

## **Corrigendum-01 dated 24.02.2023**

**Bid for Request for Proposal (RFP) for the Selection of a System Integrator for implementation (Design, Build, Commission and O&M) of Greenfield State Data Centre (Bid Number: GEM/2022/B/2889326 Dated: 22-12-2022)**

Please find the Corrigendum-1 dated 24.02.2023.  
All other terms and conditions of the tender would remain the same as in the published RFP dated 22.12.2022.

**Contact email-id for queries:** [dgmTech-gil@gujarat.gov.in](mailto:dgmTech-gil@gujarat.gov.in)/ [mgrhninfra1-gil@gujarat.gov.in](mailto:mgrhninfra1-gil@gujarat.gov.in)

**For more details visit [www.gil.gujarat.gov.in](http://www.gil.gujarat.gov.in)**

# Corrigendum cum Clarifications document

for

**Request for Proposal (RFP)**

**for the Selection of a System  
Integrator**

**for implementation (Design, Build,  
Commission and O&M) of**

**Greenfield State Data Centre**

**Issued By:**



**Gujarat Informatics Limited (GIL)**

(A Government of Gujarat Undertaking)

On behalf of

**Department of Science & Technology  
(DST)**

GIL, Block No. 2, 2nd Floor, C & D Wing, Karmayogi  
Bhavan Sector - 10 A, Gandhinagar - 382010 Gujarat

Please find the response to pre-bid queries, Corrigendum,  
revised RFP & annexure enclosed herewith.

For further details visit [www.gil.gujarat.gov.in](http://www.gil.gujarat.gov.in)



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## Section -1 Revised clauses

<b>Bid for Request for Proposal (RFP) for the Selection of a System Integrator for implementation (Design, Build, Commission and O&amp;M) of Greenfield State Data Centre</b> <b>(GeM Bid Number: GEM/2022/B/2889326 Dated: 22-12-2022)</b>				
<b>CORRIGENDUM (Date 24.02.2023)</b>				
<b>Sr. No.</b>	<b>Section/Sub section</b>	<b>Page No</b>	<b>Original RFP Clause</b>	<b>Revised Clause</b>
<b>Volume - I</b>				
1	4 Pre –Qualification Criteria	13	2. The Bidder must have minimum average annual turnover of Rs. 2000 crore, in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 as on 31st March 2022.	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.
2	4 Pre –Qualification Criteria	13	3. The Bidder should have positive Net-worth in any 3 of last 04 financial year(s) i.e., FY2018-19, FY 2019-20, FY 2020-21, and FY2021-22 as on 31st March 2022.	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.
3	4 Pre –Qualification Criteria	14	<b>Eligibility Criteria</b> 4. The Bidder shall be national /international level company having relevant experience in Building constructions for last 10 years. <b>Documents to be submitted</b> 1. Bidder shall submit certificate of incorporation AND 2. Completion certificates/ Part completion certificates from clients mentioning the periods OR The self-certification of the applicant is also permitted accompanied by certified copy of work order/document by competent authority of Bidders on its letterhead.	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.

<b>Bid for Request for Proposal (RFP) for the Selection of a System Integrator for implementation (Design, Build, Commission and O&amp;M) of Greenfield State Data Centre (GeM Bid Number: GEM/2022/B/2889326 Dated: 22-12-2022)</b>				
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4	4 Pre –Qualification Criteria	14	<p><b>Eligibility Criteria</b></p> <p>5. The bidder should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.</p> <p><b>Documents to be submitted</b></p> <p>FOR Data Centre built for Client</p> <p>1. Copy of the Work order/Purchase Order</p> <p>AND</p> <p>Certificate of completion of the work from client or phase wise completion certificate from client.</p> <p>2. Uptime/TIA Certification</p>	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.

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5	4 Pre –Qualification Criteria	14	<p><b>Eligibility Criteria</b></p> <p>6. During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes (i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc. AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more. OR b. Two orders each having minimum value of INR 200 Crore or more. OR c. Three orders each having minimum value of INR 150 Crore or more</p> <p><b>Documents to be submitted</b></p> <p>1. Copy of work order(s) / Purchase Order and Contract Agreement AND 2. Certificate of timely completion of the work from client or phase wise completion certificate from client. OR 2. Go Live or FAT certificates issued by the customer</p>	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.

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6	4 Pre –Qualification Criteria	14	7. The bidder should be registered or should deploy Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience.	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.
7	4 Pre –Qualification Criteria	14	<p>8. The bidder must have on its payroll at least 150 Professionals in the Civil Construction domain, Data Centre Electrical, Mechanical, Structural drawing, Cooling, building architecture etc. and other utility Services and having the prior experience in providing the Data Centre Infrastructure maintenance services as on bid submission date.</p> <p>Bidder Must have at least following technical manpower strength on its payroll:</p> <p>i. At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p>ii. At least 1 qualified professional having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+years of relevant experience)</li> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+ years of relevant experience)</li> <li>• Principal Plumbing Consultant (BE/ B.Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul>	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.



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			iii. At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll  iv. At least 05 resources should be CDCP/CDCS/CDCE certified.  v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification  vi. At least 05 Project management professional with PMP or Prince- 2 certified  <b>Documents to be submitted</b>  HR certificate on company's letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate	
8	Section 4.13 Technical Scoring	25	Bidder's experience in setting-up Data Centre Infrastructure in India, quantified in terms of number of projects will be evaluated. Only Projects constructed and commissioned in the last 7 years from the date of Release of RFP will be considered.	As per the corrigendum. Please refer Section -4 of this corrigendum for the revised criteria.
9	4 Pre -Qualification Criteria	15	Duration of ePBG required (Months) - 62	As per the corrigendum. Please refer Section -3 of this corrigendum for the revised criteria.
<b>Volume - II</b>				

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11	10.33 Data & Voice Network Cabling	330	LAN Cable / Installation Cable, Category 8 S/FTP, 4P, LSFRZH	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p>

<b>Bid for Request for Proposal (RFP) for the Selection of a System Integrator for implementation (Design, Build, Commission and O&amp;M) of Greenfield State Data Centre (GeM Bid Number: GEM/2022/B/2889326 Dated: 22-12-2022)</b>				
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12	10.33 Data & Voice Network Cabling	332	Fiber Panel / Optical panel housing mounts in 19-in racks or cabinets and provide up to ultra-high-density 72 port connectivity when combined with modules and cassettes.	The following Shelf Configurations should support all types of Intelligent MPO LC Modules, Splice Cassettes, LC and MPO Adapter packs: Server Rack Side 1U High-Density Shelf which can accommodate a minimum of <b>72 ports or higher with LC Duplex adaptors</b> . Also dedicated 1U panel each for LAN and SAN shall be proposed at the server Rack end to Support Current and Future growth. Network Rack Side- Ultra Density 2U 144 Duplex Shelf and 4U =288 Duplex Shelves shall be considered which ensures better Accessibility and Cable management. LIU and cable management accessories should be from OEM only.
13	10.33 Data & Voice Network Cabling	332	Fiber Panel / Splice cassette Splice cassettes shall accommodate up to 12 port of either MPO, LC Duplex or SC simplex connector providing up to 72 ports in a single rack unit height.	Fiber Panel / Splice cassette Splice cassettes shall accommodate up to 12 ports of either MPO, LC Duplex or SC simplex connector providing up to a minimum of <b>72 ports or higher</b> in a single rack unit height.

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14	10.33 Data & Voice Network Cabling	333	Copper Patch panel/ Should be able to accommodate modules like Cat.6, Cat.6A as well as adapters of FO LC- and SC-connectors.	The bidder can Propose <b>Hybrid panels / separate</b> panels for copper and fiber.
15	10.33 Data & Voice Network Cabling	334	LAN Patch Cord/ Category 8, Shielded S/FTP Grey LSZH Flexible cable, 4 x 2 xAWG 26/7, LSZH, color grey	<b>CAT6A shielded S/FTP</b> Grey cable LSZH cable can be quoted. The OEM should have the experience to work in the Data Centre field
16	10.33 Data & Voice Network Cabling	337	Intelligent Patch panel requirements / Modular versions of the Intelligent Patch Panel shall be available that support both copper and fiber connectors in the same panel.	<b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.
17	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
18	10.16 Intelligent rack PDU	262	The PDU should help to avoid potential circuit overloads with remote current metering and monitoring of connected loads.	The iPDU should be having operating temperature as per mentioned in RFP but it should be extended up to a <b>60-degree temperature.</b>

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19	10.16 Intelligent rack PDU	263	The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide Simplify circuit and phase balancing with color-code receptacles.	<b>Both, lockable sockets and lockable power connection cables</b> can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.
20	10.16 Intelligent rack PDU	263	The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error	<b>Both, lockable sockets and lockable power connection cables</b> can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.
21	10.16 Intelligent rack PDU	263	HTTP SNMP V1 SMTP Event Log MODBUS TCP/IP MODBUS RTU(RS-485) FTP DHCP IPV4 Support Telnet	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet

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22	10.16 Intelligent rack PDU	263	Conforms to CLASS I measurement accuracy of . . Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos $\Phi$ )	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
23	10.16 Intelligent rack PDU	263	Current Threshold settings with warning LED on front panel and Buzzer alarm.	The bidder shall quote <b>Buzzer as Optional</b> .
24	10.16 Intelligent rack PDU	263	TFT Color Display.	<b>TFT/ LED or Higher</b>
25	10.16 Intelligent rack PDU	263	Daisy Chaining: One Master PDU can communicate up to 4 nos. of slave PDUs.	<b>Daisy chaining should be done 25-30 nos. iPDU</b> with one master PDU, select daisy chaining as per OEM iPDU design criteria, all iPDUs shall connect with DCIM for monitoring.
26	10.14 Uninterrupted Power Supply & Lithium-ion System	408-411	A set of battery cabinets (or racks) shall be furnished with sufficient kilowatt hour rating to maintain the module rated output for a duration of 30 minutes at 25 Deg C	Battery backup of <b>15 minutes</b> needs to be considered at the EOL phase of 7 years of support.
27	10.25 Public Address System	306	Public Address System	The OEM shall provide a <b>microphone</b> as per their standard solution. All PA system components should be from a single OEM only.

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28	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
29	10.16 Intelligent rack PDU	263	The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide Simplify circuit and phase balancing with color-code receptacles.	<b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.
30	10.16 Intelligent rack PDU	263	The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error	<b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.

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31	10.16 Intelligent rack PDU	263	HTTP, SNMP V1, SMTP, Event Log, MODBUS TCP/IP, MODBUS RTU(RS-485), FTP, DHCP, IPV4 Support, Telnet	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet
32	10.16 Intelligent rack PDU	263	Conforms to CLASS I measurement accuracy. · Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos Φ)	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
33	10.16 Intelligent rack PDU	263	Current Threshold settings with warning LED on front panel and Buzzer alarm.	The bidder shall quote <b>Buzzer as Optional</b> .
34	10.16 Intelligent rack PDU	263	TFT Color Display.	<b>TFT/ LED or Higher</b>
35	10.17 Server / Network Racks & Cold aisle containment system.	264	The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	This clause has been amended with <b>75% perforated</b> rack doors.
36	10.17 Server / Network Racks & Cold aisle containment system.	264	The frame shall support 1200kg static weight load, 1000kg dynamic weight load.	The bidder can quote with the rack which shall support <b>1200kg static weight load, 600kg dynamic weight load.</b> "



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37	10.17 Server / Network Racks & Cold aisle containment system.	264	The standard top panel shall be removable in the field, and include (2) 150mm x100mm rectangular cut outs with brush insert located in the front and rear of the top panel for cable entrance or exit	The cut-out size <b>should be OEM design</b> , but all cut-outs should have a brush insert.
38	10.14 Uninterrupted Power Supply & Lithium-ion System	248	Nominal Operating Temperature	<b>LIB</b> temperature <b>0-40 degree</b> is acceptable as it is going to place in a controlled environment.
39	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
40	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.

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41	10.16 Intelligent rack PDU	263	HTTP SNMP V1 SMTP Event Log MODBUS TCP/IP MODBUS RTU(RS-485) FTP DHCP IPV4 Support Telnet	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet
42	10.16 Intelligent rack PDU	263	Features - Conforms to CLASS I measurement accuracy. · Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos Φ)	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
43	10.16 Intelligent rack PDU	263	Features - · Current Threshold settings with warning LED on front panel and Buzzer alarm.	The bidder shall quote <b>Buzzer as Optional</b> .
44	10.16 Intelligent rack PDU	263	Features - TFT Color Display.	<b>TFT/LED or Higher</b>
45	10.16 Intelligent rack PDU	263	Features - Daisy Chaining: One Master PDU can communicate up to 03 nos. of slave PDUs.	<b>Daisy chaining should be done 25-30 nos. iPDU</b> with one master PDU, select daisy chaining as per OEM iPDU design criteria, all iPDU's shall connect with DCIM for monitoring.
46	10.16 Intelligent rack PDU	263	Features - Branch Circuit Protection: Two (02) X Hydraulic Magnetic Circuit Breaker Per Phase	Point to be read as; Since the input, the rating is 32A, three phases. Branch Circuit Protection: <b>(02) x 16A Hydraulic Magnetic Circuit</b> low

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				profile Breaker as per IEC guidelines.
47	10.17 Server / Network Racks & Cold aisle containment system.	264	Doors - The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	This clause has been amended with <b>75% perforated</b> rack doors.
48	10.17 Server / Network Racks & Cold aisle containment system.	264	Material - Integrated cable management features should provide with the rack. The bidder should consider the horizontal and vertical cable management accessories as per cable density.	<b>Minimum of 5 nos. horizontal and 10 nos. vertical loop-type cable managers</b> need to be considered. The hardcore network rack should have 2 nos., high-density vertical cable managers.

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49	10.37 Data Centre Infrastructure Management (DCIM)	365	Camera Management: B. The management system enables you to watch the camera video in the layout plans directly without opening external applications. C. The management system can configure a trigger rule to record not only 1 camera video but also presents 3 types for recording: Full time, scheduling and event trigger. The eventtriggered video files are integrated in the event log for you to play the video file at your fingertips. D. The trigger rule can combine any event in the management system. E. Provide the multiple video recorder's live show for you to trace the moving object between different cameras. F. The management system is able to control the camera actions by pan, tile and zoom through the network.	DCIM Should monitor Camera Feeds, and the availability of <b>cameras and should integrate with Video Management System</b> through API.
50	10.37 Data Centre Infrastructure Management (DCIM)	367	Asset Module : E. The management system can analyze the device relationship in power and network connections.	Change in Clause: - Please read as " The management system <b>can analyze the device relationship in power connections</b> ".
51	10.37 Data Centre Infrastructure Management (DCIM)	369	Hardware Specification : - The Gateway so provided has to be compliant with ASHRAE 135-2004 and should be BTL-listed as a BACnet Building Controller (BBC) at the least. The Gateway shall have a built in FTT-10 port to communicate to the TP/FT-10 Lon Works / SNMP / Mod-bus network.	The Controller should support SNMP / Modbus/ Bacnet Protocol. The gateway controller should be certified UL / BTL or similar certification will be allowed.

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52	10.37 Data Centre Infrastructure Management (DCIM)	369	The Gateway shall include a battery-backed, real-time clock, accurate to 10 seconds per day. The RTC shall provide the following: time of day, day, month, year, and day of week.	Change in Clause: -The Gateway shall include <b>with or without the battery-backed</b> , real-time clock, accurate to 10 seconds per day. The RTC shall provide the following: time of day, day, month, year, and day of the week.
53	10.37 Data Centre Infrastructure Management (DCIM)	370	Virtual Machine Migration : -DCIM should be scalable to offer plugins to allow safe shutdown for Virtual Machines and Virtual Machine Migration. The safe shutdown feature should support VMWARE and Microsoft HYPERV formats. For sites where the UPS are also from the same OEM as the DCIM the functionality should be made available day one to the client. For sites where the UPS are not from the same OEM the functionality should be made available as and when client buys UPS from the same OEM for future integration. Non availability of such a capability will be considered as Non-Compliance as client reserves the right to opt for it or not (as per the availability and future scalability on UPS side)	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.
54	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should support the following UPS configurations for alerting: Single UPS, Redundant UPS and Parallel UPS.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.

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55	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should support Event logging - Pinpoint the timing and sequence of events leading up to an incident with the event log.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.
56	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should help prevent possible data corruption by performing graceful, unattended operating system shutdown in the event of an extended power outage or computer power problem. It should allow the operator to run command file - Run command file on network shutdown sequence as well as start-up sequence. It should facilitate Sequenced Server Shutdown - Sequences the shutdown of multiple servers powered by the same UPS to extend runtime for higher priority servers.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.
57	10.37 Data Centre Infrastructure Management (DCIM)	371	Converged management layer b. Thick client view (the downloadable client) should offer a more advance view of the complete Data Centre starting from birds eye view to reach component level view.	Change in Clause: -Converged management layer b. <b>Thick client view (the downloadable client) / Web Client</b> should offer a more advanced view of the complete Data Centre starting from bird's-eye view to reaching the component level view.

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58	10.37 Data Centre Infrastructure Management (DCIM)	375	Dashboard & Reporting : -Network Summary Report: with an overview of network connections per rack in the selected rooms. The report should list layer 2/3 network gear (such as switches) and layer 1 network gear (patch panels) as well as a summary per rack of mapped and unmapped routes equipment that is connected to a network (such as a server or PDU).	The Network switches will be managed by NMS software instead of DCIM software. The supply of NMS software will be not a part of RFP.
59	10.37 Data Centre Infrastructure Management (DCIM)	377	Software : -It should support the SNMP, Modbus TCP, Modbus RTU, OPC, Database, RTSP, ONVIF protocols directly.	Change in the clause: It should support the <b>SNMP, Modbus TCP, Modbus RTU, OPC, and Database</b> protocols directly.
60	10.20 Inrow Cooling units for Server room	268	Communication Interface: The unit should have Communication interfaces to connect DCIM software: •Digital inputs: 2x (terminal) •Protocols, Ethernet: TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, (S)FTP, HTTP (S), NTP, DHCP, DNS, SMTP (S), Syslog	The DCIM communication interface should  <b>Minimum 2 nos. Digital inputs.</b> Protocols, Ethernet: TCP/IPv4, TCP/IPv6, SNMPv1/ SNMPv2c/ SNMPv3/ Telnet/ SSH, (S)FTP, HTTP (S)/ NTP/ DHCP/DNS/SMTP (S)/Syslog
61	10.16 Intelligent rack PDU	263	General - The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error	<b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power

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				cords should be from the same iPDU OEM only.
62	10.37 Data Centre Infrastructure Management (DCIM)	General Query	Change Management : - Environment by implementing organized moves, adds, and change work processes by providing workflow system that can develop and assign work orders, reserve space, track status, and provide a historical audit trail. Ability to assign deadline and person to each work order. Ability to create multiple tasks and track task status for each work order. Ability to create work order templates that can be used for recurring work types like maintenance activities or standard procedure for installation of a certain type of server. Support workflow management that should allow for easy implementation and tracking of organized moves, additions, and changes. Support audit trail reporting that would show asset moves, additions, and changes by date/time, owner, and work orders. DCIM should allow for Integration with Dedicated Change Management Systems like BMC Remedy and Service Now as and when required. Every network management change should be recorded in audit trail report It should allow for Auto Scheduled Work Orders which can regenerate certain Service Work orders like Service Schedules for CRAC units which must renew themselves every Quarter or Yearly etc.	Addition in the clause: - Change management should be integrated with the Equipment level <b>Real-time Asset Tracking System</b> .



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63	10.37 Data Centre Infrastructure Management (DCIM)	General Query		Addition in the clause: - Change management should be integrated with the Equipment level <b>Real-time Asset Tracking System</b> .
64	10.10 SVG Panel	232	Provision shall be made for either top or bottom access, allowing for adequate cable bend radius, to the input and output connections.	<b>Top</b> cable entry.
65	10.11 APF Panel	234	APF module should be modular and hot swappable	As <b>Per the Solution requirement</b> , OEM to propose the best fit-out solution. Hot-swappable can be optional.
66	10.11 APF Panel	238	Provision shall be made for either top or bottom access, allowing for adequate cable bend radius, to the input and output connections.	<b>Top</b> cable entry.
67	10.14 Uninterrupted Power Supply & Lithium-ion System	247	Top & Bottom cable Entry options	<b>Top</b> cable entry.
68	10.14 Uninterrupted Power Supply & Lithium-ion System	250	Backup asked in Tender is for 30 Minutes.	Battery backup of <b>15 minutes</b> needs to be considered at the EOL phase of 7 years of support.
69	10.07 Busbar trunking system for Rack	241	Tap off boxes shall have at least 125 A of distribution capacity..	We have revised the rack <b>iPDU capacity of 32A</b> . So, kindly consider the BBT system accordingly.

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70	10.13 Chiller	201	Capcity of Chiller	The chiller capacity should be 570 TR, at an ambient temperature of <b>47 degrees</b> it should deliver 520 TR.
71	10.13 Chiller	246	Condenser	This is a quality parameter, it is <b>accepted.</b>
72	10.13 Chiller	246	Compressor	<b>Chiller assembler is not acceptable.</b> The bidder should propose the chiller OEM who is also the manufacturer of the compressor and deliver a complete chiller package for better after-sales services.
73	10.26 Water leak detection system	307	The WLD panel shall be capable of supplying power to the inerface modules and shall serve as the annunicator of alarms through facia mounted Zonal LEDs. The panel shall activate sounders progammed zone wise.	<b>230 VAC</b> shall be provided.
74	10.26 Water leak detection system	308	The Cable shall be FRLS twisted pair with SS 316 elements, be capable of water detection over its entire length.	<b>FRLS will be optional for the</b> for sensor cable.

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75	10.27 Rodent Repellent system	309	The powerful sound waves generated by the satellites of RR shall be within the hearing range of many pests and cause them pain and discomfort. RR's satellites should be quiet and inaudible to humans. The RR should be to add in daisy protocol for interfacing 64 controllers with controller ID with 6-digit password protection. The controller data can be transferred to computer and can be subsequently viewed by installed software of the same OEM. LCD display with on board controls for changing the parameter. Once powered up these transducers, it should produce very high frequency variable sound waves (above 20 KHz) continuously which irritate the rodents and force to evacuate the place.	The <b>minimum Password can be 4 digits.</b>

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76	10.27 Rodent Repellent system	310	The Data Centre and all Hub rooms shall be provided with Rodent repellent system. The Rodent Repellent System shall consist of one master console & multiple satellites / transducers. The Master Console shall be proposed at one central location. It is proposed to have 1 zone of 300sqft each, Hub rooms and Data Centre. The satellites will produce powerful high frequency sound waves (well above the 20 K Hz frequency which is the upper limit of the hearing range of human ear, also called as ultrasonic) are within the hearing range of the many pests and cause them pain and discomfort and thereby, forcing them to abandon the protected area. Each Satellite shall cover an open area of 300sqft. When installed in false ceiling / false flooring it should cover an approximate area of 250sq.ft. Each satellite occupies very minimum space and can be mounted in any angle, they do not need any power connection, there will be no risk of sparking & they should be able to withstand high temperatures in the false ceilings, in a temperature range of 4 Deg. C to 60 Deg. C. The Rodent Repellent shall operate either on 230 V AC or 24 V DC based on make & only 230V AC supply at one point shall be given to the Panel.	<p><b>Controller operating voltage range as per OEM hardware power requirement.</b></p> <p>Propose solution covers all the areas wherever the RRS solution is proposed.</p>
77	10.27 Rodent Repellent system	310	Signal generator should have full wave rectification, regulated 12V DC power supply to withstand power fluctuations ranging from 170V AC to 270V AC. Amplifier should have a preamplifier stage coupled with signal generator for dual transistor amplification having a push-pull configuration.	<p><b>Controller operating voltage range as per OEM hardware power requirement.</b></p>
78	Access Control Device	322	Device should have Inbuilt Web Server so device can be managed remotely through inbuilt web Server using any web browser.	As per OEM solution, <b>web server using web browser.</b>
79		323	Linux Operating System	As per <b>OEM standard secure OS.</b>

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80	Access Control Device	322	Total Indian Manufacturing Technology to enable better service and support.	This is a special category project where technology and capacity parameters should match the requirement. <b>We are allowed to import the product and supply subject to declaration to land boarder policy</b> released by GOI
81	10.16 Intelligent rack PDU	423	General: IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
82	10.17 Server / Network Racks & Cold aisle containment system.	425	3) Doors- The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	This clause has been amended with <b>75% perforated</b> rack doors.
83	10.17 Server / Network Racks & Cold aisle containment system.	425	4) Load bearing : • The frame shall support 1200kg static weight load, 1000kg dynamic weight load.	The bidder can quote with the rack which shall support <b>1200kg static weight load, 600kg dynamic weight load."</b>
84	10.17 Server / Network Racks & Cold aisle containment system.	425	The Vertical System should be a vinyl partition that hangs from a drop ceiling, and it should be available in kits that include high-grade aluminum track, UL and FM rated fire suppression links and with ESD fire resistant vinyl	This clause will be revised <b>Vinyl / Polycarbonate sheet</b> shall be fire retardant material with aluminium frame ceiling

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				suspended type and it should be rack independent
85	10.17 Server / Network Racks & Cold aisle containment system.	425	The door, ceiling or combined system shall use a vertical vinyl strip design to accommodate non-uniform rack heights and non-uniform rows. It should be flexible system to deploy, it should require a drop ceiling. The design should be a simple one that incorporates with fire detection and suppression. It can also be used in conjunction with 90° corner brackets	This clause is revised with the door will have the sliding mechanism and is made of appropriate thickness <b>thick solid Vinyl / Polycarbonate sheet with aluminium frame.</b> Also, the door will have an auto closure to avoid any air loss from the contained zone
86	10.17 Server / Network Racks & Cold aisle containment system.	425	The vertical roof partition shall be with minimum 0.40 mil thick vinyl, available linear width sections and drop-down lengths sections. The Vertical roof strips should work with standard or any non-standard/uneven rows.	This clause is revised with appropriate thickness <b>Vinyl / Polycarbonate sheet with aluminium frame.</b>
87	10.17 Server / Network Racks & Cold aisle containment system.	425	The vertical strip door material shall be with minimum 0.40 mil thick vinyl, available linear width sections and lengths sections.	This clause is revised with <b>appropriate thickness Vinyl / Polycarbonate sheet with aluminium frame.</b> Auto door closure needs to be considered.
88	10.17 Server / Network Racks & Cold aisle containment system.	425	The CAC system should be with automation integrated, the ceiling part of the CAC should be open automatic while fire or smoke detected inside the containment system	The bidder can go with <b>manual openable access</b> for maintenance work

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89	10.20 Inrow Cooling units for Server room	429	2) General : For ensuring a closed system for efficient cooling the chilled waterbased cooling should be closed at the front and rear of the rack as the same is required to form a flush joint with the rack.	The OEM can provide their independent design flush mount or protruding type cooling unit but the <b>200mm protruding should be front side</b> and inside the cold aisle containment. The backside should be flush mounted with the server/network rack.
90	General	165	Inbuilt / Outdoor type AMF panel shall be provided complete protection to engine, alternator, starting & stopping DG set automatically on mains failure / resumption	IEC61439 & IEC61641 shall be <b>applicable for all power panels.</b>
91	10.6 LT Panels, ACB & MCCB	187	The Panel should be free standing, floor mounting, indoor type. The functional components should be mounted on non-perforated mounting plate. All components should be front accessible only	All <b>Panels shall be Compartment Type</b> and Internal separation should be Form 4B.

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92	10.33 Data & Voice Network Cabling	492 LAN cable		<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p>
93	10.33 Data & Voice Network Cabling	492 LAN cable	Standards: ISO/IEC 11801-1 Ed 1.0 2017-11; IEC 61156-5; IEC 61156-7; EN 50173-1; EN 50288-4-1 Fire rating: IEC 60332-3-24; IEC 60754-2; IEC 61034, CPR fire class: EN50575, 25GBase-T and 40GBase-T over 30m (per 802.3bq Draft 2.4)	<b>As per CAT6A Standard,</b> IEC 61156-5, ANSI/TIA-568-C.2, ISO/IEC 11801, IEC 61034, IEC 60754-2, IEC 60332-1.
94	10.33 Data & Voice Network Cabling	493 Fiber Panel	Splice Cassette	We have mentioned above that <b>copper and fiber</b> both solutions should be intelligent.



