data & MATV system, Fire Detection, Alarm and PA System, Conduiting For CCTV System, Access Control System, Server for BMS software, Building Management System Web-Based Server Software, Programmable & Application Specific Controller (Ddc) - UL Listed, Web Server Engines (Network /Supervisory Controllers), System Integration Units For 3rd Party System Software Integration – UL Listed Controllers, Sensors and Field Devices for PKG-II and PKG-III have been suggested by the Architects.]

5.3 Stages of Work

The selected Consultant is expected to own end to end project life cycle responsibilities for the entire ICT infrastructure. The services to be rendered by the selected consultant, shall be performed in the following stages, forming part of the scope of work.

5.3.1 Inception stage (Concept / DBR Stage)

The selected Consultant shall do the following:

- (a) Review existing/current design proposals/plans & suggest modifications or amendments wherever needed in line with global best practices across University campuses (this is to be reinforced by a secondary study that captures best practices in three Smart campuses across the globe).
- (b) Advise on the engineering services to be provided, space allocation/positioning as required for the envisaged systems & services enumerated above (and those that may be needed but are not listed) & setting of standards & specifications of works to be adopted.
- (c) Discuss and interact with architects, PMC, construction contractor & other consultants or stakeholders involved in RCIL CUSTOMER campus project to arrive at a common understanding for the ICT design & implementation plan for RCIL CUSTOMER campus.
- (d) Prepare an overall Smart Campus Implementation Plan (inclusive of ICT roadmap) for RCIL CUSTOMER. This plan must not be a mere academic device but should also be useful for implementation & project governance through quantified milestones.
- (e) Prepare an Inception Report, in line with RCIL CUSTOMER Smart Campus vision & Implementation Plan, that shall cover the collection & analysis of requirements that starts from the requirements of a new age smart university campus. This shall be arrived at after discussion and deliberation with RCIL CUSTOMER and will also incorporate (or modify existing) concept designs, system architecture, drawings, and the like. This shall then be the baseline for detailed design.

5.3.2 Detailed Design & Development Stage

The selected Consultant after getting approval/ authorization for works agreed in the Inception Report, shall perform the following works:

- (a) Design development & preparation of solution architecture, tender specifications and deployment plan including layout drawings incorporating all elements of the agreed and anticipated ICT service delivery framework for RCIL CUSTOMER.
- (b) The details & drawings will be finalized in coordination with the architects, PMC & other consultants or stakeholders involved in RCIL CUSTOMER campus project.
- (c) Lay out the implementation phasing by clearly demarcating the scope of work into appropriate parts for tendering. This demarcation will be in alignment with the overall construction & campus infrastructure provisioning schedule.

(d) Prepare a unified /integrated system design that would describe the characteristics of the ICT system to be built for RCIL CUSTOMER. This would specify build details of sub systems, each sub-systems' component's interaction with other components, including internal and external sub-systems. This would also encompass system requirements, system and sub-system architecture, human machine interface, detailed design, processing logic, external interfaces, etc. The overall inputs at this stage shall be captured in the Design & Development Stage Report that will incorporate the Smart campus implementation roadmap & investment plan.

(e) RCIL CUSTOMER is in the process of constructing their buildings provisioned with a building management system. The consultant will ensure that there is seamless integration of various (already/to-be proposed) sub systems and heterogeneous devices so as to offer various smart functional capabilities to monitor and manage the campus.

(f) For each tender (see tender stage in the foregoing), the consultant has to prepare preliminary cost estimates based on market conditions.

(g) The overall inputs in this phase shall be captured in the Design & Development Stage Report that will incorporate the Smart campus implementation roadmap & Business model. The design of the integrated command center platform shall be a part of thereport.

5.3.3 Tender Stage

The selected Consultant shall prepare package wise tenders; however, this is subject to assessment at the actual point in time of the consultancy when this is being done. The consultant after getting the approval / authorization for works under Design & Development Stage Report shall perform the following works:

- (a) Preparation of tender documents including tender drawings such as for Data Center Non IT, technical specifications of work & complete Bill of Quantities (BoQ) for procurement, installation, commissioning and operations.
- (b) Preparation of detailed estimates of costs based on market rates (minimum three quotations).
- (c) Furnish list of vendors & assist RCIL CUSTOMER in selection of appropriate vendors when so required.
- (d) Preparation, review and validation of the eligibility criteria, tender evaluation criteria and weights for evaluating the tenders during the finalization of RFQ.
- (e) Participating in the pre-bid clarification session with all selected and participating vendors, to discuss and clarify the RFQ document and to assist in answering any question the vendor(s) may have.
- (f) Participating in the evaluation of the tender responses.
- (g) Prepare comparative statement of tenders received & submit reports.
- (h) Participate in tender evaluation, negotiations & finalization of contracts, when so required.

- (i) Preparation of “Justification of Rates” documentation.

5.3.4 Execution Stage

The selected Consultant after getting approval/ authorization for works under above mentioned tender stage shall perform the following in relation to any ICT infrastructure works awarded to System Integrator(s):

- (a) Preparation of good for construction working drawings after due coordination with RCIL CUSTOMER architects to enable execution of work at site.
- (b) Scrutinize & approve shop drawings, submitted by various vendors/ system Integrators before issue at site.
- (c) Validating tested and accepted prototypes / systems (hardware and software) / networks commissioned by SI (per specifications / procedures established in the design and development phases).
- (d) Validate and confirm in writing the execution of tendered work as per plan.
- (e) During execution, selected Consultant shall also be responsible for:
 - i. Monitoring day to day project activities
 - ii. Preparation of issue and risk matrix
 - iii. Analyzing reports and providing feedback to RCIL CUSTOMER
 - iv. Ensure all the documents are handed over during project execution stage
 - v. Help facilitating application audit
 - vi. Advising RCIL CUSTOMER on payments to be released to SI(s)
 - vii. Attending various review and/or steering committee meetings

5.3.5 Operation & Maintenance (O&M) / DLP Stage

The selected Consultant after the successful completion of the work has to ensure the smooth operation and maintenance of the implemented ICT infrastructure / solutions for the entire campus for 24 (twenty four) months after successful commissioning & handover.

The selected Consultant has to ensure successful integration of all systems as per SOW defined herein. Consultant shall also be responsible for monitoring & ensuring timely rectification of defects during the DLP of 24 (twenty four) months.

5.3.6 Details of Minimum Manpower to be Deployed for Project Duration

S.No	Stage	Manpower
1.	During Inception, Design and Development and Tender Stages	As per list given in Section 4.14
2.	During Execution stage	As per list given in Section 4.14
3.	During Defect Liability Period of 24 (twenty four) months	Minimum two site visits per month and/or as per actual requirement of RCIL CUSTOMER (by the designated Project Manager)

5.4 Deliverables

All the deliverables shall be in the form of 3 (three) hard copies + soft copies both in DOC / DOCX / ODT and PDF formats. Editable copies must be submitted. A list of all deliverables must be provided in the Technical Proposal as per Form 8.

5.5 Engagement Duration

The Consultant is to be engaged for a period of 36 months + 24 months defect liability period, extendable by mutual agreement.

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