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95	10.33 Data & Voice Network Cabling	494 Copper Patch Panel	Should be able to accommodate modules like Cat.6, Cat.6A as well as adapters of FO LC- and SC-connectors.	<b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.
96	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The MPO-QR connector shall be a multiple-fiber push-on/pull-off connector that is IEC-61754-7 and EIA/TIA-604-5 (FOCIS 5) compliant.	5 - Trunk Cable, 12 Fibers - <b>The MPO</b> connector shall be a multiple-fiber push-on/pull-off connector that is IEC-61754-7 and EIA/TIA-604-5 (FOCIS 5) compliant.
97	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The MPO-QR shall be designed in such a way that it can also be operated exclusively at the connector end, i.e., the bend protection. This allows the MPO adapters to be mounted closer together.	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
98	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The cordage comes with Method B MPO cord in accordance with ANSI/TIA-568.3-D. The boot shall be colored in the same logic as MPO adapters for an instant identification during installation and documentation.: o gray for polarity B o black for polarity A	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
99	10.33 Data & Voice Network Cabling	332 of 451	6 - Fiber Panel - Module - The LC-Duplex ports feature integrated laser shutters that move out of the way when the connector is inserted. The internal wiring of the module is based on universal polarity to ensure the correct fiber polarity while requiring just one type of patch cord on both ends of the link.	The OEM is allowed to provide its <b>high-quality MPO</b> connector.

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100	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Grounding: 6.4mm hole and normal mounting elliptic holes (conductive)	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
101	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Cable tray load: Max. 48x180g (8.64kg) for max. 1mm permanent deformation	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
102	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Dimensions: 483 x 113 x 44mm (L x W x H)	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
103	10.33 Data & Voice Network Cabling	334 of 451	7 - Copper Patch Panel - Shield contacting by shield lance with integral cable strain relief, shield material tin-coated bronze, ground contacting through 1 contact finger for flat connectors 4.8 x 0.5 mm.	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
104	10.33 Data & Voice Network Cabling	334 of 451	8 - Fiber Patch cord - Mounted on both sides with LC-QR connector, IEC 61754-20 compatible	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
105	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Mixed-Media 19" 1 RU housing prepared to hold up to 8 cassettes for copper connection modules or fiber adapters and up to 4 splice cassettes.	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. We have specified minimum port density in 1U. You can quote similar or higher.
106	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Housing: Corrosion-protected sheet steel, black, RAL 9005, powder-coated, POM plastic bars. Dimensions: 482.8 x 157.7 x 43.7 mm (W x D x H)	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their standard design and size for this clause.

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107	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Front cable management system available in two lengths, 80 mm FO optimized with separable bars as well as 100 mm for mixed operation.	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their standard design and size for this clause.
108	10.33 Data & Voice Network Cabling	335 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Shield contacting by shield lance with integral cable strain relief, shield material tin-coated bronze, ground contacting through 1 contact finger for flat connectors 4.8 x 0.5 mm.	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their standard design and size for this clause.
109	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The Intelligent Patch Panels shall use contactless sensor technology based on RFID technology in compliance with ISO 15693.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
110	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The Intelligent Patch Panels shall be standard patch panels which have been retrofitted with RFID Sensors.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
111	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The RFID Sensors mounted on the Intelligent Patch Panel shall provide an LED indicator at every port to enable easy tracing and identification of patch connections.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions. The solution must have an LED indicator to monitor physically during maintenance.
112	10.33 Data & Voice Network Cabling	337 of 451	14 - Intelligent Patch Cord Requirements - The marking tags shall contain RFID tags according to ISO 15693.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
113	10.33 Data & Voice Network Cabling	337 of 451	15- Analyzer Requirements - The Analyzer shall communicate with the RFID Sensors on the Intelligent Patch Panels using a daisy-chain Bus.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.

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114	10.33 Data & Voice Network Cabling	337 of 451	15- Analyzer Requirements - The Analyzer shall provide power to the RFID Sensors over the Bus. No additional power cabling shall be needed.	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
115	10.33 Data & Voice Network Cabling	337 of 451	15- Analyzer Requirements - The Analyzer shall be able to power up to 42 RFID Sensors on a Bus with a length of 2.5m.	The OEM can provide <b>RFID / port sensing technology for intelligent cabling solutions.</b> The OEM is allowed to provide as per their standard design for this clause.
116	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - It shall be possible to connect RFID Sensors in several racks to one Analyzer. The length of the Bus Cable shall extend up to 30 m (with a correspondingly reduced number of RFID Sensors to compensate for voltage drop along the Bus Cable).	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
117	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - An Additional Display shall be available that makes the Analyzer display content available in racks that have Intelligent Patch Panels, but no Analyzer installed.	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
118	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - The Additional Display shall have a powering input, allowing redundant powering of a bus from both the Analyzer and the Additional Display.	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
119	10.33 Data & Voice Network Cabling	338 of 451	16 - Concentrator Requirements - The Concentrators shall run on a standard PC platform using the Windows® operating system (Windows 10 and above).	<b>As per OEM's proposed solution.</b>
120	10.33 Data & Voice Network Cabling	339 of 451	17 - Software - The software shall run on Windows based operating systems.	<b>As per OEM's proposed solution.</b>

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121	10.37 Data Centre Infrastructure Management (DCIM)	365	The management system enables you to watch the camera video in the layout plans directly without opening external applications.	The camera will have <b>VMS software for analytics</b> and other monitoring. DCIM should connect with VMS and be able to fetch all data from VMS for centralized monitoring.
122	10.37 Data Centre Infrastructure Management (DCIM)	365	The management system can configure a trigger rule to record not only 1 camera video but also presents 3 types for recording: Full time, scheduling and event trigger. The eventtriggered video files are integrated in the event log for you to play the video file at your fingertips.	This is the <b>functionality of VMS software</b> . DCIM to get integrated with VMS as per solution requirements.
123	10.37 Data Centre Infrastructure Management (DCIM)	370	DCIM should be scalable to offer plugins to allow safe shutdown for Virtual Machines and Virtual Machine Migration. The safe shutdown feature should support VMWARE and Microsoft HYPERV formats. For sites where the UPS are also from the same OEM as the DCIM the functionality should be made available day one to the client. For sites where the UPS are not from the same OEM the functionality should be made available as and when client buys UPS from the same OEM for future integration. Non availability of such a capability will be considered as Non-Compliance as client reserves the right to opt for it or not (as per the availability and future scalability on UPS side)	The bidder can select <b>hardware that is suitable to their DCIM software</b> . The hardware make should be from standard OEMs like IBM / HP / Dell / VM ware / Cisco or similar.
124	10.36 Video wall	357	Dual inbuilt power supply should be hot swappable.	Bidder to consider for the <b>dual redundant power supply inside the cube</b> and should be hot-swappable for video wall.
125	10.36 Video wall	357	System should be based on Python- Django framework with web browser architecture	<b>Web-based architecture</b> is required.

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126	10.36 Video wall	356	Brightness of Projection engine 2200 Lumens & Brightness of cube 500 Nits	The brightness of the Projection engine is <b>2000 Lumens &amp; Brightness</b> of the cube is <b>500 Nits</b> .
127	10.36 Video wall	361	System should be based on Python- Django framework with web browser architecture	As per OEM's proposed solution, the system should be based on <b>web browser architecture</b> .
128	10.36 Video wall	360	Brightness of Projection engine 2200 Lumens & Brightness of cube 500 Nits	The brightness of the Projection engine is <b>2000 Lumens &amp; Brightness</b> of the cube is <b>500 Nits</b> .
129	10.33 Data & Voice Network Cabling	330	Given Parameters are for specific to single OEM  As per standard cat 8 can give 40 Gb/s for 30 meter per channel length only. Accessories considered for cat 6A which will only give you 10 Gb/s bandwidth. RJ45 connector can only go upto 10 Gb/s.	Horizontal Cabling for the facility is required on <b>Cat 6A true S/FTP solution</b> complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.
130	10.33 Data & Voice Network Cabling	331	Given Parameters are for specific to single OEM  RFID tag for port monitoring purpose.	<b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.

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131	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>Optical panel housing mounts in 19-in racks or cabinets and provide up to ultra-high-density 72 port connectivity when combined with modules and cassettes.</p>	We have specified a minimum 72 ports requirement in 1U, the bidder can <b>quote similar or higher ports</b> in 1U size fiber patch panel.
132	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>The single rack unit housing panel shall have 3 level of drawers each drawer holding two splice cassettes side by side.</p>	<b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.
133	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>Depending on the connector type, the splice cassette includes a one-meter ribbon, twelve or 24 x 250 µm single fiber pigtail, that is loaded within the cassette, and can be fusion spliced directly to either ribbon or loose fiber cable.</p>	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
134	10.33 Data & Voice Network Cabling	333	<p>Given Parameters are for specific to single OEM</p> <p>Grounding: 6.4mm hole and normal mounting elliptic holes (conductive)</p> <p>Grounding spring: Bronze (CuSn6) tinned (only with shielded version)</p> <p>Module holding force: Min. 100N (insertion), min. 30N (extraction)</p> <p>Cable tray load: Max. 48x180g (8.64kg) for max. 1mm permanent deformation</p> <p>Dimensions: 483 x 113 x 44mm (L x W x H)</p>	The <b>OEM are allowed to provide as per their standard design</b> for this clause.

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			Patch panel with integrated cable tie shelf, accommodating up to 48 shielded modules	
135	10.33 Data & Voice Network Cabling	334	<p>Given Parameters are for specific to single OEM</p> <p>Category 8, Shielded S/FTP Grey LSZH Flexible cable, 4 x 2 xAWG 26/7, LSZH, color grey</p> <p>As per standard cat 8 can give 40 Gb/s for 30 meter per channel length only. Accessories considered for cat 6A which will only give you 10 Gb/s bandwidth. RJ45 connector can only go upto 10 Gb/s.</p>	<p>Horizontal Cabling for the facility is required on <b>Cat 6A true S/FTP solution</b> complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p>



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136	10.33 Data & Voice Network Cabling	334	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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137	10.33 Data & Voice Network Cabling	336 337	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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138	10.33 Data & Voice Network Cabling	337	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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139	10.33 Data & Voice Network Cabling	337	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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140	10.33 Data & Voice Network Cabling	338	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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142	10.33 Data & Voice Network Cabling	340	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

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143	10.33 Data & Voice Network Cabling	340	All Parameters are for specific to single OEM	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>



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<b>Additional Scope/Clause added</b>				
<b>Volume - I</b>				
144	Section 4	Page 29	Add New Clause 4.18	Please refer the Section -5 of this corrigendum.
<b>Volume - II</b>				
145	Clause 3.2.2 Srl No. 4	Page 15	Design approval needs to be taken from the authority if required.	Structural Design shall be got approved/vetted from IIT/Govt. Engg Collage
146	Clause 3.4	Page 25	total five floors (Ground floor + 5 floors).	Total Six floors (Ground floor + 5 floors).
147	Clause 9.3.1	Page 99	Foundation shall be pile foundation using specified grade of concrete.	Geotechnical/soil investigation shall be performed by SI to establish the SBC of the soil.The SI shall carry out the soil investigation of entire site, as per relevant Indian standards, before taking up the foundation work.The Foundation Design shall be done by SI based on and as per recommendations of the Soil Report. These shall be submitted to the PMC for approval

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<b>CORRIGENDUM (Date 24.02.2023)</b>				
<b>Sr. No.</b>	<b>Section/Sub section</b>	<b>Page No</b>	<b>Original RFP Clause</b>	<b>Revised Clause</b>
148	Clause 9.3.13	Page 107	Aluminum formwork (using grade 5052 aluminum for panel sheets of minimum 4 mm thick and grade 6061, Type-6 aluminum for extruded sections) or JET platforms (JET PLASFORM PANEL is an innovative prefabricated modular formwork system which is made from engineered Polypropylene (PP) material) joined by P Clamp or Pin and wedges) shall be used for monolithic construction RCC/composite members. Pins and wedges to be made of high-grade mild steel.	All formwork including props shall be of Steel of adequate strength. Props shall be adjustable type, to avoid slant props. However, the form work to be used for surfaces specified in these specifications to be plastered shall be such that after application of the specified thickness, fair finished surface is achieved as specified herein. The contractor may at his discretion use timber or steel or ply wood form work for which no price adjustment will be admissible & in such cases he will have to properly roughen the concrete surfaces for receiving plaster finish.
149	Clause 9.20	Page 157	Add New Clause 9.20.A	Please refer the Section -9 of this corrigendum.
150	Clause 10.2 Sr No. 22	Page 163	Newly Added	Please refer the Section -8 of this corrigendum.
151	Clause 10.35	Page 343	Repalced with existing specifications mentioned in the RFP vol.2	Please refer the Section -7 of this corrigendum.

## Section -2 Clarifications on Queries raised

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
1	Vol.1	Section No. 4.1 sub clause 5	Page no 14	<p><b>Eligibility Criteria</b></p> <p>The bidder should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.</p> <p><b>Documents to be submitted</b></p> <p>FOR Data Centre built for Client</p> <p>1. Copy of the Work order/Purchase Order AND Certificate of completion of the work from client or phase wise completion certificate from client.</p> <p>2. Uptime/TIA Certification</p>	<p>1.If design is not done by contractor, they can associate with an agency having relevant design experience of data centres</p> <p>2. If certification is not obtained, bidder shall submit Self declaration towards DC rating/ Specifications confirming Tier- III requirements.</p>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
2	Vol.1	Section No. 4.1 sub clause 6	Page no 14	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system,</p>	<p>1)As highlighted in the eligibility criteria, request to remove the word "Turnkey Data Centre/ Tier-III/IV"</p> <p>2) As per point (ii), bidder shall associate with an agency who has O&amp;M experience of data centres including FMS. Experience of those agencies shall be considered without considering its monetary value for the purpose of evaluation.</p>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				<p>Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.                      AND                      (ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.                      a. Single order of value of INR 350 Crore or more.                      OR                      b. Two orders each having minimum value of INR 200 Crore or more.                      OR                      c. Three orders each having minimum value of INR 150 Crore or more</p> <p><b>Documents to be submitted</b></p> <p>1. Copy of work order(s) / Purchase Order and Contract Agreement                      AND                      2. Certificate of timely completion of the work from client or phase wise completion certificate from client.                      OR                      2. Go Live or FAT certificates issued by the customer</p>	<p>OR</p> <p>3) Request to remove the O&amp;M clause</p>	

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
3	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	14	<p><b>Eligibility Criteria</b></p> <p>6. During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes (i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p> <p><b>Documents to be submitted</b></p> <p>1. Copy of work order(s) / Purchase Order and Contract Agreement</p> <p>AND</p> <p>2. Certificate of timely completion of the work from client or phase wise completion</p>	<p>Request to consider experience of setting up of Own Data Center for Commercial use and amend the clause as follows:</p> <p><b>Eligibility Criteria</b></p> <p>6. During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes (i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p><b>Own Data Center constructed by the bidder/bidder group company for commercial use will be considered as part of completed works.</b></p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				certificate from client. OR 2. Go Live or FAT certificates issued by the customer	a. Single order of value of INR 350 Crore or more. OR b. Two orders each having minimum value of INR 200 Crore or more. OR c. Three orders each having minimum value of INR 150 Crore or more <b>Documents to be submitted</b> 1. Copy of work order(s) / Purchase Order and Contract Agreement AND 2. Certificate of timely completion of the work from client or phase wise completion certificate from client. OR 2. Go Live or FAT certificates issued by the customer <b>FOR Own Data Center</b> <b>1. Bidder/bidder group company to submit CA certificate confirming the value of the project</b> <b>2. Uptime/TIA Certification</b>	

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
4	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>Kindly confirm the order value mentioned herein includes the value of Operation &amp; Maintenance of the Data Center building.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
5	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>If the answer to the above query is affirmative, we seek the following changes in the interpretation of order values as follows:</p> <p>(a) Single order of value (excl. O&amp;M) of INR 300 Crore or more</p> <p>OR</p> <p>(b) Two orders each having minimum value (excl. O&amp;M) of INR 150 Crore or more</p> <p>OR</p> <p>(c) Three orders each having minimum value (excl. O&amp;M) of INR 100 Crore or more</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>



Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
6	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>We understand that any project which is substantially completed / O&amp;M commenced / Testing &amp; Commissioning completed / Handed over to the Client successfully for operations shall also be considered for eligibility criteria against the given requirements of the current tender. Kindly confirm.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
7	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>As the current scope of work includes Design, Engineering for the project, we request to include the Design &amp; Engineering of the Data Center building as the major criteria for defining participation by the bidders.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
8	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>We presume that this Pre-qualification criteria shall include any building / facility which encompasses the Data Center with the requirements as mentioned. Kindly confirm.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Corrigendum cum clarifications document for Greenfield State Data Centre (Civil & Non-IT)

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
9	Volume 1	Cl. 4.1	14, 15	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p> <p>(i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc.</p> <p>AND</p> <p>(ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more.</p> <p>OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more.</p> <p>OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>We presume that this Pre-qualification criteria requirements shall be complied with projects at multiple locations. Kindly confirm.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>
10	1	4.1	14	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes</p>	<p><b>Own commercial DC build experience should be counted and ongoing projects to be counted in India</b></p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
11	Pre-Qualification for Bidder / Vol. 1	4.1/6	14	<p>During the last 07 years, the Bidder must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes (i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc. AND (ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</p> <p>a. Single order of value of INR 350 Crore or more. OR</p> <p>b. Two orders each having minimum value of INR 200 Crore or more. OR</p> <p>c. Three orders each having minimum value of INR 150 Crore or more</p>	<p>is criteria is a clear cut limiting facto and preventing participation of capable bidders. GIL and DST needs to check other data center bids published in India, especially after Covid - 19 pendamic where Govt of India has empasised wider participation through consortium and collective experience. Hence, we solicit GIL and DST support to modify the clause as :</p> <p><b><i>"The Sole Bidder or any member of consortium should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender. During the last 07 years, The Sole Bidder or any member of consortium must have built, implemented/completed and operated Data Centre projects for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India which includes (i) Turnkey Data Centre/ Tier-III/IV Data Centre consisting of building construction, along with</i></b></p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					<p><b><i>installation, commissioning of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System, Civil and Interiors etc. AND (ii) Operation &amp; Maintenance including FMS of the Data Centre as on last date of Bid submission, that meets the below mentioned requirement.</i></b></p> <p><b><i>a. Single order of value of INR 350 Crore or more. OR</i></b></p> <p><b><i>b. Two orders each having minimum value of INR 200 Crore or more. OR</i></b></p> <p><b><i>c. Three orders each having minimum value of INR 150 Crore or more"</i></b></p>	

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
12	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	13	2. The Bidder must have minimum average annual turnover of Rs. 2000 crore, in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 as on 31st March 2022.	<p>Request to consider financials of group company and amend the clause as follows:</p> <p>The Bidder must have minimum average annual turnover of Rs. 2000 crore, in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 as on 31st March 2022.</p> <p><b>Note: Turnover from the group* companies shall also be considered for meeting this criterion.</b></p> <p>*Group Company: A group as defined in Accounting Standard (AS) 21 or the companies whose majority shareholding is with the same common promoters#. In this case, the bidder needs to submit</p> <p>a. CA certificate showing the common shareholding of the promoters in the bidder entity (agency) and all such entities whose credentials are being used by the bidder(agency).</p> <p>b. Certificate from a CA on the total turnover and net worth of such entities after having examined audited books of accounts of the entities (with common promoter) whose credentials are being used by the bidder (agency).</p>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					<p>c. An undertaking by the promoter# of such common entities as per the format.                      d. #Promoter(s) refers individual and his/her relatives as defined under the provisions of the companies act 2013 and the rules notified there under.</p> <p>(The above recommended clause has also been accepted and incorporated by STPI and NIC (Govt of India bodies under Ministry of Electronics and IT) in their recently released RFPs)</p>	
13	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	13	3. The Bidder should have positive Net-worth in any 3 of last 04 financial year(s) i.e., FY2018-19, FY 2019-20, FY 2020-21, and FY2021-22 as on 31st March 2022.	<p>Request to consider financials of group company and amend the clause as follows:</p> <p>The Bidder should have positive Net-worth in any 3 of last 04 financial year(s) i.e., FY2018-19, FY 2019-20, FY 2020-21, and FY2021-22 as on 31st March 2022.</p> <p><b>Note: Net worth of the group* companies shall also be considered for meeting this criterion.</b></p> <p>*Group Company: A group as defined in Accounting Standard (AS) 21 or the companies whose majority shareholding is with the same common promoters#. In this</p>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .



Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					<p>case, the bidder needs to submit</p> <p>a. CA certificate showing the common shareholding of the promoters in the bidder entity (agency) and all such entities whose credentials are being used by the bidder(agency).</p> <p>b. Certificate from a CA on the total turnover and net worth of such entities after having examined audited books of accounts of the entities (with common promoter) whose credentials are being used by the bidder (agency).</p> <p>c. An undertaking by the promoter# of such common entities as per the format.</p> <p>d. #Promoter(s) refers individual and his/her relatives as defined under the provisions of the companies act 2013 and the rules notified there under.</p> <p>(The above recommended clause has also been accepted and incorporated by STPI and NIC (Govt of India bodies under Ministry of Electronics and IT) in their recently released RFPs)</p>	
14	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	14	<p><b>Eligibility Criteria</b></p> <p>4. The Bidder shall be national /international level company having relevant experience in Building constructions for last 10 years.</p> <p><b>Documents to be submitted</b></p>	Request to consider experience of group company and also consider experience of setting up of Own Data Center for Commercial use and amend the clause as follows:	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				<p>1. Bidder shall submit certificate of incorporation AND 2. Completion certificates/ Part completion certificates from clients mentioning the periods OR The self-certification of the applicant is also permitted accompanied by certified copy of work order/document by competent authority of Bidders on its letterhead.</p>	<p><b>Eligibility Criteria</b> 4. The Bidder/<b>Bidder's group* company</b> shall be national /international level company having relevant experience in Building constructions for last 10 years. <b>Documents to be submitted</b> 1. Bidder shall submit certificate of incorporation AND 2. Completion certificates/ Part completion certificates from clients mentioning the periods OR The self-certification of the applicant is also permitted accompanied by certified copy of work order/document by competent authority of Bidders on its letterhead. <b>Own Data Center constructed by the bidder/bidder group company for commercial use will be considered as part of completed works. For Own Data Center, Bidder/bidder group company to submit CA certificate confirming the value of the project and relevant Uptime Tier certificate.</b></p>	
15	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	14	<p><b>Eligibility Criteria</b> 5. The bidder should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified)</p>	Request to consider experience of setting up of Own Data Center for Commercial use and amend the clause as follows:	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				<p>Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.</p> <p><b>Documents to be submitted</b> FOR Data Centre built for Client</p> <p>1. Copy of the Work order/Purchase Order AND Certificate of completion of the work from client or phase wise completion certificate from client.</p> <p>2. Uptime/TIA Certification</p>	<p><b>Eligibility Criteria</b></p> <p>5. The bidder should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender. <b>Own Data Center constructed by the bidder/bidder group company for commercial use will be considered as part of completed works.</b></p> <p><b>Documents to be submitted</b> FOR Data Centre built for Client</p> <p>1. Copy of the Work order/Purchase Order AND Certificate of completion of the work from client or phase wise completion certificate from client.</p> <p>2. Uptime/TIA Certification</p> <p><b>FOR Own Data Center</b></p> <p><b>1. Bidder/bidder group company to submit CA certificate confirming the value of the project</b></p> <p><b>2. Uptime/TIA Certification</b></p>	

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
16	Vol.1	Section No. 4.1 sub clause 8	Page no 15	<p>The bidder must have on its payroll at least 150 Professionals in the Civil Construction domain, Data Centre Electrical, Mechanical, Structural drawing, Cooling, building architecture etc. and other utility Services and having the prior experience in providing the Data Centre Infrastructure maintenance services as on bid submission date.</p> <p>Bidder Must have at least following technical manpower strength on its payroll:</p> <p>i. At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p>ii. At least 1 qualified professional having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+years of relevant experience)</li> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+ years of relevant experience)</li> <li>• Principal Plumbing Consultant (BE/ B.Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul>	<p>For sl.no iv &amp; v, bidder shall submit a declaration that they will engage resources as per the requirement during construction stage. Credentials of manpower of the consultant appointed by the bidder shall also be considered.</p>	<p>For Serial no 4 &amp; 5 only, the bidders <b>should enroll the resources prior to awarding the contract and the same should be communicated with the Purchaser and mentioned along with the bid submitted.</b></p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				<ul style="list-style-type: none"> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>iii. At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll</li> <li>iv. At least 05 resources should be CDCP/CDCS/CDCE certified.</li> <li>v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification</li> <li>vi. At least 05 Project management professional with PMP or Prince- 2 certified</li> </ul> <p><b>Documents to be submitted</b></p> <p>HR certificate on company’s letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate</p>		
17	Volume 1: Instruction to Bidder	4 Pre – Qualification Criteria	15	7. The bidder should be registered or should deploy Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience.	7. The bidder/ <b>bidder's group company</b> should be registered or should deploy Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
18	Bid Document	Bid Details	2	Duration of ePBG required (Months) - 62	The duration of ePBG shall be 31 months (Project Duration - 19 months + DLP - 12 months) from the date of issue of LOI. Request to kindly revise the same and confirm.	As per the corrigendum. Please refer to the section 5 of this corrigendum for revised criteria .
19	1	4.13	25	Bidder's experience in setting-up Data Centre Infrastructure in India, quantified in terms of number of projects will be evaluated. Only Projects constructed and commissioned in the last 7 years from the date of Release of RFP will be considered.	BTS Projects / Self Build Commercial DC facility should be considered	As per the corrigendum. Please refer to the section 4 of this corrigendum for revised criteria .
20	Pre-Qualification for Bidder / Vol. 1	4.1/5	14	The bidder should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.	This criteria is a clear cut limiting facto and preventing participation of capable bidders. GIL and DST needs to check other data center bids published in India, especially after Covid - 19 pendamic where Govt of India has empasised wider participation through consortium and collective experience. Hence, we solicit GIL and DST support to modify the clause as : <b><i>"The Sole Bidder or any member of consortium should have experience of Designing, constructing, and commissioning of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender."</i></b>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
21	Vol.1	Section No. 4.1 sub clause 12	Page no 17	The Bidder must have followed Certificate at the time of bidding, a. ISO 9001:2015 b. ISO/IEC 20000 c. ISO/IEC 27001:2013  <b>Documents to be submitted</b> Copy of Valid Certificates	For ISO/IEC 20000 And ISO/IEC 27001:2013, bidder may associate with an IT service provider who are having these certifications.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
22	Vol.1	Clause no 4.13, Point 2	Page no 24	4.13 Technical Bid Evaluation Scoring Matrix ii. In order to qualify technically, a Bid must secure a minimum of 70% of total marks in the technical evaluation. Only those Bids which have a minimum score of 70% of total marks in technical evaluation will be considered for opening of their commercial Bid.	Request to keep the qualifying score to 60%.	As per the RFP.
23	Vol.1	Section 1, Point no 9	Page no 10	<b>Earnest Money Deposit</b> : Bank guarantee of INR 15,00,00,000/- (valid for 9 months from the last date of bid submission)	As per standard procedure of Gujarat state procedures / CPWD we request to keep EMD to 1% of estimated value only.	As per the RFP.
24	-	General	General	<b>Second prebid meeting</b>	Considering the complexity of job involved , we request you to organise second pre-bid meeting after one week of receipt of 1st pre-bid meeting replies.	No Second pre-bid meeting will be organized.
25	Vol.1	Annexure-B and Annexure-C	Page no 80 & 81	<b>Statutory auditor certificate for :</b> Annexure-C: Bidder's Net worth Annexure-B: Bidder's Annual Turnover	We request to consider certificate issued by practicing CA with UDIN number. However, bidder shall submit Annual reports duly audited by Statutory auditors.	As per the corrigendum. Please refer to the section 14 & 15 of this corrigendum for revised format .
26		Clause no 7	Page no 45 -55	Project Milestone, Payment schedule & Liquidated Damages (LD)	The existing payment terms are stringent and effect cashflow of	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					project. Hence request to review this clause.	
27	Vol.2	Section 3.2 Sub-section 3.2.1	175	Site clearance (in all aspects) and Design of the Greenfield Data Centre (for CIVIL and Non- IT work) supported by all required approval)	Request you to clarify on the scope of work as Site Clearance Scope ( in all Respect ) . Request you to clarify on existing available approvals in place for the proposed Plot	All the statutory approval required for building operations like Power, Fire, Municipal, Water, Sewerage, NOC, etc. will be in the bidder's scope. These are the indicative list of approvals only.
28	Vol.2	Section 3.4	185	Concept design consideration for Greenfield Data Centre Building:	Please arrange to provide AutoCAD Layout of proposed Land Parcel and Contour Plan of the same. Please clarify on Testing carried out on the Proposed Site with respect to Air Power , Water, Underground Services Etc. Please clarify on status of Land interms of Clearnace to start the work at site.	Necessary details have already been provided in the RFP.
29	Vol.2	Section 3.4	185	Concept design consideration for Greenfield Data Centre Building:	Please clarify on Provisional NOC's taken for the Proposed Site Location and share the same.	The required information will be shared with the selected bidder.
30	Vol.2	Additional	Additional	Approved Makes	Please arrange to provide approved Make list for MEP Capital Equipments, NON IT Components.,	All the relevant approved makes have been mentioned in the RFP documents. However, bidders are free to propose any standard makes for other hardware/software/equipment meeting technical, functional and SLA requirements mentioned in the RFP. For Plumbing &



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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
						other electrical items please refer corrigendum.
31	Vol.2	Additional	Additional	Site Visit	Please arrange to allow us for Site Visit.	The necessary information has been mentioned in the RFP. The bidders are free to visit the site at their own discretion and cost.
32	Vol.1	Additional	Additional	LD	Request to Cap all LD's to 5-7%	As per the RFP.
33	Bid Document	Bid Details	1	Earnest Money Deposit - 15,00,00,000	As the EMD amount is considerably very huge sum, We request to kindly delete the EMD requirements vide the said clause and remove the EMD submission from the tender bid. Kindly confirm.	As per the RFP.
34	Bid Document Volume 1	Bid Details Cl. 4.6	Point 1: Page 19	Earnest Money Deposit - 15,00,00,000  iii. The EMD may be in the form of a Demand draft or Pay order or Bank Guarantee [on the lines of Annexure-O, issued by a Nationalized Bank in India, drawn in favor of DST/GIL payable at Gandhinagar.	We refer to the Cl. 4.6 Earnest Money Deposit Page 19 of Volume 1, wherein it is informed that the EMD shall be paid by BG. Kindly confirm that the BG shall be paid via Bank Guarantee.	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
35	Bid Document	Bid Details	1 & 2	<p>RA Qualification Rule: H1-Highest Priced Bid Elimination</p> <p>1. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:</p> <p>i. If number of technically qualified bidders are only 2 or 3.</p> <p>ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.</p> <p>iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.</p> <p>iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1</p> <p>v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1</p>	<p>As there are stringent Pre-qualification criteria in place to filter the bidders, we understand that the capable bidders shall only be participating in the competitive bidding. In such scenario, we request to kindly delete the provisions of Reverse Auction and confirm.</p>	<p>As per the RFP.</p>
36	Volume 1	Cl. 1	10	<p>Bid Control Sheet: 14. Bid validity period - 180 days from the last date of submission</p>	<p>Considering the fluctuating prices of Bulk materials within a short duration, request to replace the bid validity period as 90 days instead of 180 days.</p>	<p>As per the RFP.</p>
37	Volume 1	Cl. 4.1	13	<p>Pre-Qualification Criteria: Note: Consortium is not allowed under this Tender.</p>	<p>Refer to Cl. 4.1 of Volume 1 (Page 13), wherein it is stated that the Consortium is not allowed in this tender. Very similarly, we understand that JV is also not allowed. Kindly confirm.</p>	<p>As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .</p>

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
38	Volume 1	Cl. 4.1	13	Pre-Qualification Criteria	We understand that any Company / Organization quoting for this current tender shall individually qualify for the given PQ requirements by their own self. Kindly confirm.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
39	Volume 1	Cl. 4.1	13	Pre-Qualification Criteria	We understand that any Company / Organization quoting for this current tender shall not be allowed to bid / qualify / participate on the basis of qualification by any Sub-contractor. Kindly confirm.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
40	Volume 1	Cl. 4.1	13	Pre-Qualification Criteria	We understand that any Company / Organization quoting for this current tender shall not be allowed to bid / qualify / participate on the basis of qualification by any Consortium partner. Kindly confirm.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
41	Volume 1	Cl. 4.1	13	Pre-Qualification Criteria	We understand that any Company / Organization quoting for this current tender shall not be allowed to bid / qualify / participate on the basis of qualification by any JV Partner. Kindly confirm.	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .
42	Volume 1	Cl. 5.9	36	Subject to the above and not withstanding anything to the contrary elsewhere contained herein, the maximum aggregate liability of the bidder for all claims under or in relation to this agreement shall be regardless of the form of claims shall be limited to 100% of the amount to be paid to SI by DST/GIL under the applicable statement of work that gives rise to such liability (as of the date the liability arose).	Request to kindly revise the maximum limit of liability to 10% of the amount to be paid to SI by DST/GIL under the applicable statement of work that gives rise to such liability (as of the date the liability arose).	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
43	Volume 1	Cl. 5.13	40	Payment of liquidated damages shall be the sole and exclusive remedies available to DST/GIL Liquidated damages will be 1 % of the Capex cost for delay of every week and capped at 25% of the cost of Capex as mentioned in the Agreement.	Request to kindly revise the LD as 0.25% of project cost (excluding O&M value) per week on overall completion, capped at 5% of the project cost (excluding O&M value).	As per the RFP.
44	Volume 1	Cl. 5.15	41	All payments will be subjected to tax deduction at source as applicable/ required at the prevailing tax rates. Any changes, revision or enactment in duties like GST, taxes or any CESS during the period of validity of the Bids and also during the contract period by Central/State/Other Government bodies will be considered and applied after due consideration. The decision of DST/GIL in this regard will be final and binding and no dispute will be entertained. Any taxes at the time of supply goods and services shall be applicable as per the LAW.	We understand that the project should be bid excluding GST (18%) and labour cess (1%), for which the applicable amount shall be paid at actuals along with the payments. Kindly confirm.	As per the RFP.
45	Volume 1	Cl. 7.1	45 - 55	7.1 Project Milestone, Payment Schedule & Liquidated Damages (LD) for CAPEX Civil 7.1 Project Milestone, Payment Schedule & Penalty for CAPEX Non-IT	As the project entails major scope of design, the Contractor shall be allowed to provide the Master Construction Schedule and Milestones based on his project schedule. Hence there shall be no applicable Milestone LD for the project. Kindly confirm.	As per the RFP.
46	Volume 1	Cl. 7.1	46	Note: *For mobilization advance payment, selected bidder needs to submit ABG (Advance bank Guarantee) of 5% against total CAPEX of Schedule – I (Civil Price Bid) and Schedule – II (Non-IT Price BID) and the validity period of ABG should be additional six months from effective period of contract.	Kindly change the value as 15% (Interest Free Advance) instead of 5%.	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
47	Volume 1	Cl. 10	74	7. Obtaining all the Statutory approval from respective authority	Kindly provide the list of Statutory approvals as applicable for the project.	All the statutory approval required for building operations like Power, Fire, Municipal, Water, Sewerage, NOC, etc. will be in the bidder's scope. These are the indicative list of approvals only.
48	Volume 1	Cl. 10	74	7. Obtaining all the Statutory approval from respective authority	As the project is being sponsored by Department of Science and Technology of Gujarat Informatics Limited, it is easier for the Purchaser to obtain the required Statutory Approvals. Hence to it, we request to kindly remove the same from the scope of SI and confirm.	As per the RFP.
49	Volume 2	Cl. 3.4	24	Allotted land for Greenfield Data center is in the sector-18, Gandhinagar city. The plot has three side open and one side another department building located. The Data Centre building will have total five floors (Ground floor + 5 floors). There are one entry and one exit from the front side for people entry and material entry. The cross-sectional diagram of the building has been shown in the below figure.	Kindly provide the following a) Conceptual drawings in '*.dwg' (AutoCAD) format b) Geotechnical Investigation Report c) Site Contour Drawings	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
50	Volume 2	Cl. 4.3.3	63	The site of work is in a restricted area with limited availability of space left out for accommodation, stores, field office, batching plant etc. The SI may be allowed to erect labour huts, site office, stores, field office and batching plant within site/plot without disturbing the construction area. However, the SI shall make his own arrangements to provide for additional requirement (in addition to available area at site), as per the rules of the local bodies. Before tendering, he shall visit the site and assess the manner in which he is able to arrange the above facilities. The Engineer-in-Charge shall in no way be responsible for any delay on this account and no claim, whatsoever, on this account shall be entertained.	We request to kindly provide the land free of cost for erecting the labour huts / temporary offices / storage spaces for the current project utilization.	As per the RFP.
51	Bid Document	Bid Details	1	Bid End Date/Time: 12-01-2023 18:00:00	<b>Based on the quantum of work involved in the Design &amp; Build Tender and other Technical submittals, request to extend the Bid End Date till 15-02-2023.</b>	As per the corrigendum.
52	Volume 1	Cl. 7.1	47, 48	G4.2 = G3.2 + 3.5 Months On completion of Ground Floor (From Plinth Level to 1st Floor Level) including 1st floor slab. A) RCC work for Column, beam, slab fins. fascia complete including Reinforcement and formwork complete. B) Brick work/AAC work in walls complete	For milestones 4.2 to 4.7, completion of RCC work and brick works in each floor are sought together (1.5 months typically). However, masonry works are dependent on forwork deshuttering period. L&T shall propose timelines for interim milestones keeping the overall duration intact. Please confirm	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
53	-	-	-	List of Makes	Can the bidder propose the makes for all the equipments/Items? Kindly confirm.	All the relevant approved makes have been mentioned in the RFP documents. However, bidders are free to propose any standard makes for other hardware/software/equipment meeting technical, functional and SLA requirements mentioned in the RFP. For Plumbing & other electrical items please refer section 14 of this corrigendum.
54	1	4.1	13,14, 15,16	Experience & Financial Eligibility	Experience from Holding /JV Partner to be considered for Eligibility	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .

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55	Pre-Qualification for Bidder / Vol. 1	4.1/1/Legal Entity	13	Consortium is not allowed under this Tender.	<p>DRAIPL has built more complex and mission critical infrastructure then data center like aviation, defense and railways that includes civil, electrical and IT / ICT and all these project's RFP were defined with the objective of wider participation. We request GIL and DST to amend the criteria 4.1/1/Legal Entity as follows :</p> <p>"</p> <p><b>Legal Capacity:</b>  <b>The bidder should be A company registered under Indian Companies Act, 1956/2013 and subsequent amendments thereto OR</b></p> <p><b>A partnership firm registered under Indian Partnership Act, 1932 and subsequent amendments thereto OR</b></p> <p><b>partnership firm register under LLP Act, 2008 since last 5 years as on 31st March 2022.</b></p> <p><b>Note: Maximum Three companies shall be allowed in a consortium including the Lead Member. The lead bidder should have Minimum 51% stake (% of the total contract value) in the consortium."</b></p>	As per the corrigendum. Please refer to the section 3 of this corrigendum for revised criteria .



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56	1. Bid Control Sheet	1	11	Bid Validity Period	Bidder request to change the bid validity period to 90 days	As per the RFP.
57	5. General Terms and condition	5.13	40	Payment of liquidated damages shall be the sole and exclusive remedies available to DST/GIL Liquidated damages will be 1 % of the Capex cost for delay of every week and capped at 25% of the cost of Capex as mentioned in the Agreement.	Bidder request to cap the penalty at 10%	As per the RFP.
58	7 Project Milestone, Payment schedule & Liquidated Damages (LD)	7.1	46	PBG @ 10% of the TCV (Total Contract Value) to be submitted by SI simultaneously.	Bidder request to reduce the PBG to 3%	As per the RFP.
59	7. Project Milestone, Payment schedule & Liquidated Damages (LD)	7.2	46	*NOTE: Total LD % under this RFP is capped at Maximum 20% of the total contract value.	LD is already covered under general terms and condition. Bidder request to have one LD and Please cap the LD to 10%	As per the RFP.

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Sr. No	Volum e	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
60	7. Project Milestone, Payment schedule & Liquidated Damages (LD)	7.2	53	60% Against Capex value of the Item delivered at site. As per Non-IT price BID (Schedule-II)	1. Bidder request to increase the payment from 60% to 70% as all the non IT products are delivered at this stage 2. Bidder request to remove the payment of 5% Defect Liability and Integration with IT solution Period for 5 Months, as we have the PBG submitted which can cover the defect period	As per the RFP.
61	8.2 SLA Categories	8.2	60		There is no upper cap limit for the SLA and bidder request to cap the SLA penalty at 5% of quarterly payment	As per the RFP.
62				Bids shall remain valid for 180 days from the date of Financial Bid opening.	We request that the bid validity period be reduced to 60 days as the solutions are dynamic and the price, technical aspects, etc. would vary during the same period.	As per the RFP.
63				The PBG should be 10% of total contract value.	We request that the PBG be capped to 3% of the total contract value and the validity period be the end of the contract period.	As per the RFP.
64		Clause 5.1		Termination and Effects of Termination	We request that the termination under this clause may be exercised by DST/GIL only in case of a material breach and not any breach (request deletion of sub clauses b,c,d, and e)	As per the RFP.

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65		Clause 5.1		In the event the DST/GIL terminates the Contract in whole or in part for the breaches attributable to the SI, the DST/GIL may procure, upon such terms and in such manner as it deems appropriate, Equipment/Products and Services similar to those undelivered, and the SI shall be liable to the DST/GIL for any increase in cost for such similar Equipment/Products and/or Services. However, the SI shall continue performance of the Contract to the extent not terminated.	We request that in case of termination and risk purchase by Tenderer of solution from a third party, the successful bidder should be liable for only 5% of the differential amounts which Tenderer has spent over and above what was quoted by the successful bidder.	As per the RFP.
66		Clause 7		Project Milestone, Payment schedule & Liquidated Damages (LD)	We request that all invoices raised by SI be paid within 30 days from the date of the invoice. Further, we request that the penalty be capped to 3% of the delayed services and any penalty, wherever applicable, be recovered at the end of the contract and not from the payments against the invoices.	As per the RFP.
67		Clause 5.5		Indemnification	We submit replacing the current language with the following:  "The Indemnifying Party ("Bidder") shall defend (settle and/or pay damages awarded by the court) the Indemnified Party against any third party claims arising from the following: a. Claims for loss or damage to third party tangible property; b. claim by any person in respect of bodily injury or death; c. claims by any third party in	As per the RFP.

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					respect of any IP infringement;  brought against or recovered from Indemnified Party by reasons of any act or omission of the Indemnifying Party , his agents or employees in the performance of the contractual obligation."	
68		Clause 5.8		Confidentiality	We would like to the include the following: "Confidential information does not include information a) which is or becomes public knowledge other than by a breach of this Contract, b) that which was previously known as established by written records, prior to receipt from the other Party; c) that which was developed independently by the Bidder or any of its employees, agents or representatives who had no access to the Confidential Information;	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
69		Clause 5.14		Intellectual Property Rights	<p>We request addition of the following clause :</p> <p>The SI and its sub-contractors will own all IPR in any materials, methodologies, processes, techniques, tools, forms, templates, and Software (collectively "Materials") that are:</p> <ul style="list-style-type: none"> <li>i) owned or licensed by the SI, its subcontractors, or their respective affiliates prior to the effective date of the Contract;</li> <li>ii) developed by SI, its subcontractors, or their respective affiliates whether developed during or independently of performance of the Contract; and/or,</li> <li>iii) modifications, enhancements, and derivative works of the Materials.</li> </ul>	As per the RFP.
70		Clause 5.11		Exit Management	<p>We request that any support services provided to the Tenderer or any third party appointed by the Tenderer after the expiry of the contract shall be at additional charges to be charged by the SI. We request that any form of knowledge transfer or transition services shall be at additional cost which may be charged by the bidder.</p>	As per the RFP.
71		Clause 5.19		Audit, Access, and Reporting	<p>We request deletion of this clause altogether. SI is prepared to accommodate reasonable audit rights, but requests the inclusion</p>	As per the RFP.

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					of specific exclusions and clarifications to protect its interests.	
72		Clause 5.13		Applicability of Liquidated Damages	We request that the liquidated damages be capped to 3%.	As per the RFP.
73		Clause 6.1		Liquidity Damage/Implementation Penalty	We request that the liquidated damages be capped to 3%.	As per the RFP.
74		Annexure : Pre-Contract Integrity Pact		Fall Clause	Request deletion of the clause	As per the RFP.
75		New clause		Non-solicit clause	We request addition of the following clause as a new clause: Tenderer acknowledges that personnel to be provided by HPE represent a significant investment in recruitment and training, the loss of which would be detrimental to HPE's business. In consideration of the foregoing, Tenderer agrees that for the term of this Agreement and for a period of one year thereafter, Tenderer will not directly or indirectly, recruit, hire, employ, engage, or discuss employment with any HPE employee, or induce any such individual to leave the employ of HPE. For purposes of this clause, a HPE employee means any employee or person who has who has been involved in providing services under this Agreement.	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
76				<p>7. The bidder should be registered or should deploy Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience. Copy of registration certificate and Declaration on Bidder's letterhead stating compliance of this condition</p>	<p>Being an IT Organisation we don't have registered Architect in our payroll, However we have successfully completed such kind of project with help of our Partner Architect Organisation. Hence we request you to allow us to engage Architect from our Partner Architect Firm.</p>	<p>As per the RFP.</p>

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77				<p>8. The bidder must have on its payroll at least 150 Professionals in the Civil Construction domain, Data Centre Electrical, Mechanical, Structural drawing, Cooling, building architecture etc. and other utility Services and having the prior experience in providing the Data Centre Infrastructure maintenance services as on bid submission date.</p> <p>Bidder Must have at least following technical manpower strength on its payroll:</p> <p>i. At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p>ii. At least 1 qualified professional having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+ years of relevant experience)</li> </ul> <p>HR certificate on company's letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate</p> <p>RFP for Selection of SI for implementation</p>	<p>We request you to add domain expertise of Compute, Network, Cloud related services along with Civil construction &amp; Data center domain for total 150 professionals . We also request you to omit the clause of manpower as described " Bidder Must have at least following technical manpower strength on its payroll:</p> <p>i. At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p>ii. At least 1 qualified professional having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+ years of relevant experience)</li> </ul> <p>HR certificate on company's letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate</p> <p>RFP for Selection of SI for</p>	<p>As per the RFP.</p>



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				<p>of Greenfield SDC                      Page   16                      Sr.                      No                      Eligibility Criteria Documents to be submitted</p> <ul style="list-style-type: none"> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+ years of relevant experience)</li> <li>• Principal Plumbing Consultant (BE/ B.Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul> <p>iii. At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll</p> <p>iv. At least 05 resources should be CDCP/CDCS/CDCE certified.</p> <p>v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification</p> <p>vi. At least 05 Project management professional</p>	<p>implementation of Greenfield SDC                      Page   16                      Sr.                      No                      Eligibility Criteria Documents to be submitted</p> <ul style="list-style-type: none"> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+ years of relevant experience)</li> <li>• Principal Plumbing Consultant (BE/ B.Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul> <p>iii. At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll</p> <p>iv. At least 05 resources should be CDCP/CDCS/CDCE certified.</p> <p>v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification</p> <p>vi. At least 05 Project management professional"</p>	

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78		4.13 Technical Bid Evaluation Scoring Matrix		Capability of the Bidder to execute similar large projects	We have certain observation on scoring matrix, we request you to allow us to submit details of projects outside India. Also we seek few changes on the scoring matrix structure.	As per the RFP.
79	Vol.2	10.33 Data & Voice Network Cabling	330	LAN Cable / Installation Cable, Category 8 S/FTP, 4P, LSFRZH	<p>As per standards, complete Category 8 solution is not ratified. So even if cable will be Cat 8 which is supports upto 40Gbps bandwidth upto 30 Mtrs, the components will be Cat 6A which supports 10 Gbps. The ethernet ports switches can support upto 10Gbps bandwidth.</p> <p><b>Sugesstion from the Bidder:</b> To use Cat 6A solution which can support 10Gbps bandwidth upto 100 Mtrs or For 40 G conectivity fibre solution is recomoded.</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
80	Vol.2	10.33 Data & Voice Network Cabling	332	Fiber Panel / Optical panel housing mounts in 19-in racks or cabinets and provide up to ultra-high-density 72 port connectivity when combined with modules and cassettes.	<p><b>Suggestion from the Bidder:</b></p> <p>Optical panel housing mounts in 19-in racks or cabinets and provide up to ultra-high-density 96 fiber connectivity when combined with modules and cassettes.</p>	<p>The following Shelf Configurations should support all types of Intelligent MPO LC Modules, Splice Cassettes, LC and MPO Adapter packs: Server Rack Side 1U High-Density Shelf which can accommodate a minimum of <b>72 ports or higher with LC Duplex adaptors</b>. Also dedicated 1U panel each for LAN and SAN shall be proposed at the server Rack end to Support Current and Future growth. Network Rack Side- Ultra Density 2U 144 Duplex Shelf and 4U =288 Duplex Shelves shall be considered which ensures better Accessibility and Cable management. LIU and cable management accessories should be from OEM only.</p>
81	Vol.2	10.33 Data & Voice Network Cabling	332	Fiber Panel / Splice cassette Splice cassettes shall accommodate up to 12 port of either MPO, LC Duplex or SC simplex connector providing up to 72 ports in a single rack unit height.	<p><b>Suggestion from the Bidder:</b></p> <p>Splice cassettes shall accommodate up to 12 port of either MPO, LC Duplex or SC simplex connector providing up to 96 fiber in a single rack unit height.</p>	<p>Fiber Panel / Splice cassette Splice cassettes shall accommodate up to 12 ports of either MPO, LC Duplex or SC simplex connector providing up to a minimum of <b>72 ports or higher</b> in a single rack unit height.</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
82	Vol.2	10.33 Data & Voice Network Cabling	333	Copper Patch panel/ Should be able to accommodate modules like Cat.6, Cat.6A as well as adapters of FO LC- and SC-connectors.	<b>Suggestion from the Bidder:</b>  Should be able to accommodate modules like Cat.6, Cat.6A connectors.	The bidder can Propose <b>Hybrid panels / separate panels</b> for copper and fiber.
83	Vol.2	10.33 Data & Voice Network Cabling	334	LAN Patch Cord/ Category 8, Shielded S/FTP Grey LSZH Flexible cable, 4 x 2 xAWG 26/7, LSZH, color grey	As per standards, complete Category 8 solution is not ratified. So even if cable will be Cat 8 which is supports upto 40Gbps bandwidth upto 30 Mtrs, the components will be Cat 6A which supports 10 Gbps. The ethernet ports switches can support upto 10Gbps bandwidth.  <b>Suggestion from the Bidder:</b> Category 6A, Shielded S/FTP Grey LSZH Flexible cable, 4 x 2 x AWG 26/7, LSZH, color grey or for 40 G fibre patch cord .	<b>CAT6A shielded S/FTP</b> Grey cable LSZH cable can be quoted. The OEM should have the experience to work in the Data Centre field
84	Vol.2	10.33 Data & Voice Network Cabling	337	Intelligent Patch panel requirements / Modular versions of the Intelligent Patch Panel shall be available that support both copper and fiber connectors in the same panel.	<b>Suggestion from the Bidder:</b>  Intelligent solution shall support both copper and fiber panels	<b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.
85	Vol.2	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	We suggest to have <b>24(C13)+12(C19)</b> outlets as C19 may be required in future and also because it's a high density PDU.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.

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86	Vol.2	10.16 Intelligent rack PDU	262	The PDU should help to avoid potential circuit overloads with remote current metering and monitoring of connected loads.	We suggest that operating temperature of the PDU should be mentioned as <b>60 DEGREES</b> for better clarity and in line with current industry standard	The iPDU should be having operating temperature as per mentioned in RFP but it should be extended up to a <b>60-degree temperature.</b>
87	Vol.2	10.16 Intelligent rack PDU	263	The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide Simplify circuit and phase balancing with color-code receptacles.	We suggest to make it as "lockable chords" as "secure power lock" is definite OEM term. Also suggest to remove phase balancing with colour code receptacles as it is a single vendor feature.	<b>Both, lockable sockets and lockable power connection cables</b> can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.
88	Vol.2	10.16 Intelligent rack PDU	263	The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error	We Suggest to remove the same as it is a single vendor specifications. Also it collides with lockable cord specifications	<b>Both, lockable sockets and lockable power connection cables</b> can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.

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89	Vol.2	10.16 Intelligent rack PDU	263	HTTP SNMP V1 SMTP Event Log MODBUS TCP/IP MODBUS RTU(RS-485) FTP DHCP IPV4 Support Telnet	We suggest to remove <b>MODBUS TCP/IP MODBUS RTU(RS-485) FTP, Telnet</b> as these are age old technologies used with some definite systems with no flexibility and security. In place of this suggest to add ( <b>SSH,IPV6, SNMP V1-V3, JSON-RPC,HTTPS,FTP/SFTP, RADIUS, Redfish DMTF RESTful API</b> ). This will give more flexibility and power to the firmware of the PDU resulting in smooth operations. Also along with IPV4, <b>IPV6 &amp; LDAP</b> should also be included	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet
90	Vol.2	10.16 Intelligent rack PDU	263	Conforms to CLASS I measurement accuracy of . . Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos Φ)	We suggest it should be specifically $\pm 1\%$ of accuracy	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
91	Vol.2	10.16 Intelligent rack PDU	263	Current Threshold settings with warning LED on front panel and Buzzer alarm.	We suggest to remove buzzer alarm as it is not widely used in IT Datacenter applications and is a single vendor specifications	The bidder shall quote <b>Buzzer as Optional</b> .
92	Vol.2	10.16 Intelligent rack PDU	263	TFT Color Display.	We suggest that the display should be OLED	<b>TFT/ LED or Higher</b>
93	Vol.2	10.16 Intelligent rack PDU	263	Daisy Chaining: One Master PDU can communicate up to 4 nos. of slave PDUs.	We suggest to increase to a higher level and make it to 50 PDUs for better flexibility	<b>Daisy chaining should be done 25-30 nos. iPDU</b> with one master PDU, select daisy chaining as per OEM iPDU design criteria,

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						all iPDU's shall connect with DCIM for monitoring.
94	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	408-411	A set of battery cabinets (or racks) shall be furnished with sufficient kilowatt hour rating to maintain the module rated output for a duration of 30 minutes at 25 Deg C	Battery Back up 30 mins for Li-ion , Please clarify the back up time required for all UPS System as 30 mns back up requires more space to occupy. Li-ion batteries are Techno Commercially feasible for 10-15 mins back up for 600kVA UPS , 250 kVA UPS .	Battery backup of <b>15 minutes</b> needs to be considered at the EOL phase of 7 years of support.
95	Vol.2	10.25 Public Address System	306	Public Address System	Specification of Announcement Microphone is not provided or announcement microphone is not required? Please confirm	The OEM shall provide a <b>microphone</b> as per their standard solution. All PA system components should be from a single OEM only.
96	Vol.2	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	Please accept to change the number of sockets and PDU rating as "IPDU provided shall have minimum 24 number sockets of C13 (21 nos.) and C19 (3 nos.) outlets. The IPDU should be 16A, 3-phase with IEC industrial plugs."	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
97	Vol.2	10.16 Intelligent rack PDU	263	The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide Simplify circuit and phase balancing with color-code receptacles.	Please accept to revise this clause as "The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide phase balancing"	<b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.

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98	Vol.2	10.16 Intelligent rack PDU	263	The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error	Please accept to revise this clause as "The PDU should have lockable sockets / lockable power cords which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error"	<b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 & C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same IPDU OEM only.
99	Vol.2	10.16 Intelligent rack PDU	263	HTTP, SNMP V1, SMTP, Event Log, MODBUS TCP/IP, MODBUS RTU(RS-485), FTP, DHCP, IPV4 Support, Telnet	Please accept to revise the supported interface "HTTP, SNMP V1, SMTP, Event Log, TCP/IP, FTP, DHCP, IPV4 Support, Telnet".	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet
100	Vol.2	10.16 Intelligent rack PDU	263	Conforms to CLASS I measurement accuracy. · Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos Φ)	Please accept to revise this clause as "Conforms to 3% metering accuracy. Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA), Power factor.	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
101	Vol.2	10.16 Intelligent rack PDU	263	Current Threshold settings with warning LED on front panel and Buzzer alarm.	Please accept to remove "Buzzer Alarm" from this clause.	The bidder shall quote <b>Buzzer as Optional</b> .
102	Vol.2	10.16 Intelligent	263	TFT Color Display.	Please accept to revise this clause as "LCD Display".	<b>TFT/ LED or Higher</b>



Corrigendum cum clarifications document for Greenfield State Data Centre (Civil & Non-IT)

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		t rack PDU				
103	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	264	The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	Please accept to revise this clause as "The Racks shall include minimum 81% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with top panel."	This clause has been amended with <b>75% perforated</b> rack doors.
104	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	264	The frame shall support 1200kg static weight load, 1000kg dynamic weight load.	Please accept to revise this clause as "The frame shall support 1200kg static weight load, 600kg dynamic weight load."	The bidder can quote with the rack which shall support <b>1200kg static weight load, 600kg dynamic weight load.</b> "
105	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	264	The standard top panel shall be removable in the field, and include (2) 150mm x100mm rectangular cut outs with brush insert located in the front and rear of the top panel for cable entrance or exit	Please accept to revise the clause as "The standard top panel shall have Two 130mm (5.12") x 120mm (4.72"), Three 175mm (6.89") x 59mm (2.32") Rectangular Openings, for cable entry and exit purpose."	The cut-out size <b>should be OEM design</b> , but all cut-outs should have a brush insert.
106	Vol.2	10.14 Uninterru pted Power Supply & Lithium-	248	Nominal Operating Temperature	Nominal Operating Temperature of LIB is 0-40 Deg. So kindly confirm	<b>LIB</b> temperature <b>0-40 degree</b> is acceptable as it is going to place in a controlled environment.

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		ion System				
107	Vol.2	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	We understand that IT Load per Rack is 10kW. So 3 ph- 32 Amp PDU with IEC Industrial Plugs will be sufficient to cater the load. Kindly Accept and Amend the same.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
108	Vol.2	10.16 Intelligent rack PDU	262	IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	we request you to consider ipdu with universal socket i.e. combination of C13 & C19 in each socket . Kindly accept  Remarks:  Universal IEC sockets with IEC C13 & IEC C19 socket in the same socket. Due to increasing demand & heterogeneous IT requirement universal sockets will be value advantage for the user, so as to meet all kinds of requirement & also future requirements can be met without changing the entire iPDU.	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.

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109	Vol.2	10.16 Intelligent rack PDU	263	HTTP SNMP V1 SMTP Event Log MODBUS TCP/IP MODBUS RTU(RS-485) FTP DHCP IPV4 Support Telnet	Kindly add SNMP V2 & V3, IPv6 as these are the most secure communication protocol support & support user with critical IT Datacenter operation.  Also,Keep RTU and FTP as optional or remove since all other given protocols will suffice the requirement.	Point to be read as; HTTP SNMP v1, v2, <b>v3</b> SMTP Event Log MODBUS TCP/IP DHCP IPV4 Support <b>IPV6 Support</b> Telnet
110	Vol.2	10.16 Intelligent rack PDU	263	Features - Conforms to CLASS I measurement accuracy. · Socket level Monitoring and Metering of electric parameters: Voltage (V), Current (I), Energy (kWH) Power (kVA, kVAR), Power factor (cos Φ)	Kindly amend the point with " Conforms to ANSI and IEC standards with +/- 1% Accuracy", which as per the latest Datacenter practices & will also help the user & operational team with accurate data.	It should be as per ANSI and IEC standards with <b>+/- 1% Accuracy</b> ", which is the latest Data Centre standard.
111	Vol.2	10.16 Intelligent rack PDU	263	Features - · Current Threshold settings with warning LED on front panel and Buzzer alarm.	Kindly keep this point optional, since operation team will already be monitoring the iPDU's on network or DCIM. Or	The bidder shall quote <b>Buzzer as Optional</b> .
112	Vol.2	10.16 Intelligent rack PDU	263	Features - TFT Color Display.	Kindly amend point to TFT/LED type display	<b>TFT/LED or Higher</b>
113	Vol.2	10.16 Intelligent rack PDU	263	Features - Daisy Chaining: One Master PDU can communicate up to 03 nos. of slave PDUs.	Since in a single row of each aisle in the server hall will have minimum 25 racks (as per Layout given), daisy chaining support should for minimum 25 Nos iPDU's, as it will also help with saving on network switch port. Request you kindly amend point as below, One Master PDU can	<b>Daisy chaining should be done 25-30 nos. iPDU</b> with one master PDU, select daisy chaining as per OEM iPDU design criteria, all iPDU's shall connect with DCIM for monitoring.

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					communicate minimum 25 nos of Slave PDU.	
114	Vol.2	10.16 Intelligent rack PDU	263	Features - Branch Circuit Protection: Two (02) X Hydraulic Magnetic Circuit Breaker Per Phase	<p>For the load specified above 2 nos. of breakers will not suffice if the input current is 63A ( It should be 4 Breakers) &amp; also not as per IEC standards. Kindly amend the point to " Branch Circuit Protection: Hydraulic Magnetic Circuit Breaker as per IEC guidelines"</p> <p>As per RFP " Branch Circuit Protection: Two (02) X Hydraulic Magnetic Circuit Breaker Per Phase" Will suffice in 32 Amp, 3 Phase Intelligent PDU.</p>	Point to be read as; Since the input, the rating is 32A, three phases. Branch Circuit Protection: <b>(02) x 16A Hydraulic Magnetic Circuit</b> low profile Breaker as per IEC guidelines.
115	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	Doors - The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	<p>Kindly allow for minimum door perforation of 75%. It is enough as per standards.</p> <p>Remark: 85% Perforation one or two OEM Specific .</p>	This clause has been amended with <b>75% perforated</b> rack doors.
116	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	Material - Integrated cable management features should provide with the rack. The bidder should consider the horizontal and vertical cable management accessories as per cable density.	Kindly specify the number of horizontal (1U) cable organisers & 42U Vertical cable organisers to be considered ??	<b>Minimum of 5 nos. horizontal and 10 nos. vertical loop-type cable managers</b> need to be considered. The hardcore network rack should have 2 nos., high-density vertical cable managers.

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117	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	365	<p>Camera Management:</p> <p>B. The management system enables you to watch the camera video in the layout plans directly without opening external applications.</p> <p>C. The management system can configure a trigger rule to record not only 1 camera video but also presents 3 types for recording: Full time, scheduling and event trigger. The eventtriggered video files are integrated in the event log for you to play the video file at your fingertips.</p> <p>D. The trigger rule can combine any event in the management system.</p> <p>E. Provide the multiple video recorder's live show for you to trace the moving object between different cameras.</p> <p>F. The management system is able to control the camera actions by pan, tile and zoom through the network.</p>	<p>This is part of Video Management System , For DCIM this is non core requirement. DCIM can give health check up of camera and camera feeds rest Hence request to remove Point C,D,E &amp; F also it is vendor specific.</p>	<p>DCIM Should monitor Camera Feeds, and the availability of <b>cameras and should integrate with Video Management System</b> through API.</p>
118	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	367	<p>Asset Module : E. The management system can analyze the device relationship in power and network connections.</p>	<p>Network connections are part of NMS System. Request you to remove this point and it is vendor specific.</p>	<p>Change in Clause: - Please read as " The management system <b>can analyze the device relationship in power connections</b>".</p>

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119	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	369	Hardware Specification : - The Gateway so provided has to be compliant with ASHRAE 135-2004 and should be BTL-listed as a BACnet Building Controller (BBC) at the least. The Gateway shall have a built in FTT-10 port to communicate to the TP/FT-10 Lon Works / SNMP / Mod-bus network.	Controller should support SNMP / Modbus/ Bacnet Protocol. Lonwork protocol is specific to one vendor. And asked certification should be UL Certified, BTL listed is specific to one Vendor.	The Controller should support SNMP / Modbus/ Bacnet Protocol. The gateway controller should be certified UL / BTL or similar certification will be allowed.
120	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	369	The Gateway shall include a battery-backed, real-time clock, accurate to 10 seconds per day. The RTC shall provide the following: time of day, day, month, year, and day of week.	Battery backed Gateway Controller is specific to one Vendor.	Change in Clause: -The Gateway shall include <b>with or without the battery-backed</b> , real-time clock, accurate to 10 seconds per day. The RTC shall provide the following: time of day, day, month, year, and day of the week.
121	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	370	Virtual Machine Migration : -DCIM should be scalable to offer plugins to allow safe shutdown for Virtual Machines and Virtual Machine Migration. The safe shutdown feature should support VMWARE and Microsoft HYPERV formats. For sites where the UPS are also from the same OEM as the DCIM the functionality should be made available day one to the client. For sites where the UPS are not from the same OEM the functionality should be made available as and when client buys UPS from the same OEM for future integration. Non availability of such a capability will be considered as Non-	Safe Shutdown of server is not recommended in Data center environment. Also root user ID and password is required to do any shutdown of Servers.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.

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				Compliance as client reserves the right to opt for it or not (as per the availability and future scalability on UPS side)		
122	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should support the following UPS configurations for alerting: Single UPS, Redundant UPS and Parallel UPS.	Remote safe shutdown of server is strongly not recommend. Hence request to remove this line item.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.
123	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should support Event logging - Pinpoint the timing and sequence of events leading up to an incident with the event log.	Remote safe shutdown of server is strongly not recommend. Hence request to remove this line item.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.
124	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	370	This Plugin for Safe shutdown of Virtualized Infrastructure should help prevent possible data corruption by performing graceful, unattended operating system shutdown in the event of an extended power outage or computer power problem. It should allow the operator to run command file - Run command file on network shutdown sequence as well as start-up sequence. It should facilitate Sequenced Server Shutdown - Sequences the	Remote safe shutdown of server is strongly not recommend. Hence request to remove this line item.	This clause will <b>remove, as server shutdown</b> is not required as at all points, we have considered redundancy.

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				shutdown of multiple servers powered by the same UPS to extend runtime for higher priority servers.		
125	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	371	Converged management layer b. Thick client view (the downloadable client) should offer a more advance view of the complete Data Centre starting from birds eye view to reach component level view.	Most of the DCIM is 100% Web Based Client is not required.	Change in Clause: - Converged management layer b. <b>Thick client view (the downloadable client) / Web Client</b> should offer a more advanced view of the complete Data Centre starting from bird's-eye view to reaching the component level view.
126	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	375	Dashboard & Reporting : -Network Summary Report: with an overview of network connections per rack in the selected rooms. The report should list layer 2/3 network gear (such as switches) and layer 1 network gear (patch panels) as well as a summary per rack of mapped and unmapped routes equipment that is connected to a network (such as a server or PDU).	Network summary with 2/3 switches management is part of Network Management software.	The Network switches will be managed by NMS software instead of DCIM software. The supply of NMS software will be not a part of RFP.
127	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	377	Software : -It should support the SNMP, Modbus TCP, Modbus RTU, OPC, Database, RTSP, ONVIF protocols directly.	Protocol like ONVIF& RTSP C are not DCIM protocol , they are camera related protocol. Hence request to remove the same	Change in the clause: It should support the <b>SNMP, Modbus TCP, Modbus RTU, OPC, and Database</b> protocols directly.



Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
128	Vol.2	10.20 Inrow Cooling units for Server room	268	<p>Communication Interface: The unit should have Communication interfaces to connect DCIM software:</p> <ul style="list-style-type: none"> <li>•Digital inputs: 2x (terminal)</li> <li>•Protocols, Ethernet: TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, (S)FTP, HTTP (S), NTP, DHCP, DNS, SMTP (S), Syslog</li> </ul>	<p>Kindly Accept as below. The unit should have Communication interfaces to connect DCIM software:</p> <ul style="list-style-type: none"> <li>•Digital inputs: 2x (terminal)</li> <li>•Protocols, Ethernet: TCP/IPv4, TCP/IPv6, SNMPv1/ SNMPv2c/ SNMPv3/ Telnet/ SSH, (S)FTP, HTTP (S)/ NTP/ DHCP/DNS/SMTP (S)/Syslog</li> </ul> <p>Note: All this protocol are used for Intelligent PDU or Monitoring device. For Cooling Unit only Modbus or SNMP will be suffieicent to integrate with DCIM.</p>	<p>The DCIM communication interface should</p> <p><b>Minimum 2 nos. Digital inputs.</b> Protocols, Ethernet: TCP/IPv4, TCP/IPv6, SNMPv1/ SNMPv2c/ SNMPv3/ Telnet/ SSH, (S)FTP, HTTP (S)/ NTP/ DHCP/DNS/SMTP (S)/Syslog</p>
129	Vol.2	10.16 Intelligent rack PDU	263	<p>General - The PDU should have lockable sockets which can help connection cable of hardware to lock with the power socket to avoid any kind of loose connection error</p>	<p>Coloured Powercords to be supplied with the iPDU's ? If yes, number &amp; which type of powercords to be considered ? Also kindly add colored iPDU chasis point for the ease of UPS source identification &amp; aiding in operation activity to save time or unwanted downtime.</p>	<p><b>Both, lockable sockets and lockable power</b> connection cables can be quoted by the bidder. Colored locking Power cords of C13-C14 &amp; C19-C20, are to be considered as per the socket count of the IPDU. Power cords should be from the same iPDU OEM only.</p>

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130	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	General Query	<p>Change Management : - Environment by implementing organized moves, adds, and change work processes by providing workflow system that can develop and assign work orders, reserve space, track status, and provide a historical audit trail. Ability to assign deadline and person to each work order. Ability to create multiple tasks and track task status for each work order. Ability to create work order templates that can be used for recurring work types like maintenance activities or standard procedure for installation of a certain type of server. Support workflow management that should allow for easy implementation and tracking of organized moves, additions, and changes. Support audit trail reporting that would show asset moves, additions, and changes by date/time, owner, and work orders. DCIM should allow for Integration with Dedicated Change Management Systems like BMC Remedy and Service Now as and when required. Every network management change should be recorded in audit trail report It should allow for Auto Scheduled Work Orders which can regenerate certain Service Work orders like Service Schedules for CRAC units which must renew themselves every Quarter or Yearly etc.</p>	<p>Change management is part of CMDB tool i.e IT Management System . Also the specification are single Vendor specific in nature. No other OEM can participate for DCIM Specs.</p>	<p>Addition in the clause: - Change management should be integrated with the Equipment level <b>Real-time Asset Tracking System</b>.</p>

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131	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	General Query		DCIM does not have the capability of real-time IT asset tracking inside the the datacenter, for deriving the maximum value from DCIM, request you to incorporate real-time asset tracking solution. As, this will give the user real-time IT asset location inside the Datacenter & similar solutions have been incorporated in various State Data Centers (SDC's).	Addition in the clause: - Change management should be integrated with the Equipment level <b>Real-time Asset Tracking System</b> .
132	Vol.2	10.10 SVG Panel	232	Provision shall be made for either top or bottom access, allowing for adequate cable bend radius, to the input and output connections.	Pls confirm the cable entry.	<b>Top</b> cable entry.
133	Vol.2	10.11 APF Panel	234	APF module should be modular and hot swappable	The APF Panel is modular in construction having Power modules of 50/75/100A Rating. The Power Modules are not hot Swappable. Hope it is acceptable.	As <b>Per the Solution requirement</b> , OEM to propose the best fit-out solution. Hot-swappable can be optional.
134	Vol.2	10.11 APF Panel	238	Provision shall be made for either top or bottom access, allowing for adequate cable bend radius, to the input and output connections.	Please confirm the cable entry.	<b>Top</b> cable entry.
135	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	247	Top & Bottom cable Entry options	Please confirm the cable entry.	<b>Top</b> cable entry.

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136	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	250	Backup asked in Tender is for 30 Minutes.	Request you to reduce Backup time from 30 Minutes to 15 Minutes as Lithium Ion Batteries are commercially higher than normal SMF Batteries	Battery backup of <b>15 minutes</b> needs to be considered at the EOL phase of 7 years of support.
137	Vol.2	10.07 Busbar trunking system for Rack	241	Tap off boxes shall have at least 125 A of distribution capacity..	We suggest to restrict the capacity to 32 A considering the power requirement of individual server rack.	We have revised the rack <b>iPDU capacity of 32A</b> . So, kindly consider the BBT system accordingly.
138	Vol.2	10.13 Chiller	201	Capacity of Chiller	47 Deg C is very High Temperature. Single Chiller can deliver 520 TR at this Temperature. No OEM can provide 570 TR and Kindly allow to proceed with 520 TR.	The chiller capacity should be 570 TR, at an ambient temperature of <b>47 degrees</b> it should deliver 520 TR.
139	Vol.2	10.13 Chiller	246	Condenser	Condenser Coil should be coated with Electrolysis Coating. ( Factory Paint or Spary is not allowed ) Condenser Coil should be with +10000 Hrs Salt Spray test as per ASTM B117 Standard	This is a quality parameter, it is <b>accepted</b> .
140	Vol.2	10.13 Chiller	246	Compressor	Chiller Manufacturer should be the OEM of the compressor as well. Chiller Assembler should be not accepted here. Considering quality and efficiency of chiller.	<b>Chiller assembler is not acceptable</b> . The bidder should propose the chiller OEM who is also the manufacturer of the compressor and deliver a complete chiller package for better after-sales services.

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141	Vol.2	10.26 Water leak detection system	307	The WLD panel shall be capable of supplying power to the interface modules and shall serve as the annunciator of alarms through fascia mounted Zonal LEDs. The panel shall activate sounders programmed zone wise.	For interface module Separate 230 VAC power required. Programmable relay card available.	<b>230 VAC</b> shall be provided.
142	Vol.2	10.26 Water leak detection system	308	The Cable shall be FRLS twisted pair with SS 316 elements, be capable of water detection over its entire length.	In sensor cable FRLS not available.	<b>FRLS will be optional for the</b> for sensor cable.
143	Vol.2	10.27 Rodent Repellent system	309	The powerful sound waves generated by the satellites of RR shall be within the hearing range of many pests and cause them pain and discomfort. RR's satellites should be quiet and inaudible to humans. The RR should be to add in daisy protocol for interfacing 64 controllers with controller ID with 6-digit password protection. The controller data can be transferred to computer and can be subsequently viewed by installed software of the same OEM. LCD display with on board controls for changing the parameter. Once powered up these transducers, it should produce very high frequency variable sound waves (above 20 KHz) continuously which irritate the rodents and force to evacuate the place.	Yes. Our system repels Rodent only. Password can be 4- digit.	The <b>minimum Password can be 4 digits.</b>

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144	Vol.2	10.27 Rodent Repellent system	310	<p>The Data Centre and all Hub rooms shall be provided with Rodent repellent system. The Rodent Repellent System shall consist of one master console &amp; multiple satellites / transducers. The Master Console shall be proposed at one central location. It is proposed to have 1 zone of 300sqft each, Hub rooms and Data Centre. The satellites will produce powerful high frequency sound waves (well above the 20 K Hz frequency which is the upper limit of the hearing range of human ear, also called as ultrasonic) are within the hearing range of the many pests and cause them pain and discomfort and thereby, forcing them to abandon the protected area. Each Satellite shall cover an open area of 300sqft. When installed in false ceiling / false flooring it should cover an approximate area of 250sq.ft. Each satellite occupies very minimum space and can be mounted in any angle, they do not need any power connection, there will be no risk of sparking &amp; they should be able to withstand high temperatures in the false ceilings, in a temperature range of 4 Deg. C to 60 Deg. C. The Rodent Repellent shall operate either on 230 V AC or 24 V DC based on make &amp; only 230V AC supply at one point shall be given to the Panel.</p>	<p>Yes. Our system repels Rodent only.</p> <p>Quoted controller transducers can cover 300 sq ft of area in Room Void and 150 sq ft of area in Ceiling and Floor Void.</p> <p>Controller Voltage operating range - 230 V AC/50Hz</p>	<p><b>Controller operating voltage range as per OEM hardware power requirement.</b></p> <p>Propose solution covers all the areas wherever the RRS solution is proposed.</p>
145	Vol.2	10.27 Rodent Repellent system	310	<p>Signal generator should have full wave rectification, regulated 12V DC power supply to withstand power fluctuations ranging from 170V AC to 270V AC. Amplifier should have a preamplifier stage coupled with signal generator for dual</p>	<p>Controller Voltage operating range - 230 V AC/50Hz</p>	<p><b>Controller operating voltage range as per OEM hardware power requirement.</b></p>

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				transistor amplification having a push-pull configuration.		
146	Vol.2	Access Control Device	322	Device should have Inbuilt Web Server so device can be managed remotely through inbuilt web Server using any web browser.	Non-comply due to Cyber Security. Our device work with only Web-server	As per OEM solution, <b>web server using web browser.</b>
147	Vol.2		323	Linux Operating System	Please except QT-OS	As per <b>OEM standard secure OS.</b>
148	Vol.2	Access Control Device	322	Total Indian Manufacturing Technology to enable better service and support.	Please except Made in Korea Product	This is a special category project where technology and capacity parameters should match the requirement. <b>We are allowed to import the product and supply subject to declaration to land boarder policy released by GOI</b>
149	Vol.2	10.16 Intelligent rack PDU	423	General: IPDU provided shall have minimum 30 number of C13 (24 nos.) or C19 (6 nos.) outlets. The IPDU should be 63A, 3-phase with IEC industrial plugs.	Specifications calls for 63 Amp 3 Phase PDU but technically it is not required as the IT load per rack is 10 kW only hence we can go for 32 Amp three phase Switched PDU	The bidder can quote with C13 (24 nos.) and C19 (6 nos.) sockets with 32A switch iPDU will be required. The bidder can also quote a total of <b>30 nos. hybrid sockets C13/C19</b> with 32A switch iPDU.
150	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	3) Doors- The Racks shall include minimum 85% Perforated locking Front Door, Perforated Split locking Rear Doors, 2 pair 19" Mounting Rails with removeable top panel.	In the provided specification user will get 78% perforated surface area, also please note with 78% perforation on front door is sufficient for Air volume (CFM) flow for uniform cold air distribution across 42U height and for required cooling capacity per	This clause has been amended with <b>75% perforated</b> rack doors.

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					rack i.e 10 kW, CFD report can be submitted for same.	
151	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	425	4) Load bearing : • The frame shall support 1200kg static weight load, 1000kg dynamic weight load.	In the provided specification user will get 750 kg dynamic load , also please note these racks are provided with containment hence very rarely these racks will move hence dynamic load of 1000 kg not required.	The bidder can quote with the rack which shall support <b>1200kg static weight load, 600kg dynamic weight load."</b>
152	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	425	The Vertical System should be a vinyl partition that hangs from a drop ceiling, and it should be available in kits that include high- grade aluminum track, UL and FM rated fire suppression links and with ESD fire resistant vinyl	The polycarbonate sheet shall be UL rated fire retardant material with with aluminium frame celing suspended type CAC will be provided which is Rack independednt	This clause will be revised <b>Vinyl / Polycarbonate sheet</b> shall be fire retardant material with aluminium frame ceiling suspended type and it should be rack independent
153	Vol.2	10.17 Server / Network Racks & Cold aisle containm ent system.	425	The door, ceiling or combined system shall use a vertical vinyl strip design to accommodate non-uniform rack heights and non-uniform rows. It should be flexible system to deploy, it should require a drop ceiling. The design should be a simple one that incorporates with fire detection and suppression. It can also be used in conjunction with 90° corner brackets	Door will have sliding mechanism and made of 4mm thick solid polycarbonate sheet with aluminium frame. Also door will have auto closer to avoid any air loses from contained zone	This clause is revised with the door will have the sliding mechanism and is made of appropriate thickness <b>thick solid Vinyl / Polycarbonate sheet with aluminium frame</b> . Also, the door will have an auto closure to avoid any air loss from the contained zone



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154	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	The vertical roof partition shall be with minimum 0.40 mil thick vinyl, available linear width sections and drop-down lengths sections. The Vertical roof strips should work with standard or any non-standard/uneven rows.	Horizontal top panel made from 3 mm thick polycarbonate sheet with aluminium frame. Fire or smoke detector can be bring inside the containment system. Cable entry to rack & Bus bar system will have cable entry from Rack rear side	This clause is revised with appropriate thickness <b>Vinyl / Polycarbonate sheet with aluminium frame.</b>
155	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	The vertical strip door material shall be with minimum 0.40 mil thick vinyl, available linear width sections and lengths sections.	Door will have sliding mechanism and made of 4mm thick solid polycarbonate sheet with aluminium frame. Also door will have auto closer to avoid any air looses from contained zone	This clause is revised with <b>appropriate thickness Vinyl / Polycarbonate sheet with aluminium frame.</b> Auto door closure needs to be considered.
156	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	The CAC system should be with automation integrated, the ceiling part of the CAC should be open automatic while fire or smoke detected inside the containment system	The CAC ceiling is manual openable to access for any maintenance work above it. Fire or smoke detector should be bring inside the containment system.	The bidder can go with <b>manual openable access</b> for maintenance work
157	Vol.2	10.20 Inrow Cooling units for Server room	429	2) General : For ensuring a closed system for efficient cooling the chilled waterbased cooling should be closed at the front and rear of the rack as the same is required to form a flush joint with the rack.	Here we can provide protruded type LCP CW to achieve the better cooling output, by protruding 200 mm inside cold aisle containment the Protruding LCP Inline devices extend 200 mm in front of the bayed server racks into the cold aisle and are available with a maximum cooling output of 53 kW.	The OEM can provide their independent design flush mount or protruding type cooling unit but the <b>200mm protruding should be front side</b> and inside the cold aisle containment. The backside should be flush mounted

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					This has the advantage that the device fans can blow freely left and right directly in front of the server racks. This produces a cold air curtain in front of the perforated server racks so that the 19" equipment can draw in cold air unimpeded."	with the server/network rack.
158	Vol.2	General	165	Inbuilt / Outdoor type AMF panel shall be provided complete protection to engine, alternator, starting & stopping DG set automatically on mains failure / resumption	IEC/IS Standard applicable is not mentioned on the scope, We recommend IEC61439, IEC61641 Standard for AMF Panel	IEC61439 & IEC61641 shall be <b>applicable for all power panels.</b>
159	Vol.2	10.6 LT Panels, ACB & MCCB	187	The Panel should be free standing, floor mounting, indoor type. The functional components should be mounted on non-perforated mounting plate. All components should be front accessible only	Please clarify Internal Partitions Details as well as Form of Separations for internal Partition. Also Panels required are Compartmental or Non Compartmental type. We recommend Compartment Panel with Form 4B type internal separation for Panels.	All <b>Panels shall be Compartment Type</b> and Internal separation should be Form 4B.

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160	Vol.2	10.33 Data & Voice Network Cabling	492 LAN cable		<p>Is there any Third Party Certification required for Cat.8.1 Installation Cable</p> <p><b>Suggestion from the Bidder:</b> GHMT Certification for Installation Cable as per ISO/IEC 11801-1 Ed.1.0 (2017-11) standard.</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p>
161	Vol.2	10.33 Data & Voice Network Cabling	492 LAN cable	Standards: ISO/IEC 11801-1 Ed 1.0 2017-11; IEC 61156-5; IEC 61156-7; EN 50173-1; EN 50288-4-1 Fire rating: IEC 60332-3-24; IEC 60754-2; IEC 61034, CPR fire class: EN50575, 25GBase-T and 40GBase-T over 30m (per 802.3bq Draft 2.4)	<p>Which CPR &amp; DOP Fire Class category should the cable comply with.</p> <p><b>Suggestion from the Bidder:</b> Minimum CPR class of Dca &amp; DOP D8000 required for Data Center Cables.</p>	<p><b>As per CAT6A Standard,</b> IEC 61156-5, ANSI/TIA-568-C.2, ISO/IEC 11801, IEC 61034, IEC 60754-2, IEC 60332-1.</p>

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162	Vol.2	10.33 Data & Voice Network Cabling	493 Fiber Panel	Splice Cassette	<p>Whether the Splice Cassette also shall be compatible with the intelligent cabling system for enabling Automated Infrastructure Management (AIM) solution.</p> <p><b>Suggestion from the Bidder:</b> Splice Cassette also shall be compatible with the intelligent cabling system because we may not be able to monitor these connections otherwise.</p>	We have mentioned above that <b>copper and fiber</b> both solutions should be intelligent.
163	Vol.2	10.33 Data & Voice Network Cabling	494 Copper Patch Panel	Should be able to accommodate modules like Cat.6, Cat.6A as well as adapters of FO LC- and SC-connectors.	<p>Whether this panel should support fiber modules also.</p> <p><b>Suggestion from the Bidder:</b> It saves Rack space as otherwise we need to consider separate panels for copper and fiber if required.</p>	<b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.
164	Vol.2	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The MPO-QR connector shall be a multiple-fiber push-on/pull-off connector that is IEC-61754-7 and EIA/TIA-604-5 (FOCIS 5) compliant.	The MPO-QR Connector is an OEM Specific terminology, request to kindly amend or delete the same. Refer to <a href="https://www.rdm.com/qr-connector-family/">https://www.rdm.com/qr-connector-family/</a>	5 - Trunk Cable, 12 Fibers - <b>The MPO</b> connector shall be a multiple-fiber push-on/pull-off connector that is IEC-61754-7 and EIA/TIA-604-5 (FOCIS 5) compliant.
165	Vol.2	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The MPO-QR shall be designed in such a way that it can also be operated exclusively at the connector end, i.e., the bend protection. This allows the MPO adapters to be mounted closer together.	The MPO-QR Connector is an OEM Specific terminology, request to kindly amend or delete the same. Refer to <a href="https://www.rdm.com/qr-connector-family/">https://www.rdm.com/qr-connector-family/</a>	The OEM is allowed to provide its <b>high-quality MPO</b> connector.

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166	Vol.2	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - The cordage comes with Method B MPO cord in accordance with ANSI/TIA-568.3-D. The boot shall be colored in the same logic as MPO adapters for an instant identification during installation and documentation.: o gray for polarity B o black for polarity A	OEM Specific color - for adapter. Request to kindly amend to Black which is generic	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
167	Vol.2	10.33 Data & Voice Network Cabling	332 of 451	6 - Fiber Panel - Module - The LC-Duplex ports feature integrated laser shutters that move out of the way when the connector is inserted. The internal wiring of the module is based on universal polarity to ensure the correct fiber polarity while requiring just one type of patch cord on both ends of the link.	"The LC-Duplex ports feature integrated laser shutters that move out of the way when the connector is inserted." is an OEM specific refer to <a href="https://www.rdm.com/netscale-72/">https://www.rdm.com/netscale-72/</a> . Request to kindly delete the same.	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
168	Vol.2	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Grounding: 6.4mm hole and normal mounting elliptic holes (conductive)	The Size of the grounding hole is OEM specific. Request you to kindly generalise or delete the same	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
169	Vol.2	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Cable tray load: Max. 48x180g (8.64kg) for max. 1mm permanent deformation	The Cable tray load is OEM specific. Request you to kindly generalise or delete the same	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
170	Vol.2	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Dimensions: 483 x 113 x 44mm (L x W x H)	The Dimension is OEM specific. Request you to kindly generalise or delete the same	The <b>OEM is allowed to provide as per their standard design</b> for this clause.
171	Vol.2	10.33 Data & Voice	334 of 451	7 - Copper Patch Panel - Shield contacting by shield lance with integral cable strain relief, shield material tin-coated bronze,	The Size of the flat connector is OEM specific request to generalise or delete the same	The <b>OEM is allowed to provide as per their</b>

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		Network Cabling		ground contacting through 1 contact finger for flat connectors 4.8 x 0.5 mm.		<b>standard design</b> for this clause.
172	Vol.2	10.33 Data & Voice Network Cabling	334 of 451	8 - Fiber Patch cord - Mounted on both sides with LC-QR connector, IEC 61754-20 compatible	The MPO-QR Connector is an OEM Specific terminology, request to kindly amend or delete the same. Refer to <a href="https://www.rdm.com/qr-connector-family/">https://www.rdm.com/qr-connector-family/</a>	The OEM is allowed to provide its <b>high-quality MPO</b> connector.
173	Vol.2	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Mixed-Media 19" 1 RU housing prepared to hold up to 8 cassettes for copper connection modules or fiber adapters and up to 4 splice cassettes.	The capacity to hold number of ports in 8 cassettes for copper connection modules isnt clear. Request to amend "Mixed-Media 19" 1 RU housing prepared to hold up to 48 copper connection modules or fiber adapters and up to 4 splice cassettes.	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. We have specified minimum port density in 1U. You can quote similar or higher.
174	Vol.2	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Housing: Corrosion-protected sheet steel, black, RAL 9005, powder-coated, POM plastic bars. Dimensions: 482.8 x 157.7 x 43.7 mm (W x D x H)	The Dimension is OEM specific. Request you to kindly generalise or delete the same	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their standard design and size for this clause.
175	Vol.2	10.33 Data & Voice Network Cabling	334 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Front cable management system available in two lengths, 80 mm FO optimized with separable bars as well as 100 mm for mixed operation.	The Dimension is OEM specific. Request you to kindly generalise or delete the same	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their standard design and size for this clause.
176	Vol.2	10.33 Data & Voice Network Cabling	335 of 451	10 - Hybrid Patch Panel with MPO connectivity- Fiber & Copper System - Shield contacting by shield lance with integral cable strain relief, shield material tin-coated bronze, ground contacting	The Size of the flat connector is OEM specific request to generalise or delete the same	The bidder can provide <b>Hybrid panels / separate</b> panels for copper and fiber. The OEM is allowed to provide as per their

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				through 1 contact finger for flat connectors 4.8 x 0.5 mm.		standard design and size for this clause.
177	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The Intelligent Patch Panels shall use contactless sensor technology based on RFID technology in compliance with ISO 15693.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
178	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The Intelligent Patch Panels shall be standard patch panels which have been retrofitted with RFID Sensors.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
179	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	13 - Intelligent Patch Panel Requirements - The RFID Sensors mounted on the Intelligent Patch Panel shall provide an LED indicator at every port to enable easy tracing and identification of patch connections.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions. The solution must have an LED indicator to monitor physically during maintenance.
180	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	14 - Intelligent Patch Cord Requirements - The marking tags shall contain RFID tags according to ISO 15693.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
181	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	15- Analyzer Requirements - The Analyzer shall communicate with the RFID Sensors on the Intelligent Patch Panels using a daisy-chain Bus.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	The OEM can provide <b>RFID / port sensing technology</b> for intelligent cabling solutions.
182	Vol.2	10.33 Data & Voice	337 of 451	15- Analyzer Requirements - The Analyzer shall provide power to the RFID Sensors over the	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin	The OEM can provide <b>RFID / port sensing</b>

Corrigendum cum clarifications document for Greenfield State Data Centre (Civil & Non-IT)

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		Network Cabling		Bus. No additional power cabling shall be needed.	Connector or NFC Tags. Request you to kindly add the same	<b>technology</b> for intelligent cabling solutions.
183	Vol.2	10.33 Data & Voice Network Cabling	337 of 451	15- Analyzer Requirements - The Analyzer shall be able to power up to 42 RFID Sensors on a Bus with a length of 2.5m.	This shall depend of individual OEM Offerings and Solution. Request to kindly delete the same as is OEM Specific.	The OEM can provide <b>RFID / port sensing technology for intelligent cabling solutions</b> . The OEM is allowed to provide as per their standard design for this clause.
184	Vol.2	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - It shall be possible to connect RFID Sensors in several racks to one Analyzer. The length of the Bus Cable shall extend up to 30 m (with a correspondingly reduced number of RFID Sensors to compensate for voltage drop along the Bus Cable).	This shall depend of individual OEM Offerings and Solution. Request to kindly delete the same as is OEM Specific.	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
185	Vol.2	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - An Additional Display shall be available that makes the Analyzer display content available in racks that have Intelligent Patch Panels, but no Analyzer installed.	This shall depend of individual OEM Offerings and Solution. Request to kindly delete the same as is OEM Specific.	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
186	Vol.2	10.33 Data & Voice Network Cabling	338 of 451	15- Analyzer Requirements - The Additional Display shall have a powering input, allowing redundant powering of a bus from both the Analyzer and the Additional Display.	This shall depend of individual OEM Offerings and Solution. Request to kindly delete the same as is OEM Specific.	The <b>OEM are allowed to provide as per their standard design</b> for this clause.
187	Vol.2	10.33 Data & Voice Network Cabling	338 of 451	16 - Concentrator Requirements - The Concentrators shall run on a standard PC platform using the Windows® operating system (Windows 10 and above).	The Solution should support other OS and platform which are open source as well like LINUX etc.	<b>As per OEM's proposed</b> solution.
188	Vol.2	10.33 Data & Voice	339 of 451	17 - Software - The software shall run on Windows based operating systems.	The Solution should support other OS and platform which are open source as well like LINUX etc.	<b>As per OEM's proposed</b> solution.



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		Network Cabling				
189	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	365	The management system enables you to watch the camera video in the layout plans directly without opening external applications.	DCIM Tool is used to monitor, plan & manage Data Center Physical Infrastructure & Facilities to certain extent. Surveillance cameras come up with their specialized software suite, hence it is recommended to perform certain tasks / functions in that specialized software, while the cameras supporting standard protocol will be integrated with DCIM.	The camera will have <b>VMS software for analytics</b> and other monitoring. DCIM should connect with VMS and be able to fetch all data from VMS for centralized monitoring.
190	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	365	The management system can configure a trigger rule to record not only 1 camera video but also presents 3 types for recording: Full time, scheduling and event trigger. The eventtriggered video files are integrated in the event log for you to play the video file at your fingertips.	DCIM Tool is used to monitor, plan & manage Data Center Physical Infrastructure & Facilities to certain extent. Surveillance cameras come up with their specialized software suite, hence it is recommended to perform certain tasks / functions in that specialized software, while the cameras supporting standard protocol will be integrated with DCIM.	This is the <b>functionality of VMS software</b> . DCIM to get integrated with VMS as per solution requirements.

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191	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	370	DCIM should be scalable to offer plugins to allow safe shutdown for Virtual Machines and Virtual Machine Migration. The safe shutdown feature should support VMWARE and Microsoft HYPERV formats. For sites where the UPS are also from the same OEM as the DCIM the functionality should be made available day one to the client. For sites where the UPS are not from the same OEM the functionality should be made available as and when client buys UPS from the same OEM for future integration. Non availability of such a capability will be considered as Non-Compliance as client reserves the right to opt for it or not (as per the availability and future scalability on UPS side)	DCIM Tool is used to monitor, plan & manage Data Center Physical Infrastructure & Facilities to certain extent.. Can the clause be modified as VMWare OR Hyper-V, instead of VMWare And Hyper-V. Generally only one hypervisor is popular within organization. The IT monitoring is efficiently managed with specific IT Monitoring tools efficiently, can this clause be tied to the IT Monitoring / Management tools ?	The bidder can select <b>hardware that is suitable to their DCIM software.</b> The hardware make should be from standard OEMs like IBM / HP / Dell / VM ware / Cisco or similar.
192	Vol.2	10.36 Video wall	357	Dual inbuilt power supply should be hot swappable.	Request you mention Dual inbuilt power supply	Bidder to consider for the <b>dual redundant power supply inside the cube</b> and should be hot-swappable for video wall.
193	Vol.2	10.36 Video wall	357	System should be based on Python- Django framework with web browser architecture	This is specific to one OEM .Request to consider System should be based on web browser architecture	<b>Web-based architecture</b> is required.
194	Vol.2	10.36 Video wall	356	Brightness of Projection engine 2200 Lumens & Brightness of cube 500 Nits	Request you to consider Brightness of Projection engine 2000 Lumens & Brightness of cube 800 Nits as Video wall industry on screen brightness is important and not projector brightness	The brightness of the Projection engine is <b>2000 Lumens &amp; Brightness</b> of the cube is <b>500 Nits.</b>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
195	Vol.2	10.36 Video wall	361	System should be based on Python- Django framework with web browser architecture	This is specific to one OEM .Request to consider System should be based on web browser architecture	As per OEM's proposed solution, the system should be based on <b>web browser architecture</b> .
196	Vol.2	10.36 Video wall	360	Brightness of Projection engine 2200 Lumens & Brightness of cube 500 Nits	Request you to consider Brightness of Projection engine 2000 Lumens & Brightness of cube 800 Nits as Video wall industry on screen brightness is important and not projector brightness	The brightness of the Projection engine is <b>2000 Lumens &amp; Brightness</b> of the cube is <b>500 Nits</b> .
197	Vol.2	10.33 Data & Voice Network Cabling	330	Given Parameters are for specific to single OEM  As per standard cat 8 can give 40 Gb/s for 30 meter per channel length only. Accessories considered for cat 6A which will only give you 10 Gb/s bandwidth. RJ45 connector can only go upto 10 Gb/s.	Reconsider desing and give approval for quoting Cat 6A complete end to end solutions which is cost effective and efficient solutions for 10 Gb/s.	Horizontal Cabling for the facility is required on <b>Cat 6A true S/FTP solution</b> complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.
198	Vol.2	10.33 Data & Voice Network Cabling	331	Given Parameters are for specific to single OEM  RFID tag for port monitoring purpose.	We request you to please remove this specification to eligible for participating in this tender	<b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.

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199	Vol.2	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>Optical panel housing mounts in 19-in racks or cabinets and provide up to ultra-high-density 72 port connectivity when combined with modules and cassettes.</p>	<p>We request: why only perticular number 72 port asked??</p> <p>Can we give more or less port??</p>	<p>We have specified a minimum 72 ports requirement in 1U, the bidder can <b>quote similar or higher ports</b> in 1U size fiber patch panel.</p>
200	Vol.2	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>The single rack unit housing panel shall have 3 level of drawers each drawer holding two splice cassettes side by side.</p>	<p>We request you to please relax this clause and allow OEMs to give products based on desing</p>	<p><b>The intelligent solution shall support copper and fiber panels.</b> The bidder can provide <b>Hybrid panels / separate panels</b> for copper and fiber.</p>
201	Vol.2	10.33 Data & Voice Network Cabling	332	<p>Given Parameters are for specific to single OEM. It seems someone has copy peasted specific OEM datasheet for all parameter</p> <p>Depending on the connector type, the splice cassette includes a one-meter ribbon, twelve or 24 x 250 μm single fiber pigtail, that is loaded within the cassette, and can be fusion spliced directly to either ribbon or loose fiber cable.</p>	<p>We request you to please relax this clause and allow passive OEMs to give products and solutions based on design</p>	<p>The <b>OEM are allowed to provide as per their standard design</b> for this clause.</p>

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202	Vol.2	10.33 Data & Voice Network Cabling	333	<p>Given Parameters are for specific to single OEM</p> <p>Grounding: 6.4mm hole and normal mounting elliptic holes (conductive)                      Grounding spring: Bronze (CuSn6) tinned (only with shielded version)                      Module holding force: Min. 100N (insertion), min. 30N (extraction)                      Cable tray load: Max. 48x180g (8.64kg) for max. 1mm permanent deformation                      Dimensions: 483 x 113 x 44mm (L x W x H)                      Patch panel with integrated cable tie shelf, accommodating up to 48 shielded modules</p>	<p>Given Parameter are too stringent. Even dimensions also specified</p> <p>We request you to please relax this clause and allow passive OEMs to give products and solutions based on design</p>	<p>The <b>OEM are allowed to provide as per their standard design</b> for this clause.</p>
203	Vol.2	10.33 Data & Voice Network Cabling	334	<p>Given Parameters are for specific to single OEM</p> <p>Category 8, Shielded S/FTP Grey LSZH Flexible cable, 4 x 2 xAWG 26/7, LSZH, color grey</p> <p>As per standard cat 8 can give 40 Gb/s for 30 meter per channel length only.                      Accessories considered for cat 6A which will only give you 10 Gb/s bandwidth. RJ45 connector can only go upto 10 Gb/s.</p>	<p>As this patch cords are used in Datacenter we request you to please amend or add below parameter.</p> <p>Category 6A, Shielded Grey LSZH Flexible cable, 4 x 2 x AWG 28/7, LSZH, color grey</p> <p>Slim Patch Cords can to support high-speed 10GBASE-T networks and offer a 35% space saving compared with standard 26 AWG C6A Patch Cords which will help is air circulation.</p>	<p>Horizontal Cabling for the facility is required on <b>Cat 6A true S/FTP solution</b> complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p>
204	Vol.2	10.33 Data & Voice Network Cabling	334	<p>All Parameters are for specific to single OEM</p>	<p>Given Parameter are too stringent.</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>Horizontal Cabling for the facility is required on <b>Cat 6A true S/FTP solution</b> complying 10Gbps bandwidth for which 25 years system performance</p>

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						<p>and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>
205	Vol.2	10.33 Data & Voice Network Cabling	336 337	All Parameters are for specific to single OEM	Given Parameter are too stringent.  Intelligent solutoins is customised and properitery products. Each OEM have their own system and	Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25

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					<p>software for management and operation. integration of this propriety solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>
206	Vol.2	10.33 Data & Voice	337	All Parameters are for specific to single OEM	<p>Given Parameter are too stringent.</p> <p>Intelligent solutions is customised and propriety products. Each</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
		Network Cabling			<p>OEM have their own system and software for management and operation. integration of this propriety solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>
207	Vol.2	10.33 Data & Voice	337	All Parameters are for specific to single OEM	<p>Given Parameter are too stringent.</p> <p>Intelligent solutoins is customised</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution</p>



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		Network Cabling			<p>and propriety products. Each OEM have their own system and software for management and operation. integration of this propriety solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>
208	Vol.2	10.33 Data &	338	All Parameters are for specific to single OEM	Given Parameter are too stringent.	Horizontal Cabling for the facility is required on Cat

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		Voice Network Cabling			<p>Intelligent solutions is customised and proprietary products. Each OEM have their own system and software for management and operation. integration of this proprietary solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p><b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology for intelligent cabling solutions.</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
209	Vol.2	10.33 Data & Voice Network Cabling	338	All Parameters are for specific to single OEM	<p>Given Parameter are too stringent.</p> <p>Intelligent solutions is customised and proprietary products. Each OEM have their own system and software for management and operation. integration of this proprietary solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p> <p>The OEM can provide RFID / port sensing technology</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
						for intelligent cabling solutions.
210	Vol.2	10.33 Data & Voice Network Cabling	340	All Parameters are for specific to single OEM	<p>Given Parameter are too stringent.</p> <p>Intelligent solutions is customised and proprietary products. Each OEM have their own system and software for management and operation. integration of this proprietary solutions is very restricting</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper and fiber.</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
						The OEM can provide RFID / port sensing technology for intelligent cabling solutions.
211	Vol.2	10.33 Data & Voice Network Cabling	340	All Parameters are for specific to single OEM	<p>Given Parameter are too stringent.</p> <p>Intelligent solutions is customised and proprietary products. Each OEM have their own system and software for management and operation. integration of this proprietary solutions is very restricting</p> <p>Investing in one OEM's Intelligent Cabling Solution will bind the SDC to purchase the products and software exclusively from the same OEM</p> <p>We request you to please allow passive OEMs to give products and solutions based on design.</p>	<p>Horizontal Cabling for the facility is required on Cat <b>6A true S/FTP</b> solution complying 10Gbps bandwidth for which 25 years system performance and application assurance warranty shall be provided by OEM. The complete CAT6A SFTP channel shall be 3rd party verified by UL/ETL/3P.</p> <p><b>The fiber solution shall be designed on 100G and it should be intelligent upgradable and scalable for 400G and 800G</b> without any downtime and shall operate through intelligent cabling architecture. The patch cord shall comply with IDC technology and standard for LSZH.</p> <p>The intelligent solution shall support copper and fiber panels. The bidder can provide Hybrid panels / separate panels for copper</p>

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
						and fiber.  The OEM can provide RFID / port sensing technology for intelligent cabling solutions.
212	Vol.2	10.33 Data & Voice Network Cabling	334	Hybrid Patch Panel with MPO connectivity-Fiber & Copper System/ Mixed-Media 19" 1 RU housing prepared to hold up to 8 cassettes for copper connection modules or fiber adapters and up to 4 splice cassettes.	16 cassettes for copper can save space  <b>Suggestion from the Bidder:</b> Mixed-Media 19" 1 RU housing prepared to hold up to 16 copper or 4 splice cassettes.	As per the RFP.
213	Vol.2	10.16 Intelligent rack PDU	263	Networking: 10/100 Base Ethernet Port.	We suggest to add redundant network ports so that the network runs smoothly without any bottleneck as more data is processed. 1GIG port(Primary) and 10/100 port(Secondary)	As per the RFP.
214	Vol.2	10.16 Intelligent rack PDU	263	Branch Circuit Protection: At least (02) or more Hydraulic Magnetic Circuit Breaker Per Phase	We suggest that PDU should have atleast 6 or more breakers as it is a high density PDU	As per the RFP.
215	Vol.2	10.16 Intelligent rack PDU	263	The PDU should be certified with UL/CE, IEC, EN, and RoHS certified	We suggest that IEC should be removed as it is same as EN.	As per the RFP.
216	Vol.2	Section 3.4	188-189	Telecom room, IBMS panel room, Network room (Hub room), Server staging room, Storage room.	The Network and Mux rooms are not diagonally opposite in Layout , Do we require to maintain the same ?please clarify	As per the RFP.

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217	Vol.2	Section 3.4.1	194	Power from two nos. 33KV dedicated lines shall be fed to the Group operated switch to overhead power lines for switching ON/OFF between circuits then it will be further distributing to the HT panel.	Please clarify on the status of Two Feeders availability at Site Location	As per the RFP.
218	Vol.2	Section 3.4.1.3	195	HSD storage is placed in the side area of the plot.	Please clarify on HSD Storage to be proposed as per Tier III Requirement ?	As per the RFP.
219	Vol.2	Section 10.3	324	seismically qualified emergency Diesel Generator (DG) units with each of 5000 KVA at 0.8 p.f lagging, 415 V, 3 phase, 3 wire, 50Hz	is 5000kVA DG Rating is mandatory , Can we explore the different combination of KVA Ratings ?	As per the RFP.
220	Vol.2	10.13 Chiller	405	Supply, installation, testing & commissioning of air-cooled Water Chiller of 570 TR Actual capacity	Can Bidder would be allowed to explore 570 TR Chiller for other Ratings ?	As per the RFP.
221	Vol.2	Section 10.33	491	Data and Voice Network Cabling	Request for more details on sizing for network cabling /infrastructure component	As per the RFP.
222	Vol.2	10.35 Interior of NOC/ SOC/DCI M/ Innovation Centre Room	343	1. Scope	<p><b>To ensure that the complete control room interior is designed and executed by an experienced professional agency, it recommended to add the following text.</b></p> <p>1) Experience:- The Control Room Interior Solution Provider shall have experience of supplying and installed below products in single order out of last five financial years to qualify: -</p> <p>1.1) Acoustic Modular Metal Panelling / Partition – minimum 300 Sq. Meter</p> <p>1.2) Acoustic Modular Metal False</p>	As per the RFP.

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					Ceiling - minimum 300 Sq. Meter 1.3) Acoustic flooring /carpet flooring – minimum 300 Sq. Meter 1.4) supplying and installing at-least 100 modules with modular removable Polyurethane Edge over industrial grade metal core for control room application in past seven financial years	
223	Vol.2	10.35 Interior of NOC/ SOC/DCI M/ Innovation Centre Room	350	8. Ceiling	<b>Add on points in existing criteria:-</b> Integrated Ceiling & Paneling: Audited certified design feature of Modular Metal Ceiling & Paneling for integrated look of interior application. Valid audit certificate from UL/Intertek to be submitted along with the technical bid.	As per the RFP.
224	Vol.2	10.35 Interior of NOC/ SOC/DCI M/ Innovation Centre Room	354 to 355	11 . Control Desk	<b>In addition to the existing criteria, it is recommended to add the below Quality and sustainability certificate for the control desk-</b> The proposed control desk shall be ANSI/BIFMA e3-2019 certified/tested at least for level 3 from UL/Intertek as per Furniture Sustainability Standard to identify the sustainability level of the furniture with respect to the environmental, health & wellness, and social impacts applicable to product(s). Valid certificate to be submitted along with the bid.	As per the RFP.



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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
225	Vol.2	10.20 Inrow Cooling units for Server room	244 to 247 266 to 271	Chiller Precision Air-Conditioning Units In-row cooling Units	Please provide the detailed technical specification for all the HVAC Items.	As per the RFP.
226	Vol.2	Annexure-Z	137	Preferred Make list for Civil Items	Please provide the List of approved Makes for HVAC Package	As per the RFP.
227	Vol.2	10.13 Chiller	405 of 602	Supply, Installation, Testing & Commissioning of air cooled water chiller of 570 TR actual capacity with two screw compressors..	Air-cooled screw chiller with the operating chilled water parameters of 14/21 deg C is not available in the market. Can bidder reconfigure the per chiller capacity and number of chillers to meet the total load requirement specified in the tender.	As per the RFP.
228	Vol.2	Definitions	169 of 612	The "Project" means setting up a Tier III Complaint and Tier IV ready Data Center..	Continuous cooling is the prescriptive requirement for Tier IV and better reliability requirement for Tier III DC but the requirement of Buffer Tank(Thermal storage tank) to meet continuous cooling is not spelled out in the Tender requirement. Kindly confirm.	As per the RFP.
229	Vol.2	10.20 Inrow Cooling units for Server room	431 of 612	The chilled water inlet temperature to cooling unit 14 deg C or higher	Kindly specify the requirement of rack inlet air temperature and cfm/kW so that best optimum chilled water inlet temperature can be arrived.	As per the RFP.
230	Vol.2	10.20 Inrow Cooling units for	71 of 612	In-row cooling system with all accessories for all Server Farm areas-Nos-58	Kindly specify the requirement of working and stand by.	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
		Server room				
231	Vol.2	Definitions	169 of 612	The "Project" means setting up a Tier III Complaint and Tier IV ready Data Center..	With the specified cooling system of In-row cooling, Uptime Tier-4 rating can not be achieved. Can the bidder propose the design which comply to the rating system requirement as specified in the tender.	As per the RFP.
232	Vol.2	10.20 Inrow Cooling units for Server room	199 of 612	General Design Criteria-In row cooling system with CAC containment	The Max. Server/Network density is 10 kW/Rack and In-row cooling system is not Techno-commercially viable. Can the bidder propose the alternative system considering Uptime Tier -4 certification, Low PUE, compatibility of water leak detection on chilled water piping and techno commercially viable.	As per the RFP.
233	Vol.2	10.20 Inrow Cooling units for Server room	199 of 612	Server areas shall be provided with treated fresh air provided with chemical filter for pressurization	Kindly provide the Air Sampling Report in the particular site to decide the type of chemical filters required.	As per the RFP.
234	Vol.2	10.25 Public Address System	306	Voice Alarm Controller	The controllers are available in multiple zones configuration. Please confirm how many zone controller is required	As per the RFP.
235	Vol.2	10.25 Public Address System	307	Amplifier	Wattage of amplifier is not mentioned	As per the RFP.
236	Vol.2	10.16 Intelligen	262	The PDU should help to avoid potential circuit overloads with remote current	Please accept to revise this clause as "The PDU should help with	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
		t rack PDU		metering and monitoring of connected loads.	remote current metering and monitoring of connected loads."	
237	Vol.2	10.16 Intelligent rack PDU	263	Hot Swappable Controller.	Please accept to revise this clause as "Field Replaceable Controller Module".	As per the RFP.
238	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	On front and rear doors bio metric with electromechanical handle lock required	Please accept to change this clause to "On front and rear doors HID Card Based access control handle and lock required"	As per the RFP.
239	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	The frame shall include depth markings for ease of EIA rail alignment.	Please accept to revise this clause as "The frame shall include depth markings / holes for ease of EIA rail alignment."	As per the RFP.
240	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	19" Mounting Rails shall be spaced 29.1" (740mm) apart from the factory	Please accept to revise this clause as "19" Mounting Rails shall be spaced 29 (736) - 29.1" (740mm) apart from the factory"	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
241	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	265	The horizontal beams telescope to adapt to any aisle length and the system support aisle widths from three to six feet. A variety of roof options should enable different approaches to fire suppression and airflow management. The system should also support aboverack cable management and busbar management	Please confirm whether the Containment incorporates a Horizontal Top Panel along with a Vertical Flexible Vinyl / PVC Sheet for Height Adjustment ( I.e Flexible Curtain Vertical Sheets are Required Instead of Rigid ones ).	As per the RFP.
242	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	247	SLD Required	Kindly share the SLD to understand the UPS Configuration in detail for both 600kVA & 250kVA ratings	As per the RFP.
243	Vol.2	General		UPS rating	Instead of 600kVA UPS, Can we go with lesser rating UPS's with fulfilling required capacity without any compramisation	As per the RFP.
244	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	247	Need clarity on Future Load Expansion	Please confirm about complete furture load expansion.	As per the RFP.
245	Vol.2	10.14 Uninterrupted Power Supply & Lithium-	247	LIB Sizing Calculation	Please confirm about requirement of SOL & EOL in mins, As its required for LIB Sizing	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
		ion System				
246	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	248	LIB Chemistry with UL- 9540A Certification	Can we go with LMO/NMC Samsung LIB Chemistry which has UL 9540A Certification as well which is mandatory as per NFPA Guidelines for Data center projects	As per the RFP.
247	Vol.2	General		Service Lift	Is Service List available	As per the RFP.
248	Vol.2	General		Base Frame	Kidly confirm about Base Frame, If required then please mention the Base Frame Height	As per the RFP.
249	Vol.2	General		Room Layout required- UPS to Battery Distance	Kindly share room layout, on which floor UPS & LIB going to install	As per the RFP.
250	Vol.2	General		FAT & SAT	Is FAT, SAT Required, Please share the details	As per the RFP.
251	Vol.2	General		I/O Panel	Is I/O Panel in Customer scope, Please confirm	As per the RFP.
252	Vol.2	General		BOQ required in detail	Please share BOQ in detail	As per the RFP.
253	Vol.2	General		Warranty	Need clarity on warranty for Both UPS & LIB	As per the RFP.
254	Vol.2	10.18 Precision Air conditioning units (Wall	266	The cooling unit should have below features: - High efficiency EC fan with high airflow (> 500 CFM/TR)	Please accept to revise the clause as "- High efficiency AC fan / EC fan with high airflow (> 500 CFM/TR) "	As per the RFP.

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		mount type)				
255	Vol.2	10.18 Precision Air conditioning units (Wall mount type)	266	The bidder should propose net sensing capacity in TR and kW both as per the room volume	Please share the heat load, design parameters to be maintained in the room to define the capacity and PAC ratings	As per the RFP.
256	Vol.2	10.19 Precision Air conditioning units / CRAC for UPS Room & Battery Room	267	The cooling unit should have below features: - with digital Scroll Compressors	Please accept to revise this clause as "with digital / tandem / fixed scroll compressors"	As per the RFP.
257	Vol.2	10.19 Precision Air conditioning units / CRAC for UPS Room & Battery Room	268	The net capacity of the unit needs to specify in the TR and kW units:	Please share the heat load, design parameters to be maintained in the room to define the capacity and PAC ratings	As per the RFP.
258	Vol.2	10.20 Inrow Cooling units for	269	The solution should be with adjustable airflow baffles	Please accept to revise this clause as "adjustable / unidirectional airflow", baffles are not required.	As per the RFP.

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		Server room				
259	Vol.2	10.20 Inrow Cooling units for Server room	269	The temperature / Humidity sensors should be place 3 level of the rack top, middle and bottom level. It means total 6 sensors in the rack should be consider by bidder three sensors front side and three sensors rear side	Please accept to revise this clause as "The temperature sensors should be place 3 level of the rack top, middle and bottom level. It means total 3 sensors in the rack should be consider by bidder which either can be installed at front or rear of the unit"	As per the RFP.
260	Vol.2	10.20 Inrow Cooling units for Server room	270	The chilled water inlet temperature to cooling unit 14°C or higher for better efficiency level. The output of the cooling unit should not compromise and need to be achieve cooling capacity of minimum 50kW per cooling unit.	Please specify the design parameters (RAT/SAT) to select and design the units accordingly.	As per the RFP.
261	Vol.2	10.20 Inrow Cooling units for Server room		Structure parts should galvanize coated with pure polyester, UV resistance powder coating in broken white shade to protect against corrosion resistance and tested to withstand 1000 hrs. salt spray test.	Please accept this as per OEM standards	As per the RFP.
262	Vol.2	3.4.1.9	39	Quantity in Phase 1 : 2 Working +1 Standby	Kindly accept 03Working + 01 Standby configuration with N= 375 TR	As per the RFP.
263	Vol.2	3.4.1.9 / Pt. A Detailed design brief Chiller configuration	39	Variable drive feature have been proposed to meet the following duty requirements essentials for Data Centre applications. 1. Quick starting feature. 2. Energy saving. 3. Initial cooling requirement of Data Centre which can be as low as 30 %	Kindly accept Fixed speed screw compressors with capacity modulation from 12.5% to 100% along with Quick start & Demand Limit feature.  Advantage: Our controller ensures to keep the compressors at optimum efficiency level to ensure better	As per the RFP.

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					performance. Fixed type of compressors gives better reliability for Data centers and do not need active harmonic filters too	
264	Vol.2	3.4.1.9 / Pt. A Detailed design brief Chiller configuration	40	Performance rating for Air cooled chillers shall be as follows: - 1. Capacity of chiller: 570TR (actual) 2. Temperature of chilled water entering chiller: 21 degree C 3. Temperature of chilled water leaving chiller: 14 degree C 4. Ambient temperature: 47 degree C 5. Refrigerant: R-134a 6. Feature: Quick starting feature and 100% loading within 5 minutes.	Kindly accept capacity of 375 TR for chiller, 03 nos . with 2W + 1S redundancy configuration for phase 1 along with Quick start feature i.e. 150 seconds from the time of power restoration to chiller panel.  For Phase 2 : Total cumulative qty for Chillers 04 nos in N+1 configuration i.e. 03 working + 01 Standby .  Advantage:  More compressors ensures the availability and better part load performances. Reduction in quick restart ensures high monetary/space savings towards Thermal storage tank.	As per the RFP.
265	Vol.2	3.4.1.9 / Pt. B Chilled Water distribution system	40	<b>1)</b> Primary-secondary system is based on two sets of pumps, out of which one sets of pumps have constant flow through chiller (which is called primary pumps) and second set of pumps are required for distribution which is variable in nature. <b>2)</b> To meet continuous cooling requirement for server floor, primary pumps in electrical distribution path need to be on UPS.	Kindly accept Chiller with inbuilt Primary Pump option.  Advantage: It saves installation hurdles, time , costing and space.	As per the RFP.



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266	Vol.2	10.13 Chiller	244	Supply, installation, testing & commissioning of air-cooled Water Chiller of 570 TR Actual capacity with Two screw compressor operating on refrigerant R-134a driven by suitable Semi-Hermetic motor. The Chiller should be suitable for operating at 415V + 10%, 3P, 50 Hz power supply. The scope also includes chiller system installation work with all required accessories and other activities that are not specifically mentioned in the specifications but are required for successful commissioning of the project.	Kindly accept capacity of 375 TR for chiller, 03 nos . with 2W + 1S redundancy configuration for phase 1 along with Quick start feature i.e. 150 seconds from the time of power restoration to chiller panel.  For Phase 2 : Total cumulative qty for Chillers 04 nos in N+1 configuration i.e. 03 working + 01 Standby .	As per the RFP.
267	Vol.2	10.13 Chiller	244	The chiller shall be factory insulated with 19 mm thick nitrile rubber / or equivalent thermal insulation with vapour barrier. The insulation shall be applied in such a manner that water boxes and covers shall be removable without damaging it	Kindly Accept Closed cell elastomeric insulation 9 mm thick & DX type Evaporator.  Advantage:  9mm is sufficient for high chilled water applications as 19 mm is normally needed for around 7 deg C chilled water outlet.	As per the RFP.
268	Vol.2	10.13 Chiller	245	Each chiller should have minimum 2 compressors with independent refrigerant circuits. All compressors should be on VFD, having nil in rush current. More than two Compressors are not accepted due to space issue at site	Kindly accept with fixed speed screw compressors with Star Delta starter , logic controlled to set the starting inrush current to 2 times of FLA	As per the RFP.
269	Vol.2	10.13 Chiller	245	The motor starter shall be zero electrical inrush current (Variable Frequency Drives). Not only all compressors with in chiller, but also all chillers must be capable of simultaneous starting	Kindly accept with fixed speed screw compressors with Star Delta starter , logic controlled to set the starting inrush current to 2 times of FLA	As per the RFP.

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270	Vol.2	10.13 Chiller	245	The evaporator shall be horizontal shell and tube type, flooded / Hybrid falling film type evaporator suitable for given heat transfer capacity	Kindly accept DX type Shell and Tube Evaporator  Advantage:  DX type Evaporator has very high proven reliability in data center applications.	As per the RFP.
271	Vol.2	10.13 Chiller	246	The condenser fans should be direct driven VFD operated, heavy duty axial fans with aluminum blades.	Kindly accept more energy efficient & reliable EC fans  Advance: EC fans are more efficient & reliable over VFD Fans.	As per the RFP.
272	Vol.2	10.13 Chiller	246	Factory testing for checking performance of chiller shall be witness by the Engineer- In charge/purchaser for one unit of each type for obtaining the dispatch clearance. Single Chiller of each type will be selected from the manufactured lot and will tested for performance. The chiller will be tested for varying percentage of cooling capacities of 100 %, 75 %, 50 % & 25 % for their performance. Client will witness performance testing of one each type of chiller at manufactures factory. The performance testing shall be carried out at four points as per AHRI/ Eurovent test standards.	Complied , Max ambient available is 46 Deg C due to lab limitation. However ensuring the performance at higher ambient ie 47 deg C.	As per the RFP.
273	Vol.2	10.13 Chiller	246	UL 1995 – Heating and Cooling Equipment ASHRAE 15 – Safety Code for Mechanical Refrigeration ASHRAE Guideline – Reducing Emission of Halogenated Refrigerants in Refrigeration and Air Conditioning Equipment and Systems	Being a European chiller manufacturer Vertiv follows European guidelines/standards. Chillers will be Technology transferred to India for manufacturing locally and it shall be manufactured according to EN 14511. (*) With nominal Airflow @	As per the RFP.

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				NEC – National Electrical Code OSHA – Occupational Safety and Health Act	T<=35°C Products are conformed to the following Directives: 2006/42/EC; 2014/30/EU; 2014/35/EC; 2014/68/EU. However in India, we do not produce certificates of these standards.	
274	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	Size: The Rack should be adaptive and scalable electronic equipment support cabinets. The Rack shall be a cabling and distribution enclosure or a complete server enclosure. The size of the rack should be 800W X 2000H X 1200D in mm.	Kindly confirm the 'U' height required is 42U ?	As per the RFP.
275	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	264	The Server / Network rack shall be designed in accordance with the following standards or certifications. <ul style="list-style-type: none"> <li>• EIA-310</li> <li>• DIN 41494</li> <li>• IEC 297</li> <li>• UL</li> <li>• ISO 9001, ISO 14001, ISO 45001</li> </ul>	Kindly amend the point as EIA-310, IEC 60950-1/UL, ISO 9001, ISO 14001, ISO 45001. Since it covers all the points as per Datacenter needs & practices.	As per the RFP.
276	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	369	Hardware Specification : -The Gateway shall comply to Emission Norms: EN 61000-6-3; FCC Part 15, Sub-part B, Class B	Controller should be ROHS , CE & UL Listed. Please make The Gateway shall comply to Emission Norms: EN 61000-6-3; FCC Part 15, Sub-part B, Class B or ROHS , CE & UL Listed.	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
277	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	374	The graphical floor plan of the configured Data Centre layout should include overlays showcasing capture index (CI), plenum pressure, plenum velocities, and 3D rendering of the temperature map, including airflow and temperature thresholds	For getting pressure & Velocities reading DCIM needs real time sensors. Simulated pressure and velocity data here asked in only rated not actual. Hence request to delete this point.	As per the RFP.
278	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	374	It should also offer dedicated Overlay to show Floor Plenum to help client drill down into looking at specific velocity issues in the plenum and estimate perforated tile airflow rates	For getting pressure & Velocities reading DCIM needs real time sensors. Simulated pressure and velocity data here asked in only rated not actual. Hence request to delete this point.	As per the RFP.
279	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	374	Velocity vector and temperature results should look like those from traditional CFD applications and provide the same ability to quickly locate problem spots and understand the underlying causes.	For getting Velocity & temperature reading DCIM needs real time sensors. Simulated pressure and velocity data here asked in only rated not actual. Hence request to delete this point.	As per the RFP.
280	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	374	CFD like Model should be able to detect airflow around those DCIM thermal model should incorporate Thermal calculations utilizing both mechanisms: Simulated and Real Time T/H sensor polling. User should have the ability to simulate his Data Centre on any of them at any time and see Thermal Maps in X, Y and Z Planes.	CFD is different set of software which is not part of DCIM. DCIM can give real time data wherein CFD uses rated data. Hence request you to make this data on real time basis or remove this point.	As per the RFP.

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281	Vol.2	General		Preferred make list for Non-IT Datacenter Components not given.	Vertiv name to be added	As per the RFP.
282	Vol.2	10.07 Busbar trunking system for Rack	194	The Tap-off units must be designed in such a way that the units can be fitted or removed while the system i.e., the main bus-bar trunking is energized. The BBT shall have min. 120 minutes fire barrier.	Kindly Accept as Below.  The main busbar is designed to have the TOBs inserted or removed during the power disconnection condition only. Hot swappable feature is applicable only for the Data hall busbar system	As per the RFP.
283	Vol.2	10.07 Busbar trunking system for Rack	195	Standards : IEC 439-1 & VDE0660 Pt500	Kindly Accept:IEC 61439-1 & 6	As per the RFP.
284	Vol.2	10.19 Precision Air conditioning units / CRAC for UPS Room & Battery Room			We Recommend all the critical cooling units like precision air conditioning for UPS Room Cooling, PAHU and In row cooling should be from Same OEM.	As per the RFP.
285	Vol.2	10.20 Inrow Cooling units for Server room	268	It should be designed with a maximum footprint of 300 mm width with similar depth of the rack to have better aesthetic view and proper baying with the rack	Kindly Accpet 600 mm width for Cooling Unit.	As per the RFP.
286	Vol.2	10.20 Inrow Cooling	268	It should be scalable cooling from 20-100% capacity with load matching controls provides lower energy	It is relevant to DX technology. Capacity modulation shall be done	As per the RFP.

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		units for Server room		consumption and operational costs	in line with PICV in chilled water unit. Kindly Remove the same.	
287	Vol.2	10.20 Inrow Cooling units for Server room	268	The Cooling unit should have features for expandability and scalability for future to "N" number of racks depends on the available space in the server room. Cooling units should have modules of fans which can be added as per requirement and rack loads.	It is specific to single OEM. Kindly allow Unit design to unit be as per OEM Design.	As per the RFP.
288	Vol.2	10.20 Inrow Cooling units for Server room	270	Structure parts should galvanize coated with pure polyester, UV resistance powder coating in broken white shade to protect against corrosion resistance and tested to withstand 1000 hrs. salt spray test. Rigid base frames to take full load of chiller during handling & installation. The chiller should have liquid separator, electronic expansion valve, optimized heat exchanger, high and low-pressure sensors, Schrader valves, filter dryer, non-return valve, highpressure switch and shutoff devices.	It is relevant to chiller unit. Kindly remove the same.	As per the RFP.

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289	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	247	UPS Asked in N+ 1 Configuration. 8 nos. to be paralleled for IT Server Farms	<p>We recommend to go for N+ N redundancy in UPS System for to create concurrent maintainability. To Create two Separate Path from UPS System Itself. To have a ready TIER 4 Data Center. Which is as per RFP Requirement.</p> <p>Note: Although an N+1 system contains redundant equipment, it is not, however, a fully redundant system and can still fail because the system is run on common circuitry or feeds at one or more points rather than two completely separate feeds.</p> <p>In the cases where UPS is used to power IT equipment, 2N / N+N power mode is the safest with the best security solution. 2N / N+N power solution, provide two independent power sources to protect the electrical systems against unexpected power failure. The loads are powered by both power sources, or the two sources feed power independently to their own loads.</p> <p>At a data center, a 2N/ N+N system contains double the amount of equipment needed that run separately with no single points of failure. These 2N / N+N</p>	As per the RFP.

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					<p>systems are far more reliable than an N+1 system because they offer a fully redundant system that can be easily maintained on a regular basis without losing any power to subsequent systems. In the event of an extended power outage, a 2N /N+ N system will still keep things up and running.</p> <p>We request you to please consider N+N Design.</p>	
290	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	247	UPS Asked in N+ 1 Configuration. 8 nos. to be paralleled for IT Server Farms	In accordance with above points, If we go for N+ N Redundancy in UPS, We can go ahead with Monolithic UPS also. (i.e- 600kVA /kW x 5 NOS- 2 Sets) with Lithium ION Batteries. No requirement for Modular Hotswappable UPS system in N+N Mode. As complete capacity Redundancy is available. Kindly accept the same.	As per the RFP.
291	Vol.2	KVM Switch	8	KVM Switch*	<p>No Specification is given for KVM Switch.</p> <p>Kindly Accept : LCD Console (18.5" Screen) with IP KVM Switch of 16 Port with Cables.</p>	As per the RFP.
292	Vol.2	10.16 Intelligent rack PDU	263	General - The PDU should have feature to lock receptacles to secure power cords and avoid accidental disconnections. It should also be able to provide Simplify circuit and phase balancing with color-code receptacles.	Along with color-code receptacles, it is useful to consider & add the point of <u>Alternating Phase Outlets</u> for 3-phase iPDU's which further helps in proper load balancing, simplified cable management at	As per the RFP.



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					the rear to avoid cluttering of cables & help maintain proper airflow inside the rack.	
293	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)		General Query	I/O summary required for DCIM license count	As per the RFP.
294	Vol.2	3 Objective & Brief Scope of Work - Envisioned Project Objective	13	Greenfield State Data Centre will be built at a specific location Starting from selection of site and construction up to operation as a <i>TIER-III compliant and TIER -IV ready</i> Data Centre	Understandably, the RFP expects the design to be Tier III compliant and also that it shall be ready to be upscaled as Tier IV as and when required in future. Kindly clarify if the DC Design to be made compliant to Tier III or Tier IV.	As per the RFP.
295	Vol.2	3.2 Project Scope - General	14	b. Site clearance (in all aspects)	Please elaborate on the type of clearances - like - encroachments, govt. clearances, site feasibility etc expected to be made by bidder	As per the RFP.
296	Vol.2	3.2.3 Key Scope of Work (Non-IT) 3.4.1.5 General Design criteria for non-IT sizing	16	1. The design is planned for of 150 racks on 1st floor and 150 racks on 3rd floor in 2nd phase. Load Sheets	Please clarify if there is any time gap planned between Phase 1 (for 150 racks) & Phase 2 (For 300 Racks) deployment. If the two phases are planned with certain interval, then please clarify if the bidder should factor the BOQ & commercials for the components like Transformers, DG Sets, etc to be used in only 1st phase only during the bidding	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
297	Vol.2	3.3.3 Site Preparation	19	In the RFP, it is mentioned that Soil testing shall be done prior to site preparation work by selected bidder	Please furnish the site Soil test reports to facilitate building structure load design & costing required for bidding	As per the RFP.
298	Vol.2	3.4.1 Data Centre load / density details	33	Two feeds shall be provided from the SEB/ Private electric company for maintaining the redundancy	Please clarify if the 2 power supply feeds shall be provided at site location into the Metering kiosk/RMU or the bidder is required to plan and factor or plan power supply upto site RMU at a distant location from the site. If so, please provide distances from the substations (Utility Source 1 & Utility Source 2) of SEB/Private electric companies to factor the same in the design	As per the RFP.
299	Vol.2	10.10 SVG Panel	230	Front mounting SVG cabinet shall be front cabling structure, if 100kvar SVG module is selected, which makes it possible to install SVG cabinet against the wall.	Hot Air Discharge is from rear side so 600 mm rear space is required for hot air discharge.	As per the RFP.
300	Vol.2	10.10 SVG Panel	231	Operating Ambient Temperature : -10°C to 50°C without de-rating.	Product is designed for -10°C to 40°C without de-rating . Above 40°C the SVG shall be derate. Hope it is acceptable.	As per the RFP.
301	Vol.2	10.11 APF Panel	235	50A/75A/100A APF modules should be able to mix up in the same cabinet to make a flexible larger rating APF system. Up to 7 pcs 50A or 75A modules or 6pcs 100A modules should be able to be integrated into one APF cabinet, so maximum APF rating per cabinet can reach 525A or 600A. And up to 10 APF cabinets should be able to word in	APF cabinet is able to eintegrtae 5pcs of power Modules in one APF cabinet. Hope it is acceptable	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				parallel, making the maximum rating for one APF system 5250A or 6000A		
302	Vol.2	10.11 APF Panel	237	Operating Ambient Temperature -10°C to 50°C without derating.	Product is designed for -10°C to 40°C without de-rating . Above 40°C the APF shall be derate. Hope it is acceptable.	As per the RFP.
303	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	249	The battery system shall be sized to provide backup time as specified in the schedule of quantity when the UPS is supplying 100% rated load.	Please confirm the Load PF to be consider for battery sizing.	As per the RFP.
304	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	General	General Query	Please confirm the Input/Output cable details for 600kVA & 250kVA UPS.	As per the RFP.
305	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	General	General Query	Please confirm the cable route length between UPS and Battery.	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
306	Vol.2	10.14 Uninterrupted Power Supply & Lithium-ion System	General	General Query	Do we need to consider load bank in UPS Vendor scope for SAT Activity? Pls confirm	As per the RFP.
307	Vol.2	10.07 Busbar trunking system for Rack	240	Open channel bus bar system	We suggest to go with IP55 busbars which would offer higher safety and longer operating life.	As per the RFP.
308	Vol.2	10.07 Busbar trunking system for Rack	240	Operating Ambient Temperature : 0°C to 40°C without de-rating.	Better specifications are available in the market with 50 deg C ambient. We suggest to opt for the same.	As per the RFP.
309	Vol.2	10.07 Busbar trunking system for Rack	240	Seismic	We suggest to specify the seismic standard like Zone 4, 0.8g.	As per the RFP.
310	Vol.2	10.13 Chiller	138	Approved Makes	Approved Makes for Chiller should be YORK/TRANE/CARRIER	As per the RFP.
311	Vol.2	10.13 Chiller	246	Condenser	The condenser fans should be direct driven VFD/EC Fans operated, heavy duty axial/EC fans with aluminum blades.	As per the RFP.
312	Vol.2	10.13 Chiller	246	Condenser	The condenser Coil should have minimum 5 years warranty	As per the RFP.
313	Vol.2	10.13 Chiller	246	Control Panel	Chiller Power supply should be single ( Multi power Supply in one chiller should not be acceptable )	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					Multi Power Supply requires more Electrical circuit and increase cable cost	
314	Vol.2	10.13 Chiller	246	Dimension	Considering Floor Layout and Terrace dimension is there any limitation for chiller dimension. Because it is Air Cooled Chiller and Requires ample space for heat exchange.	As per the RFP.
315	Vol.2	10.13 Chiller	246	Experience	Since this is 24 x 7 x 365 Days Running Application, Chiller should be provided by reputed manufacturer having experience in data centre for more than five years. We request to consider makes who have Same Model Installation running in data centre for more than five years. Minimum Five installation of data centre should be there	As per the RFP.
316	Vol.2	10.13 Chiller	246	Makes	Considering and Quality of chiller. Origin of Chiller should be China/India. Other countries origin chillers should not be accepted. ( Due to quality issue )	As per the RFP.
317	Vol.2	10.26 Water leak detection system	307	The Testing procedure shall involve physical application of a wet cloth to the cable, to test the relay operation. The Panel should sound the Alarms, and notify the DCIM system	In Digital WLD system for testing Small amount water need to be put over the sensor cable or Sensor cable can be dipped into water.	As per the RFP.
318	Vol.2	10.26 Water leak	308	Operating Nominal Voltage: 12 VDC	16 VDC	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
		detection system				
319	Vol.2	10.26 Water leak detection system	308	Wire communication: 2 core	3 core cable is suggested.	As per the RFP.
320	Vol.2	10.26 Water leak detection system	308	It is proposed to get the system tested before commissioning by placing a wet cloth over the cable to simulate a water leak. The particular zone on the main water leak panel must be displayed and the alarm relay has to operate. This will confirm that the system is working fine. Extension of alarm to the BMS system is proposed. The panel will have to be reset manually once the cable dries up. The Controller or repeater shall be installed at BMS room to control & monitor the water leakage system.	In Digital WLD system for testing Small amount water need to be put over the sensor cable or Sensor cable can be dipped into water.  Auto reset available, If Sensor cable dries up WLD panel will reset automatically.	As per the RFP.
321	Vol.2	10.27 Rodent Repellent system	310	1. Uniform pressure output of 80 dB to 110 dB with 360° transmission angle. 2. Linear propagation of mixed / variable frequencies detectable at, or about 40 ft distance from the source (Transducer/ Satellite). 3. Spatial average intensity - 83mW per cm <sup>2</sup>	Yes. Variable frequencies detectable at distance from the 1 meter from the Transducer	As per the RFP.
322	Vol.2	Recognition height	323	1.2~2.2 meters	Partially comply 1.4~1.9 meter	As per the RFP.
323	Vol.2	Recognition distance	323	1.2~2.2 meters	Partially comply 0.6~1 meter	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
324	Vol.2	9.3 Bill of Material – Greenfield GSDC Non- IT	73	23) Rack humidity and temp sensor - Lot- 1	For Rack health monitoring there is no detailed specification provided , only at page-73 it is mentioned, please confirm number of sensors required per Rack with specification	As per the RFP.
325	Vol.2	3.4 Concept design consideration for Greenfield Data Centre Building	188	First Floor Layout	First Floor details (excluding future expansion) : Data center Room-1 , Total 148 nos Racks with 54 nos LCP's but BOM (section 9.3 Bill of Material – Greenfield GSDC Non-IT, page -71) mentioned as 150 Racks & 58 nos LCP's.	As per the RFP.
326	Vol.2	3.4 Concept design consideration for Greenfield Data Centre Building	188	First Floor Layout	First Floor details (excluding future expansion): Networking Room , 7 nos Rack also shown, the rack specification same as DC Racks	As per the RFP.
327	Vol.2	3.4 Concept design consideration for Greenfield Data Centre Building	188	First Floor Layout	CAD Drawing for First floor	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
328	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	3) Doors- On front and rear doors biometric with electromechanical handle lock required	* Rack Biometric access control detailed specification required, * Integration with main building access panel will be Access control supplier scope. * Approved Access control make list required	As per the RFP.
329	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425	The horizontal beams telescope to adapt to any aisle length and the system support aisle widths from three to six feet. A variety of roof options should enable different approaches to fire suppression and airflow management. The system should also support above- rack cable management and busbar management	Horizontal top panel made from 3 mm thick polycarbonate sheet with aluminium frame. Fire or smoke detector can be bring inside the containment system. Cable entry to rack & Bus bar system will have cable entry from Rack rear side	As per the RFP.
330	Vol.2	10.17 Server / Network Racks & Cold aisle containment system.	425		We suggest to have the rack & cooling from same OEM for proper buying & to achieve better cooling output .	As per the RFP.
331	Vol.2	10.6 LT Panels, ACB & MCCB	188	The sheet should be uniformly coated with a special nano-ceramic coating, dip coat.	Please provide clarification with meaning of Dip Coat.	As per the RFP.
332	Vol.2	10.6 LT Panels, ACB & MCCB	188	Copper Used shall be of Electrolytic Grade. No drilling shall be allowed on Main Busbar systems of LV	Please clarify this statement as why Non drilling Main Busbar System is required	As per the RFP.



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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				Assemblies to avoid Heating on Joints.		
333	Vol.2	10.33 Data & Voice Network Cabling	497 Intelligent Patch Panel Requirements	The Intelligent Patch Panels shall provide capabilities of recognizing patch connections made between Intelligent Patch Panel ports and equipment ports. Both connect and disconnect operations shall be recognized.	Which connection topology we need to follow for intelligent panels? Whether it is of Cross-connect or Interconnect.  <b>Suggestion from the Bidder:</b> Cross-connect offers the benefit of being able to isolate active equipment and ease moves, adds and changes.	As per the RFP.
334	Vol.2	10.33 Data & Voice Network Cabling	330 of 451	2 - General - OEM should have its own intelligent solution. To make it intelligent OEM should not allow to use any third-party components.	This is specific to a few established OEM and doesn't promote Make in India or #StartupIndia OEM.	As per the RFP.
335	Vol.2	10.33 Data & Voice Network Cabling	331 of 451	5 - Trunk Cable, 12 Fibers - MPO connector shall have the option to be equipped with RFID tag for port monitoring purpose.	RFID for intelligent cabling is specific to OEM. AIM cable be implemented using 9th Pin Connector or NFC Tags. Request you to kindly add the same	As per the RFP.
336	Vol.2	10.33 Data & Voice Network Cabling	332 of 451	6 - Fiber Panel - Unloaded Panel 1U with Front Cable Guide - Material housing - Steel (DC01 electrogalvanized & HC420LA)	The Material housing steel standard mentioned is one of the type of Cold Rolled Steels used by OEM. Request to delete and mention "Material housing - SPCC (Cold Rolled Steel Sheet)"	As per the RFP.
337	Vol.2	10.33 Data & Voice Network Cabling	332 of 451	6 - Fiber Panel - Unloaded Panel 1U with Front Cable Guide - The housings should include sliding trays enabling module or cassette installation from the rear of the housing. The split tray feature allows each half of the tray to be pulled out	"The split tray feature" is an OEM Specific feature. However since module or cassette can be removed easily request to kindly delete the same.	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
				independently, protecting connections from disruption.		
338	Vol.2	10.33 Data & Voice Network Cabling	333 of 451	7 - Copper Patch Panel - Should have provision for color coding and patch cord locking system.	Color coding can be achieved using option of color coded Information Outlets which can be offered in 7 or more Color which most the OEM Offer. Request to Change or Delete.	As per the RFP.
339	Vol.2	10.33 Data & Voice Network Cabling	339 of 451	17 - Software - The software shall support the Microsoft SQL database management system.	The Solution should support other database platform which are open source as well like Apache etc.	As per the RFP.
340	Vol.2	10.33 Data & Voice Network Cabling	339 of 451	17 - Software - The Software shall be capable of running background queries and send generate alarms in case such a query returns a result (e.g., excessive power consumption in a rack). Alarms shall be displayed in the software Client GUI and shall be notified by email.	Feature of a DCIM Software or can be accessed from the Intelligent PDU System. Request you to kindly delete the same.	As per the RFP.
341	Vol.2	10.33 Data & Voice Network Cabling	339 of 451	17 - Software - Time planning of work orders (GANNT chart)	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.
342	Vol.2	10.33 Data & Voice Network Cabling	339 of 451	17 - Software - It shall be possible to create dependencies between work orders,e.g., a work or-der to install a server in a rack is dependent on the completion of another work order to install this rack.	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
343	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	17 - Software - The Software shall provide for management of assets and organizations. It shall be possible to create links between assets / organizations and network objects, e.g., to identify the owner of a device or software applications being installed on a device.	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.
344	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	17 - Software - The Software shall have a capacity management function that provides means to search for free capacity in the infrastructure based on various criteria (rack space, power availability, network availability etc.)	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.
345	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	17 - Software - The Software shall have a storage management function allowing to place objects in storage locations and remove objects from storage to install it in the IT infra-structure. Comprehensive storage reports shall be available.	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.
346	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	17 - Software - The Software shall provide configurable multiple user access levels that are based on specific locations, access to objects and the capability to perform operations on these objects.	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.
347	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	17 - Software - The Software shall be capable to connect to external user directories using the LDAP protocol.	Feature of a DCIM Software or and FMS or Active Switching or Server Management system. Request you to kindly delete the same. Or Delete it from the DCIM Systems 10.35 Interior of NOC/ SOC/DCIM/ Innovation Centre Room	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
348	Vol.2	10.33 Data & Voice Network Cabling	340 of 451	19 - Data Cabling Infrastructure Management - Continuously supervise the connectivity status on Intelligent Patch Panels and generate alarms in the case of unallowed changes. Alarms shall be displayed in the software Client GUI and shall be notified by email.	This feature pushes the Alarms through Email only which should also be intergated with visible alarms or hooters etc. Request to amend.	As per the RFP.
349	Vol.2	10.37 Data Centre Infrastructure Management (DCIM)	366	A. The management system can assign holidays in the scheduling calendar. B. The scheduling action can be added, edited and deleted. C. The scheduling can be assigned by daily, per-N days, specific date, weekly and monthly. D. The scheduling action can send a control command through the protocol or popping out a message in the user interface.	DCIM Tool is used to monitor, plan & manage Data Center Physical Infrastructure & Facilities. Managing staff/employee shifts is popularly done with specialized Shift Roster Software, that have specific features relevant in that area. Can this cluase be mentioned under requirement for such Roster Tools?	As per the RFP.
350	Vol.2	10.36 Video wall	356	The OEM should be an established multinational in the field of video walls and should have at least 1000 laser cube installations in India.	Request you to consider The OEM should be an established multinational in the field of video walls and should have at least 1000 DLP cube installations in India / Worldwide	As per the RFP.
351	Vol.2	10.36 Video wall	357	Cube should be equipped with a built in dual redundant power supply as integral part of projection system	Request you to Consider Cube as well as controller should be equipped with dual redundant power supply based projection system As placing internally as during power on it it not possible to rmeove power supply & due to high noise its not recommended	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
352	Vol.2	10.36 Video wall	357	Rear (Depth 560 ±5 % mm)	Request you to consider Rear (Depth 650 ±5 % mm) as 560mm is Proprietary & specific to one OEM	As per the RFP.
353	Vol.2	10.36 Video wall	357	Screen Gap ≤ 0.2 mm at 23~ 25 ° C (control room Temperature)	Request you to consider ≤ 0.5 mm at 23~ 25 ° C (control room Temperature) as 0.2mm is specific to one OEM	As per the RFP.
354	Vol.2	10.36 Video wall	356	Laser light source	Request you to consider RGB Laser light Source so as to get latest technology else bidders will quote outdated color wheels moving parts technology which is based on Laser Phosphor	As per the RFP.
355	Vol.2	10.36 Video wall	359	The OEM should be an established multinational in the field of video walls and should have at least 1000 laser cube installations in India.	Request you to consider The OEM should be an established multinational in the field of video walls and should have at least 1000 DLP cube installations in India / Worldwide	As per the RFP.
356	Vol.2	10.36 Video wall	360	Cube should be equipped with a built in dual redundant power supply as integral part of projection system	Request you to Consider Cube as well as controller should be equipped with dual redundant power supply based projection system As placing internally as during power on it it not possible to remove power supply & due to high noise its not recommended	As per the RFP.
357	Vol.2	10.36 Video wall	360	Dual inbuilt power supply should be hot swappable.	Request you mention Dual inbuilt power supply	As per the RFP.
358	Vol.2	10.36 Video wall	360	Rear (Depth 560 ±5 % mm)	Request you to consider Rear (Depth 650 ±5 % mm) as 560mm	As per the RFP.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					is Proprietary & specific to one OEM	
359	Vol.2	10.36 Video wall	360	Screen Gap $\leq 0.2$ mm at 23~ 25 ° C (control room Temperature)	Request you to consider $\leq 0.5$ mm at 23~ 25 ° C (control room Temperature) as 0.2mm is specific to one OEM	As per the RFP.
360	Vol.2	10.36 Video wall	359	Laser light source	Request you to consider RGB Laser light Source so as to get latest technology else bidders will quoted outdated color wheels moving parts technology which is based on Laser Phosphor	As per the RFP.
361	Vol.2	10.33 Data & Voice Network Cabling	331	Given Parameters are for specific to single OEM o gray for polarity B o black for polarity A	We request you to please remove this specific color polarities	As per the RFP.
362	Vol.2	10.33 Data & Voice Network Cabling	332	Given Parameters are for specific to single OEM. It seems someone has copy pasted specific OEM datasheet for all parameter  Material housing - Steel (DC01 electrogalvanized & HC420LA)	We request you to please remove this specification to eligible for participating in this tender  housing material will be different for all OEM	As per the RFP.
363	Vol.2	10.33 Data & Voice Network Cabling	332	Given Parameters are for specific to single OEM  The MPO-to-LC modules are easily swappable with MPO cassettes to migrate to MPO ports for parallel optics.	We request you to please relax this clause and allow passive OEMs to give products and solutions based on design	As per the RFP.
364	Vol.2	10.33 Data & Voice Network Cabling	333	Given Parameters are for specific to single OEM  The MPO-to-LC modules are easily swappable with MPO cassettes to migrate to MPO ports for parallel optics.	We request you to please relax this clause and allow passive OEMs to give products and solutions based on design	As per the RFP.

Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
365	Vol.2	10.33 Data & Voice Network Cabling	333	Given Parameters are for specific to single OEM  Material frame: Steel plate, galvanised and blue passivated	We request you to please relax this clause and allow passive OEMs to give products and solutions based on design	As per the RFP.
366	Vol.2	General			<b>Suggestion from the Bidder:</b>  We request you to please consider N+ N Configuration in UPS System instead of N+1, and if we can go ahead with N+N Configuration, Then there is no need of Modular UPS, we can get N+ N redundancy in Monolithic UPS also.	As per the RFP.
367	Vol.2	General	56	Gas based Fire Suppression system Standards and Codes.	You Are requested to approve Vds approved System, which is also complying as per NFPA and Having proven installation base in many Data centers.	As per the RFP.
368	Vol.2	Section 3.2 Sub-section 3.3.8 to 3.3.10	183	The SI shall resolve the Punch Points /Observations raised during the PAT inspection and after completion of all rectification SI shall communicate to PMC and request for final acceptance test and Go-Live from DST/GIL.	Please clarify on Script for PAT and FAT ISAT. Are you looking for third Party Testing ? Also L1 to L5 Tests to be mandatory ? Please clarify	Please refer to clause 3.3.9 for PAT and clause 7.1 Page 50, Implementation Phase for PAT and FAT Phase.
369	Vol.2	Section 3.4	186	The Data Centre building will have the following areas placed in the floors as detailed below. (Tentative/ Indicative area):	Please clarify on the Areas and Allocation of various Rooms mentioned for respective floors GF up to Fifth Floor. Do we need to maintain the same in our Proposed layout. Total Plinth area 7046 Sqmtrs mentioned , is it considering all FSI applicable ?Can	Keeping the broad organization the same, the SI may suggest improvements based on detailing. 7046 Sqm is the utilized FAR and the same needs to be followed.

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Sr. No	Volume	Section No.	Page No.	Content of the RFP requiring clarification	Clarification Sought	Draft Response
					we consider this as Baseline of the project ?	
370	Vol.2	Section 3.4	187-191	The Data Centre building will have the following areas placed in the floors as detailed below. (Tentative/ Indicative area):	Do we need to adhere to the respective layouts mentioned ? Each Floor Layout has insufficient Service Shafts shown like Fire , Plumbing Services , HVAC ,Electrical Control ,Fiber cables Shafts. Please clarify .	SI shall carry out detailed services design leading to required shaft design and sizing.
371	Volume 2	Cl. 9.3 & 9.20	Pg. 99 , 157	<p>9.3.1 Foundation shall be pile foundation using specified grade of concrete. The Foundation level shown in the structural &amp; architectural drawings are for supporting the foundation on firm strata as per SBC specified therein.</p> <p>9.20.1. Raft Foundation not less than 3.00 m depth is recommended since allowable Safe Bearing Capacity 20 T/m<sup>2</sup> is observed.</p>	The foundation recommendations are contradictory in cl. 9.3.1 and 9.20.1. Kindly confirm the recommended foundation type.	Geotechnical/soil investigation shall be performed by SI to establish the SBC of the soil. The SI shall carry out the soil investigation of the entire site, as per relevant Indian standards, before taking up the foundation work. The Foundation Design shall be done by SI based on and as per recommendations of the Soil Report.



## Section -3 Revised Pre-Qualification Criteria

Sr. No	Eligibility Criteria	Documents to be submitted
<p><b>1</b></p>	<p><b>Legal Entity</b></p> <p>A company registered under Indian Companies Act, 1956/2013 and subsequent amendments thereto</p> <p><b>OR</b></p> <p>A partnership firm registered under Indian Partnership Act, 1932.</p> <p><b>OR</b></p> <p>partnership firm register under LLP Act, 2008</p> <p><b>OR</b></p> <p>Consortium/Joint Venture (here in after referred as "JV") is also allowed. The consortium shall not consist of more than one company and shall be formed under a duly stamped consortium agreement. (Attach Proof). In a consortium, one of the partners shall be designated as a "Lead Partner". Consortium member shall be equally responsible and jointly and severally liable for the successful completion of the entire project. In case of any issues, Lead Partner shall be responsible for all the penalties and liabilities related with this project.</p> <p>The qualification as mentioned <b>at Section 3, clause 3.1, Consortium</b> of chapter "Terms of Consortium" needs to be complied by the consortium partner for undertaking civil and/or (MEP, Building Services).</p>	<p>Copy of Valid Registration Certificate</p> <p>Copy of Certificates of Incorporation</p> <p>In case of a consortium, a Consortium Agreement must be submitted, duly signed by the consortium members. Also, the legal entity clause applicable for both members of the consortium. Agreement must clearly specify the scope of each member and outline their roles and responsibilities Refer <b>(Section -12 As per Annexure-7)</b></p>
<p><b>2</b></p>	<p>The Lead Bidder must have minimum average annual turnover of Rs. 2000 crore, in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 as on 31st March 2022.</p>	<p>CA certified and audited Balance Sheet and Profit &amp; Loss statement for any three of last four audited financial years (2018-19, 2019-20, 2020-21, 2021-22).</p> <p>CA certificate mentioning turnover from the said business.</p>
<p><b>3</b></p>	<p>The Lead Bidder should have positive Net-worth in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21, and FY 2021-22 as on 31st March 2022.</p>	<p>CA certified and audited Balance Sheet and Profit &amp; Loss statement for any three of last four audited financial years (2018-19, 2019-20, 2020-21, 2021-22).</p> <p>CA certificate mentioning turnover from the said business.</p>

Sr. No	Eligibility Criteria	Documents to be submitted
4	<p>The Lead Bidder/Consortium partner/JV should have experience of built and implementation of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.</p> <p><b>Note:</b> For Self-built Data Center constructed by the bidder for 3rd party commercial use only will be considered as part of completed works. The bidder to submit board of director/statuary auditor/cost auditor &amp; client certificate (using the facility) confirming the value and quantum of the project and achieving the Tier III standards.</p>	<p>FOR Data Centre built for Client</p> <p>1. Copy of the Work order/Purchase Order</p> <p><b>AND</b></p> <p>Certificate of completion of the work from client or phase wise completion certificate from client.</p> <p>2. Uptime/TIA Certification</p> <p><b>Note:</b> In case, the Data Centre build for client did not opt the Tier III certification from any certified agency, the bidder should submit client certificate stating that the facility built for Tier III standards with number of racks and copy of work order stating built Tier III Data Centre.</p>
5	<p>During the last 07 years, the Lead Bidder/Consortium partner/JV must have experience of certified Tier-III/IV Data Centre from Uptime Institute or TIA-942 for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India as under.</p> <p><b>1. Civil work Experience:</b></p> <p>Single workorder consisting of building &amp; construction experience of Data Centre having minimum built up area of 3500 sq. meter.</p> <p><b>OR</b></p> <p>Two workorders consisting of building &amp; construction experience of Data Centre having minimum built up area of 2000 sq. meter</p> <p><b>AND</b></p> <p><b>2. Non-IT work Experience:</b></p> <p>Workorder for Data Centre consisting of SITC of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS</p>	<p>1. Copy of work order(s) / Purchase Order and Contract Agreement</p> <p><b>AND</b></p> <p>2. Certificate of timely completion of the work from client or phase wise completion certificate from client.</p> <p><b>OR</b></p> <p>2. Go Live or FAT certificates issued by the customer</p> <p>For self-built Data Centre, the bidder should submit the necessary documented evidence certifying the value of the Data Centre to meet the said criteria certified by board of director/statuary auditor/cost auditor &amp; client certificate (using the facility).</p> <p><b>Note:</b> In case, the Data Centre build for client did not opt the Tier III certification from any certified agency, the bidder should submit client certificate stating that the facility built for Tier III standards with number of racks and copy of work order stating built Tier III Data Centre.</p>

Sr. No	Eligibility Criteria	Documents to be submitted
	<p>System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System etc.</p> <p>Single order of value of INR 60 Crore or more.</p> <p><b>OR</b></p> <p>Two orders each having minimum value of INR 35 Crore or more.</p> <p><b>AND</b></p> <p><b>3. O&amp;M work Experience</b></p> <p>The Lead Bidder/Consortium partner/JV must have Data Centre O&amp;M work experience in the Civil and Non-IT domain as under.</p> <p>Single work order value of 100 Cr consisting of O&amp;M work experience for Civil &amp; Non-IT.</p> <p><b>OR</b></p> <p>Two work orders (one work order for O&amp;M of Civil works &amp; one workorder for O&amp;M of Non-IT works) having total combined value of 100 Cr.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li><b>1. In case of Single work order, the above credentials should be complied and clearly defined in Work order with respect to CIVIL, Non-IT and O&amp;M experience.</b></li> <li><b>2. For Self-built Data Center constructed by the bidder for 3rd party commercial use only will be considered as part of completed works. The Bidder to submit board of director/statuary auditor/cost auditor &amp; client certificate confirming the value and quantum of the project and achieving the Tier III standards.</b></li> </ol>	

Sr. No	Eligibility Criteria	Documents to be submitted
6	<p>The Lead Bidder/Consortium partner/JV should be registered with Council of Architect or should have deployed Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience.</p>	<p>Copy of registration certificate and Declaration on Bidder's letterhead stating compliance of this condition.</p>
7	<p>The Lead bidder/consortium partner/JV jointly must have on its payroll at least 150 Professionals in the Civil Construction domain, Data Centre Electrical, Mechanical, Structural drawing, Cooling, building architecture etc. and other utility Services and having the prior experience in providing the Data Centre Infrastructure maintenance services as on bid submission date. Bidder Must have at least following technical manpower strength on its payroll:</p> <p><b>i.</b> At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p><b>ii.</b> At least 10 qualified professionals having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+ years of relevant experience)</li> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+ years of relevant experience)</li> <li>• Principal Plumbing Consultant (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul> <p><b>iii.</b> At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll</p> <p><b>iv.</b> At least 02 resources should be</p>	<p>HR certificate on company's letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate</p> <p><b>Note: (for Point no: iv &amp; v) The Lead bidder/consortium partner/JV partner may onboard the following resources prior to contract signing between the selected bidder and purchaser.</b></p> <p><b>iv. At least 02 resources should be CDCP/CDCS/CDCE certified.</b></p> <p><b>v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification</b></p>

Sr. No	Eligibility Criteria	Documents to be submitted
	CDCP/CDCS/CDCE certified. v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification vi. At least 05 Project management professional with PMP or Prince-2 certified	
8	The Lead Bidder & Consortium partner / JV should not have been blacklisted by any Government and Public Sector Unit during the last 3 years.	The Lead Bidder & Consortium partner / JV partner shall submit declaration on their letterhead in this regard as per format given in this corrigendum.
9	The Lead Bidder should have a local presence of Office in Gujarat and level 3 support (highest escalation) locally in India. And Lead Bidder should be setting up one Project site office in Gandhinagar for day-to-day Project Management & Monitoring activity during entire project life cycle (till Go Live phase)	The Lead Bidder shall submit declaration on their letterhead in along with necessary address proof.  In case of no office in Gujarat on bidding date, Bidder needs to submit undertaking if after getting award of order, he shall setup Support center in Gujarat in 30 days' time.
10	Tax registration and clearance The Lead Bidder & Consortium partner/JV partner should furnish following information 1. COI 2. MOA & AOA 3. GST No Income Tax / Pan Number.	Valid documentary proof of: 1. Memorandum of Consortium & Articles of Consortium 2. GST registration document. 3. Income Tax registration / PAN number
11	The Lead Bidder/Consortium partner/JV must have either of two from following Certificate at the time of bidding, a. ISO 9001:2015 b. ISO/IEC 20000 c. ISO/IEC 27001:2013	Copy of Valid Certificates
12	The Lead Bidder & Consortium partner /JV from a country which shares a land border with India will be eligible to bid in this tender only if they are registered with Competent Authority as per OM No. 6/18/2019-PPD dated 23rd July 2020 issued by Department of Expenditure, GoI.	Self-certification from bidder as per Annexure H of the RFP.

Sr. No	Eligibility Criteria	Documents to be submitted
13	<p>Mandatory Undertaking/Declaration</p> <p>The Lead Bidder &amp; Consortium partner / JV should:</p> <p>a) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended.</p> <p>b) not have a conflict of interest in the procurement in question as specified in the bidding document.</p>	<p>A Declaration letter as per Annexure-B1: Self-Declaration of the corrigendum.</p>

**\*Note:**

1. **Definitions of Group of Company - A group of companies is an economic entity formed of a set of companies which are either companies controlled by a same company compliance as defined in Indian Companies Act, 1956/2013 and subsequent amendments thereto.**
2. **In case of NDA, copies of NDA agreement (along with masked copies of work order) may be provided. The Bidder needs to submit (on its letter head) the scope of work, Bill of Materials and value of the contract/order duly signed by its Statutory Auditor/Cost Auditor/Board of Director.**
3. **In Case of single bidder, the bidder may use the credentials of bidder's Group Company.**
4. **In case of single bidder, using the credentials of group company, the bidder must submit declaration from Board of director/statuary auditor/cost auditor certificate showing the common shareholding of the promoters\* in the bidding entity and all such entities whose credentials are being used by the bidder.**  
**AND**  
**An undertaking and declaration by the promoter(s)\*/board of directors of such common entities as per the format annexed with this corrigendum. (Please refer the Section 10 of this corrigendum).**
5. **\*Promoter(s): - Refers individual and his/her relatives as defined under the provisions of the companies act 2013 and the rules notified there under.**
6. **All the supportive documents and undertaking (as per the Annexures of the RFP) appropriate to Pre-qualification and Technical qualification must be submitted in line with revised Pre-qualification and Technical qualification criteria of this corrigendum.**
7. **In case of single bidder, the lead bidder shall be read as a single bidder and in case of JV the lead bidder shall be read as a JV partner.**

- 8. In case of JV, necessary legal and supporting documents to be submitted.**
- 9. In case of JV, using the credentials of JV partners, the JV must submit declaration and undertakings of respective JV partners for using their credentials and owning whole and sole responsibility and liabilities under this RFP.**
- 10. In case of consortium, lead bidder shall be responsible to submit the bid on GeM portal. Failing to which will lead to disqualification.**

### **3.1 Terms of Consortium**

In addition to single bidders with relevant experience in Design & Build of Tier-III Data Centers, any bidder having relevant experience in design and build of Tier III Data Center and interested to bid but not able to meet above pre-qualification criteria can form a consortium with another firm jointly fulfilling the following conditions. The consortium shall not consist of more than one company.

- The Lead Bidder & Consortium partner shall be liable for adherence to all terms & conditions of the RFP document.
- The Consortium will draw upon human resource, experience and technical strength for serving particular purpose(s) during implementation & operation and maintenance.
- The Technical Bid shall include exact details in this regard, so that an Consortium is not artificially created only to qualify / improve the technical score in the bid.

Consortium formation:

- In case of Consortium the lead bidder must be clearly specified in the bid.
- The Associate Bidder cannot be associated with more than one Lead Bidder for this project.
- The Consortium shall have a valid Memorandum of Understanding (MOU) / agreement among all the members signed by the Authorized Signatories of the companies dated prior to the submission of the bid. The MOU / agreement shall clearly specify the each member and outline the roles and responsibilities of each member in a detailed manner as given below.

S. No.	Project Component/Activity	Roles & Responsibility of Lead Bidder	Roles & Responsibility of Associate Member of Consortium
1			
2			
3			
4			

- The lead bidder along with Consortium partner shall jointly be responsible for the project execution.
- The MOU / agreement shall be exclusively for this project and shall specify explicitly that the Lead Bidder along with consortium partner shall be responsible for the execution of this project.

- It should be expressly agreed by the members that customer may directly procure from members the respective scope of services as detailed in the MOU / agreement which shall be governed under separate contractual arrangements. However, Lead Member being a system integrator shall be responsible for the overall vendor management, resource augmentation by the members, services and performance as under the Service Level Objectives for the project.
- For the purpose of this Agreement, the RFP Document and the Contract, the Lead Member shall be the single point of contact for the customer, shall have the overall responsibility of the management of the Project and shall have single point responsibility for ensuring that the member of the consortium is complying with the terms and conditions set out in the Contract and the RFP Document.
- All instructions/communications from Customer / Consultant to the Lead Member shall be deemed to have been duly provided to the member of the consortium.
- Name and specimen signature of the person who is authorized to sign the tender document(s) on behalf of the Consortium should be clearly identified in the bid proposal.
- It should also be agreed that Lead Member shall, on behalf of the consortium shall submit the Bid and performance security as specified by Customer in the RFP document.
- It should be further agreed that this MOU / consortium agreement shall be irrevocable and shall continue to be enforceable on all the members till the same is discharged by the Customer OR shall terminate upon occurrence of any of the events listed below: -
  - The bid submitted to the Customer has been rejected or expires by its own terms as of a given date unless such term is extended by mutual consent of both the Parties,  
or.
  - The Customer abandons the project before the conclusion of the contract with the Lead Bidder,  
or;
  - Either of the Parties has been declared insolvent by a Court or Competent jurisdiction,  
or ;
  - This agreement can also be terminated before the submission of the bid proposal.
    - by mutual agreement between the parties provided there are no liabilities to be adjusted between the Parties in which event upon completion of such adjustments between the Parties and after full payment has been made pursuant thereto, or
    - If parties are not able to agree upon the terms of the bid.
    - In case of any issues, Lead Partner shall be responsible for all the penalties and liabilities related with this project.



## Section -4 Revised Technical Qualifications Criteria

Sr. No	RFP Evaluation Criteria	Max Marks	RFP Criteria																
1	<p>Capability of Lead Bidder/Consortium partner/JV partner to execute certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks project</p> <p><b>Note: Self-build Data Center constructed by the Lead bidder/Consortium partner/JV partner for 3rd party commercial use only will be considered as part of completed works. The Bidder to submit board of director/statuary auditor/cost auditor &amp; client certificate (using the facility) confirming the value and quantum of the project and achieving the Tier III standards.</b></p>	20	<p>Lead Bidder/Consortium/JV should have experience in setting-up Data Centre Infrastructure in India, quantified in terms of number of projects will be evaluated. Only Projects constructed and commissioned in the last 7 years from the date of Release of RFP will be considered.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Project Type</th> <th style="width: 30%;">No. of Projects (having &gt;=100 rack)</th> <th style="width: 30%;">Marks</th> </tr> </thead> <tbody> <tr> <td>Tier III/Rated III or More</td> <td style="text-align: center;">&gt;=3</td> <td style="text-align: center;">15</td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> <td style="text-align: center;">12</td> </tr> <tr> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">10</td> </tr> </tbody> </table> <p>* 05 Marks will be given extra for Tier IV Data Centre credential i.e., 05 marks for one Tier IV DC. These marks will be added in Marks secured by bidder as per above table.</p> <p>Bidder needs to submit Purchase order along with Project Phase wise Completion Certificate from Client  <b>AND</b>                      Uptime/TIA Certification</p> <p><b>*Note:</b>  <b>1. If the data Centre (Design Certified) is not certified by Uptime Institute Tier III or TIA-942 Rated III (Design Certified), the bidder must produce the documentary proof of achieving the Tier III standards by board of director/statuary auditor and client certificate (using the facility) confirming the value and quantum of the project.</b></p>			Project Type	No. of Projects (having >=100 rack)	Marks	Tier III/Rated III or More	>=3	15		2	12		1	10		
Project Type	No. of Projects (having >=100 rack)	Marks																	
Tier III/Rated III or More	>=3	15																	
	2	12																	
	1	10																	
2	<p>The Lead Bidder/Consortium partner/JV Partner's experience in certified Tier-III/IV Data Centre from Uptime Institute or TIA-942 for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India in last 07 years in following domain:</p>	30	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Project Type</th> <th style="width: 30%;">No. of Projects</th> <th style="width: 30%;">Marks</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Civil work Experience:</b></td> </tr> <tr> <td>Having built &amp; constructed project of minimum 5000 sq. mtr built up area</td> <td style="text-align: center;">1</td> <td style="text-align: center;">10</td> </tr> <tr> <td rowspan="2">Having built &amp; constructed project of minimum 3500 sq. mtr built up area</td> <td style="text-align: center;">&gt;=2</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">8</td> </tr> </tbody> </table>			Project Type	No. of Projects	Marks	<b>Civil work Experience:</b>			Having built & constructed project of minimum 5000 sq. mtr built up area	1	10	Having built & constructed project of minimum 3500 sq. mtr built up area	>=2	10	1	8
Project Type	No. of Projects	Marks																	
<b>Civil work Experience:</b>																			
Having built & constructed project of minimum 5000 sq. mtr built up area	1	10																	
Having built & constructed project of minimum 3500 sq. mtr built up area	>=2	10																	
	1	8																	

Sr. No	RFP Evaluation Criteria	Max Marks	RFP Criteria		
	<p><b>Civil work Experience:</b> Building &amp; Construction work of Data Centre</p> <p><b>AND</b></p> <p><b>Non-IT work Experience:</b> Data Centre consisting of SITC of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System.</p> <p><b>Note:</b> <b>1. Only Projects constructed and commissioned in the last 7 years from the date of Release of RFP will be considered.</b></p> <p><b>2. Self-build Data Center constructed by the Lead bidder/Consortium partner/JV partner for 3rd party commercial use only will be considered as part of completed works. The Bidder to submit board of director/statuary auditor/cost auditor &amp; client certificate (using the facility) confirming the value and quantum of the project and achieving the Tier III standards.</b></p>		Having built & constructed project of minimum 2000 sq. mtr built up area	>=2	8
			<b>Non-IT work Experience</b>		
			SITC of Non-IT Project having value of 80 Cr.	>=1	10
			SITC of Non-IT Project having value of 60 Cr.	>=1	8
			SITC of Non-IT Project having value of 35 Cr.	>=2	8
			<p><b>O&amp;M Experience in Civil and Non-IT</b> -Single work order having combined work of O&amp;M for CIVIL and Non-IT OR Two work orders (one for O&amp;M-Civil and one for O&amp;M-Non-IT)</p>		
			Work order having value of 130 cr.	>=1	10
			Work Order(s) having Value of 100 Cr.	>=1	8
			<p>Bidder needs to submit Purchase order along with Project Phase wise Completion Certificate from Client AND Uptime/TIA Certification</p>		
			<p><b>Note:</b> *Marks under this section is capped at 30. In any combinations, the Marks shall not be given more than 30.</p>		
3	Lead Bidder/Consortium/JV should have Technical Resource Capabilities jointly (on company payroll)	15	Resource Type	No. of Resource	Marks
			Total Technical resources- B.E/B.Tech/Diploma (as mentioned in pre-qualification)	>=200	5
				>=150	3
				>=100	2
			Civil Engineer having BE/B.Tech degree	>=15	2

Sr. No	RFP Evaluation Criteria	Max Marks	RFP Criteria		
			Electrical Engineer having BE/B.Tech degree	>=15	2
			Mechanical Engineer having BE/B.Tech degree	>=15	2
			Resources with CDCP/CDCS/CDCE certification	>=2	2
			No. of Architects (B. Arch.) having 10+ years of relevant experience	>=2	2
			<p>The Bidders shall submit HR declaration consisting of list of employee details with respect to above mentioning Name, Designation, Payroll, Employee ID, Education detail, Certificate, Total years of experience etc. on bidder's Letter head.</p> <p>Copy of the Certificates should be provided along with the HR letter.</p>		
4	Technical Solution and Presentation given by Bidders	35	<p>Based on Technical Solution submitted in this Bid, Bidder shall be requested to make Technical Presentation to the Bid Evaluation Committee appointed by DST/GIL. The Bid Evaluation Committee (BEC) shall evaluate the presentation based on the following criteria:</p> <ol style="list-style-type: none"> <li>1. Demonstration of understanding regarding the project scope consisting of, but not limited to, Detailed Project plan, Building Construction plan, Interior &amp; Exterior Layout/Design plan, Technical Design and Solution, timeline for each phase: 10 marks</li> <li>2. Detailed approach &amp; methodology to meet the project requirement: 15 Marks</li> <li>3. Resource deployment plan along with their Profiles, Competency &amp; relevant Experience: 10 Marks</li> </ol>		
<b>Total Marks</b>		<b>100</b>			

## **Section -5 Additional Clause in RFP volume 1 section 4**

### **4.18 Performance Bank Guarantee**

- The successful bidder shall at his own expense, deposit with PURCHASER, within 14 days from the date of the issuance of LOI (done through issuance of the Purchase Order/Letter of Acceptance), an unconditional and irrevocable Performance Bank Guarantee (PBG) from all Nationalized Bank including the public sector bank or Private Sector Banks authorized by RBI or Commercial Bank or Regional Rural Banks of Gujarat or Co-Operative Bank of Gujarat (operating in India having branch at Ahmedabad/Gandhinagar) as per the G.R. no. EMD/10/2020/38780/DMO dated 20.04.2020 issued by Finance Department or further amendment issued by Finance department time to time as per the format given in this Bid Document, payable on demand, for the due performance and fulfilment of the contract by the bidder. All the performance bank guarantee should be encashable or payable at Gandhinagar.
- The successful bidder shall require submitting the 2 separate PBGs for Implementation and Operation & Maintenances period. This Performance Bank Guarantee (PBG) will be for an amount equivalent to 10% of CAPEX and O&M value. All charges whatsoever such as premium, commission, etc. with respect to the Performance Bank Guarantee shall be borne by the bidder.
- The Performance Bank Guarantee shall be valid for the 180 days beyond the term of the resultant Agreement (which applicable to project implementation period and Operation and Maintenance period) and shall be renewed and maintained as necessary by the MSI for the term of the resultant Agreement, and extensions if any.
- The Performance Bank Guarantee may be discharged/ returned by PURCHASER upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.
- In the event of the Bidder being unable to service the contract for whatever reason, PURCHASER would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of PURCHASER under the Contract in the matter, the proceeds of the PBG shall be payable to PURCHASER as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. PURCHASER shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.
- PURCHASER shall also be entitled to make recoveries from the Bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

## Section -6 Annexure 1 Additional Land Scope of Work

### Brief About Scope:

DST/GIL is in process to perceive additional land, which will be utilized preliminary for parking staff vehicles, landscaping & some portion will be kept reserve for future expansion provision if any. Bidder to study local guideline for land utilization & design, built below scope.

Sr. No.	Name of products/ services
1	Soil filling and surface making activities
2	Required wall construction to cover for additional space adjacent to data center building
3	Road should be made from Paver block
4	Electric Fencing on the wall
5	Shed on the vehicle placing area
6	Solar Panel
7	Solar Invertor
8	Lightning pole with light
9	Gardening work
10	Electrical work, earthing and cabling work
11	CCTV system
12	Cage for the DG & transformer placing area
13	Color on the wall and finishing work
14	Drainage, Strome water work in the parking area

Require Soil filling, Surface preparation is part of bidder scope only. All require drainage Line, Strome water line etc. to be considered while designing parking & landscaping. Proper underground trench to be consider for water & power line. Overhead or surface laying waterline, power connection line not allowed. All the require earthing, earth pit to be considered for parking shed, as Solar PV panel will require to place at the parking rooftop.

Perimeter Wall construction along with electric fencing over to be considered while designing perimeter wall. Sufficient wall height to be considered as per Data Centre physical security prospective. Perimeter wall finishing, wall painting require to match aesthetically with Data Centre building.

While designing parking system, few parking slot require to kept reserve & demarcation separately for visitor vehicle. Approach road for parking area to be consider with Concrete cement road & require speed limit bump & navigation banner. Separate In entry & out entry to be consider for parking area. Automated boom barrier can be considered for in & out entry of parking plaza. Parking to be considered as surface parking with covered shed. At the rooftop of car parking, solar PV panel provision to be considered. Few parking slots will be provision with EV charging point for Govt vehicle, with lockable socket provision to avoid misuse of same. The solar Inverter panel to be place at second floor i.e., at utility floor only.

Bidder to consider proximity of car parking to data center perimeter building with physical barriers to prevent vehicles from driving closer.

Steel Fabricated gate to be considered at entrance & exit of the parking plaza. Bidder to submit layout drawings to committee for approval. All services drawings require to be integrated and all services plotted on single master drawing.

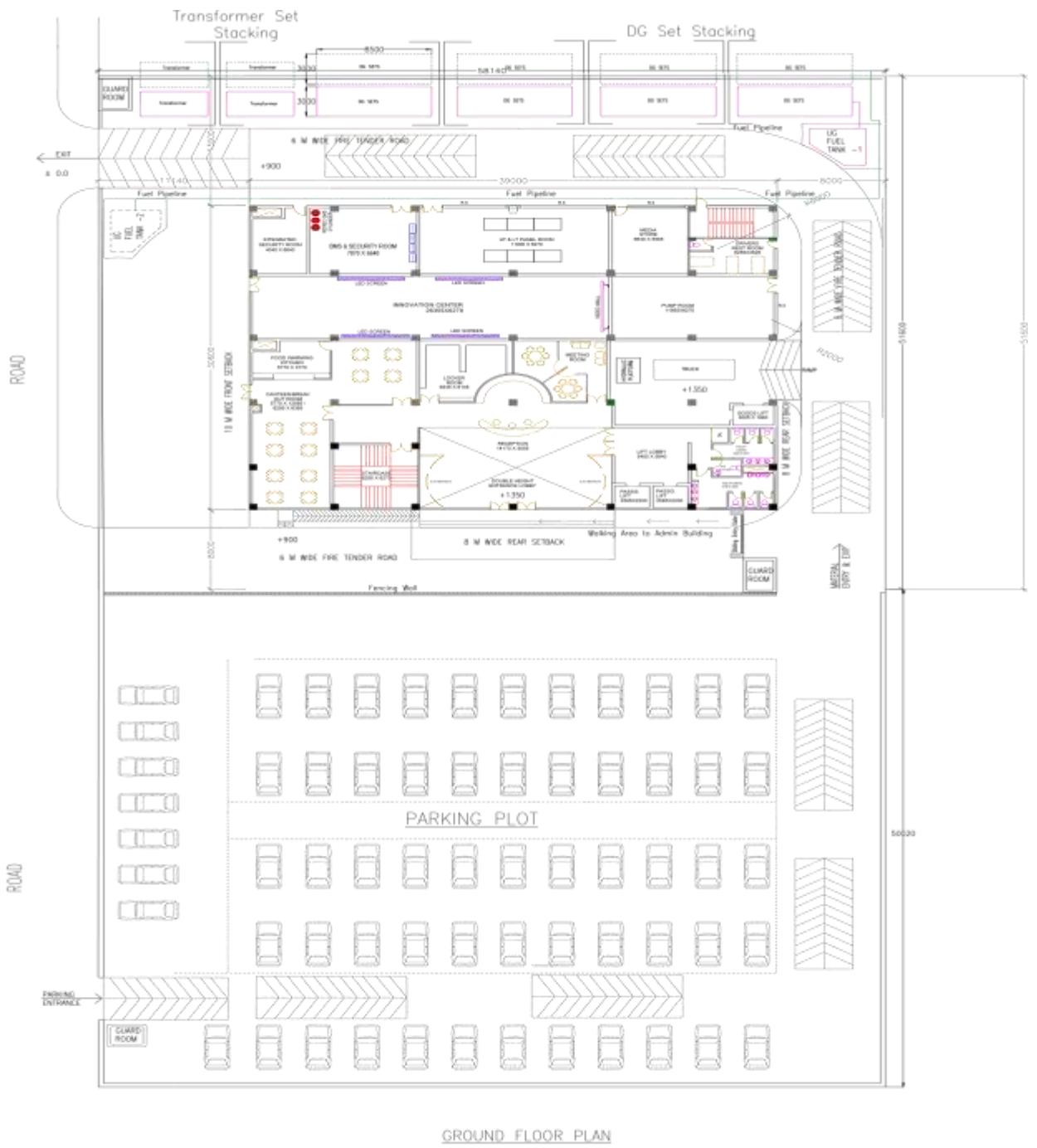
Illumination of parking area require to be considered with energy saving concept like sensor base for ON/OFF purpose, also perimeter Illumination require to be considered to be work on sensor base. All the non-essential area illumination like parking spot lighting, perimeter lighting, EV charging point, garden/ landscaping bollard fitting etc. to be considered on Solar power only.

For landscaping bidder to considered specification of horticulture provided in this RFP. require garden watering line to be considered & same will follow separate physical path than power cable trench path.

Parking plaza & other open/ landscape plot require to be cover under CCTV monitoring. CCTV cameras require to cover perimeter wall as well for better control on trespass if any. PTZ camera to be considered at the gate entry/ exit point.

Caging for potentially hazardous area to be considered i.e., transformer yard, DG yard, Underground HSD tank. Require danger signage to be put at all relevant area.

Continuous monitoring & Vigilance is in the bidder's scope only. Bidder to consider gardener, require resource to maintain same.



GROUND FLOOR PLAN

**Note: This is an indicative Layout of parking. Bidders to design as per client requirement.**

## Section -7 Annexure 2 Interior of NOC/ SOC/DCIM/ Innovation Centre Room

<b>Interior of NOC/ SOC/DCIM/ Innovation Centre Room</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	Scope	<p>1. The Scope of work includes the specifications of control room interiors &amp; consoles for control room project.</p> <p>2. Control room is a significant place where critical operations / monitoring takes place, it is imperative that it is designed properly in terms of aesthetics, safety, ergonomics and functionality. Various aspects shall be considered while designing control room area to create ideal workplace, considering physiological aspects such as line of sight and field of vision and cognitive factors such as concentration and perceptivity as per ISO 11064.</p> <p>3. The scope of the project includes designing; engineering, supply &amp; installation of 24X7 mission critical control Centre interiors. Being a project of national repute this state-of-the-art facility &amp; all its components like ceiling, flooring, paneling/partition, glass partitions, control desks, ceiling light &amp; luminaire's electrical etc. shall look integrated and therefore it shall be treated as a part of one single solution i.e., Control room interior solution provider (CRISP) Eligibility for the CRISP will include having carried out successfully completed a Control room of 80% of the specified area in the building, or 2 projects of 60% of the specified area in the Gujrat SDC Building) Main bidder to submit MAF (Manufacturer's Authorization Form) from professional Control Room Interior Solution provider.</p> <p>4. To ensure an integrated solution, to qualify as per the international control room design &amp; safety norms; main bidder shall bring one single professional control room interior solution provider on board with an experience of at least twenty control rooms interiors along with control desks. Corresponding purchase orders/work orders and their appreciation/completion letters to be submitted along with the bid.</p> <p>5. It is mandatory for the main bidder that the control room interior solution provider supplies all elements &amp; executes all the activities at site like ceiling, flooring, control desks, paneling, partitions &amp; illumination to avoid interface &amp; quality related issues.</p> <p>6. All the certificates and reports mentioned shall be submitted along with the technical bid.</p> <p>7. In broad, the scope of work and supply shall consist of the following parts</p> <ol style="list-style-type: none"> <li>a. Interior Design, engineering of Control room.</li> <li>b. All related services for supply, installation &amp; testing.</li> <li>c. Ergonomic compliance report as per ISO 11064.</li> </ol>
2	Submittals	<p>a. The project demands for a contemporary, aesthetically appealing, ergonomically designed, safe and 24X7 working facility. Conventional wooden cladding, Gypsum, Aluminum composite panels, Laminates, Fabric, Paint, Plaster of Paris (for Control room area) are prone to damages &amp; ageing. These components shall not be used to ensure maintenance free working environment. Control room interior solution provider to submit an undertaking on letterhead to comply the same.</p> <p>b. Illumination: - Control room illumination shall be designed as per ISO 11064 norms. Valid lux level report to be submitted along with the bid.</p>



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3	Design Criteria	The metal ceiling, metal paneling and partition shall be of modular design, facilitating future equipment retrofits and full reconfigurations without requiring any major modification to the structure.
4	Quality Criteria	The critical components of the control room i.e., designer metal ceiling, carpet/laminated flooring, modular metal wall paneling/partitions shall not emit formaldehydes, TVOC beyond permissible limits i.e., 9 µg/m <sup>3</sup> , 0.22 mg/m <sup>3</sup> respectively. This is to ensure healthier air quality for the operators. Therefore, the control room interior shall be green guard gold certified (Modular metal ceiling, Acoustic flooring & Modular metal wall paneling) from ISO by SIS (standard syndicate of international system) . Valid certificate to be submitted along with the technical bid. The Proposed console shall comply with the stringent/advanced version of BIFMA X 7.1 standard. The Console (open plan) shall not emit TVOC (A), Formaldehyde, i.e., 152 µg/m <sup>2</sup> *hr, 6.2 µg/m <sup>2</sup> *hr respectively. This is to ensure healthier air quality for the operators. Proposed console shall be green certified from IGBC / GRIHA. Valid certificate to be submitted along with the technical bid. The control room solution provider shall have had this certificate for at-least four years prior to April 1st, 2022. Valid certificates shall be submitted along with bid.
5	Modular rigid PVC metal paneling	<p>a. Factory made removable type self inter lockable metal panels with front sheet of preformed textured hot dip galvanized sheet with rigid polyvinylchloride (PVC) film on one side and on the other side a coating to avoid rust (sheet thickness 0.9 mm &amp; PVC coating at least 60 microns). The back cover of the panel shall be made up of 1.2 mm thick CRCA/GI sheet of approved colour. The paneling design shall comprise of specially designed combination of perforated and non-perforated panels through CNC laser cutting, bending &amp; punching. Panels shall be designed to achieve shape and design as per the design consultant and shall be fixed using GI/CRCA hook fitting on structure. Overall system thickness for paneling &amp; partition shall be 70mm to 150mm.</p> <p>b. Panel shall comprise of perforation for making the cladding and partitions acoustically sound.</p> <p>c. Tiles Perforation – To achieve acoustics without deteriorating the aesthetical appeal of the control room it is necessary that the wall paneling shall have micro-perforations (less than 1.8mm diameter each) all over the surface with a density of 5000 holes per square feet. UL audit certified design feature on modular wall paneling tile having clean perforations and providing smooth finish on front fascia of tiles. The tile shall have 5000 holes per square feet on front side of the tile. Valid ISO affiliated labs audit certificate to be submitted along with the technical bid.</p> <p>d. As per design, panel shall comprise of perforation for making paneling and partitions acoustically sound. Acoustic grade fire retardant fabric (minimum 1mm thick) will be fixed (on the back side of perforated tiles) at some parts of the control room facility.</p> <p>e. There shall be possibility of wide variety of colours and images to be used on the wall elements to give the aesthetic and state of the art look to the control room interior.</p> <p>f. Panel design to support proper integration of large video screen.</p> <p>g. Gluing, screwing, ACP (Aluminium composite panels), Paint, Fabric, Gypsum, Wooden laminates shall be deemed unacceptable in control room interior.</p>

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		<p>h. Structure shall allow uninterrupted flow of wires/cable/tubes of maximum diameter 25mm.</p> <p>i. Panel shall be designed in such a manner that it takes care of undulation of walls and gives perfect flat surface finish and compile easy service &amp; maintenance procedure.</p> <p>j. To provide acoustically superior environment and ensure proper attenuation of airborne sound, it is necessary that the sound transmission class (C) value of wall paneling, and partition shall be 35 (According to IS: 8225-198, IS0: 11654, test report to be submitted along with the technical bid.</p> <p>k. The modular metal paneling shall comply to the lead-free directive to ensure restriction of hazardous substances so that the final product does not contaminate the environment. The final product i.e., modular metal paneling does not contain hazardous substances and we give a healthy life to our coming generations it is necessary that the modular metal paneling system shall be RoHS certified/tested (SIS). Valid certificate/test report to be submitted along with the technical bid.</p> <p>l. From fire safety point of view the metal wall paneling tiles shall be class A fire rated as per the norms of comparative measurements of surface flame spread and smoke density measurements with that of select grade red oak and fiber-cement board surfaces under the specific fire exposure conditions. The proposed wall paneling tiles shall be DIN EN 13964 certified/tested for surface spread of flame and smoke generation. This is mandatory to ensure that the materials used in the interiors do not provoke fire. Valid certificate/test report to be submitted along with the technical bid.</p> <p>m. Seismic safety of user &amp; control room equipment is a prime concern area. The metal paneling shall sustain the seismic vibrations as per design spectrum for zone 4 or better vibrations. The test shall be carried out by authorized government agency. Test Report to be submitted along with the technical bid.</p> <p>n. The wall paneling shall be robust &amp; strong enough to sustain the routine loads/minor impacts of typical control room environment. The wall paneling/partition structure shall have UL audit certified feature of Load bearing capacity of 300 Kgs to hold any display unit on clamp having minimum length of 750mm. Valid UL audit certificate to be submitted along with the technical bid.</p> <p>o. As control room is a mission critical area and in an unlikely case of damage to the existing wall paneling tiles the same shall be replaceable within 20 seconds and thereby preventing loss of time of operators and ongoing operations. ISO by SIS audit certified feature of modular wall paneling tile having secure locking arrangement for equidistant mounting. Locking arrangement enables easy replacement without using any tool. The feature shall provide easy flexibility of locking all tiles in one column through gravity. Valid ISO by SIS audit certificate to be submitted along with the technical bid.</p> <p>p. Design</p> <p>i. The cladding panels shall be made up of combination of two sheets locked and riveted together and polystyrene shall be used as infill to achieve strength and acoustics. The front tile (PVC pre-coated metal sheet) shall be perforated/ non-perforated as per the design requirement and the back tile (Powder coated 0.9mm GI steel sheet and powder coating thickness 60 to 80 microns) shall be</p>

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		<p>designed in such a manner that it fits on the back portion of the front tile. Once the tiles are assembled then these will be riveted. These tiles shall be bent through CNC, machine punched &amp; laser cut to achieve perfect accuracy.</p> <p>ii. Structure shall be made from modular, heavy-duty powder coated GI frame (minimum sheet thickness 1mm) and shall allow uninterrupted flow of wires/cable/tubes of maximum diameter 25mm.</p> <p>iii. Structure shall be securely connected from wall, roof and floor. It shall be made up of minimum 1mm thick vertical slotted rolled C sections (Upright) and horizontal rolled 'C' connectors. Grid of desired dimension shall be formed by vertical and horizontal sections having 20 to 50mm pitch.</p> <p>q. Surface Finish</p> <p>r. For panels</p> <p>1. Front Panel: PVC pre-coated GI sheet (sheet thickness: 0.9 mm and PVC coating: 60 to 80 microns)</p> <p>2. Back Cover: Powder coated GI steel sheet. (Sheet thickness: 0.6mm)</p> <p>ii. Rigid PVC / Panel material shall provide better thermal and electrical insulation. It shall be non-reflective/glare free and be eligible for food contact.</p> <p>iii. For Structure</p> <p>1. Powder coated GI steel sheet. (Sheet thickness minimum 1.0mm with powder coating)</p> <p>2. The metal sheet shall have possibility of being formed mechanically per the specific needs of the project.</p> <p>s. Material Selection</p> <p>i. Available Width- 100mm to 1800 mm (in multiples of 100 &amp; 150mm).</p> <p>ii. Available Height- 100mm to 600mm (in multiples of 100 &amp; 150mm).</p> <p>iii. Thickness- minimum 0.9 mm for perforated tiles with acoustic fleece without back cover.</p> <p>iv. Minimum 1.8 mm for perforated/non-perforated tiles with back covers.</p> <p>t. Material Testing/Certification: (Certificate to be submitted along with the technical bid)</p> <p>i. PVC pre-coated sheet:</p> <p>1. Fire rating and Low flame spread: DIN EN 13964 ISO 9001:2015 by SIS</p> <p>ii. Core material (compressed polystyrene):</p> <p>1. Acoustic test:</p> <p>iii. Powder coating</p> <p>1. Adhesion test:</p> <p>2. Impact resistance test:</p> <p>3. Conical mandrel test:</p> <p>4. Salt spray test:</p> <p>5. Resistance to humid atmosphere test as per</p> <p>6. Green Pro/Member of IGBC/ Green Pro GPDI 2504</p> <p>7. Tolerance: TAIM</p> <p>u. Component Specification</p> <p>i. Floor Mounting</p>

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		<p>1. 'I' section made from pre-welded of minimum 2mm thick C channels, having minimum height of 150mm. This I section shall be firmly weld on 3mm thick grouting plate.</p> <p>2. This assembly shall be grouted on the false floor with the help of M8/10 anchor fasteners.</p> <p>3. These floor mountings shall be the base support to the vertical uprights spaced at a center-to-center distance of 1200mm maximum.</p> <p>4. Bidder shall ensure proper marking and levelling before proceeding with any floor grouting.</p> <p>ii. C Section (Upright) fixing</p> <p>1. 58mm wide slotted rolled C section (UPRIGHT) (1 to 1.6 mm thick CRCA steel sheet). Maximum single piece length shall not exceed 2450mm.</p> <p>2. All sections will be dual slotted with 20 to 50 mm pitch.</p> <p>3. These uprights shall be mounted over the floor mountings and shall be connected by C connectors made up of 1.0mm to 1.6mm thick CRCA steel sheet 'C' sections.</p> <p>4. The installation to be carried out with Uprights spaced at 1200 mm (center to center) securely fixed to the false floor by means floor mountings.</p> <p>5. The uprights shall be firmly held with L-shaped wall mounts made up of minimum 1.6mm thick CRCA steel sheet duly powder coated.</p> <p>6. The L clamp and the upright will be bolted together with M6 bolts</p> <p>iii. End Cap</p> <p>1. 0.75mm thick PVC coated GI tile; (similar to panel tile) shall be bolted on the extreme end-uprights, corners to hide the grid structure.</p> <p>v. Panel</p> <p>i. The panels shall be hooked on the uprights.</p> <p>ii. Panels shall have metal hooks</p> <p>iii. The hooks of the panels shall have a length of minimum 30mm. Tolerances and quality requirements according to TAIM, DIN EN 13964. So that these panels are firmly held on the uprights.</p> <p>iv. The panel shall have hook in arrangement (With gravity lock).</p> <p>w. Door Profile</p> <p>i. Door frame shall be fixed with these profiles only to have proper integration of doors with the overall system.</p> <p>x. Feature</p> <p>i. Raw material for tile &amp; powder coating shall not affect environment.</p> <p>ii. Colour shall not fade over 5 years</p> <p>iii. No sagging</p> <p>iv. Easy and quick installation</p> <p>v. Low cleaning effort</p> <p>vi. Vendor to demonstrate one portion at wall paneling &amp; ceiling at their premises before dismantling &amp; shipping to site. In short, a FAT (Factory acceptance test) to be carried out at vendors works for ceiling &amp; paneling</p> <p>vii. 100 % modular design. At site chipping work is allowed.</p> <p>viii. The tile shall be bend resistant.</p>

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6	Curve modular rigid PVC metal paneling	<p>a. The material of construction and technical specification shall remain the same as per modular rigid PVC metal paneling (wall finishing - Sr No. 1 modular rigid PVC metal paneling) however, the shape shall be a Fragmented curve to provide more space for mounting of the LED. Paneling's curve shall be achieved by curved tiles only. Curvilinear arrangement using straight tiles shall be deemed unacceptable.</p> <p>b. Factory made removable type self inter lockable metal panels with front sheet of preformed textured hot dip galvanized sheet with rigid polyvinylchloride (PVC) film on one side and on the other side a coating to avoid rust (sheet thickness 0.5mm &amp; PVC coating at least 60 microns). The back cover of the panel shall be made up of 0.5mm thick GI sheet of approved colour. The paneling design shall comprise of specially designed combination of perforated and non-perforated panels through CNC laser cutting, bending &amp; punching. Panels shall be designed to achieve shape and design as per the design consultant and shall be fixed using GI hook fitting on structure. Overall system thickness for paneling shall be 60mm to 150mm and for partition shall be 70mm to 150mm.</p> <p>c. Structure shall allow uninterrupted flow of wires/cable/tubes of maximum diameter 25mm.</p> <p>d. Panel shall be designed in such a manner that it takes care of undulation of walls and gives perfect flat surface finish and compile easy service &amp; maintenance procedure.</p> <p>e. The modular metal paneling shall comply to the lead-free directive to ensure restriction of hazardous substances so that the final product does not contaminate the environment. The final product i.e., modular metal paneling does not contain hazardous substances and we give a healthy life to our coming generations it is necessary that the modular metal paneling system shall be RoHS certified/tested (from SIS). Valid certificate/test report to be submitted along with the technical bid.</p> <p>f. From fire safety point of view the metal wall paneling tiles shall be class A fire rated as per the norms of comparative measurements of surface flame spread and smoke density measurements with that of select grade red oak and fiber-cement board surfaces under the specific fire exposure conditions. The proposed wall paneling tiles shall be Class A certified/tested as per ISO (from SIS) for surface spread of flame and smoke generation. This is mandatory to ensure that the materials used in the interiors do not provoke fire. Valid certificate/test report to be submitted along with the technical bid.</p> <p>g. Seismic safety of user &amp; control room equipment is a prime concern area. The metal paneling shall sustain the seismic vibrations as per design spectrum for zone 4 or better vibrations. The test shall be carried out by authorized government agency. Test Report to be submitted along with the technical bid.</p> <p>h. The wall paneling shall be robust &amp; strong enough to sustain the routine loads/minor impacts of typical control room environment. The wall paneling/partition structure shall have ISO audit certified feature of Load bearing capacity of 300 Kgs to hold any display unit on clamp having minimum length of 750mm. Valid ISO by SIS audit certificate to be submitted along with the technical bid.</p> <p>i. As control room is a mission critical area and in an unlikely case of damage to the existing wall paneling tiles the same shall be replaceable and thereby</p>

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		<p>preventing loss of time of operators and ongoing operations. ISO by SIS audit certified feature of modular wall paneling tile having secure locking arrangement for equidistant mounting. Locking arrangement enables easy replacement without using any tool. The feature shall provide easy flexibility of locking all tiles in one column through gravity. Valid ISO by SIS audit certificate to be submitted along with the technical bid.</p> <p>j. Structure shall be made from modular, heavy-duty powder coated GI frame (minimum sheet thickness 1mm) and shall allow uninterrupted flow of wires/cable/tubes of maximum diameter 25mm.</p>
7	Doors	<p>12mm thick frameless toughened glass door shutter (Single / Double ) of approved brand and manufacture, including providing and fixing top &amp; bottom pivot &amp; double acting hydraulic floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer in charge</p> <p>Double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight up to 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.</p>
8	Ceiling	<p>The Factory made acoustic modular metal false ceiling of powder coated panels. Make shall comprise of perforated and non-perforated metal panels made through CNC laser Cutting, bending &amp; punching. Panel shall be of 0.7mm GI of approved powder coating finish. Panels shall be designed to achieve shape and design as per the design consultant with the combination of acrylic panels with lights, designed to enhance visual feel, with provision for easy installation and maintenance, integrated lighting and scope for integration of building services like HVAC and fire detection/ fighting system. Metal modular false ceiling shall have noise absorption coefficient (NRC) value minimum 0.7 according to IS:8225-1987. Test report to be submitted along with the technical bid.</p> <p>It is well known that metal is resistant to fire as compared to wood &amp; fabric. However, from fire and safety point of view, to ensure that the used material is not subjected to any kind of surface treatment which provokes fire. The proposed ceiling tiles shall be Class A certified/tested as per ISO (from SIS) for surface spread of flame and smoke generation. This is mandatory to ensure that the materials used in the interiors do not provoke fire. Valid certificate/report to be submitted along with the technical bid.</p> <p>The bidder should ensure restriction of hazardous substances; so that the final product does not contaminate the environment and we give a healthy life to our coming generations it is necessary that the modular metal ceiling system shall be RoHS certified/tested (SIS). Valid certificate/report to be submitted along with the technical bid.</p> <p>The bidder should avoid dark spots/areas in the control room it is necessary that continuous linear lights should use across the width/length of the control room. ISO audit certified by SIS design feature of integrated channel in ceiling for quick installation &amp; replaceability of continuous linear light: The ceiling</p>

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		<p>system should have integrated inbuilt channel for installation of cove lights or any other special ceiling design shall only be permit quick and easy replacement of cove light without using any tools. Valid ISO audit certificate by SIS to be submitted along with the technical bid.</p>
		<p>The metal ceiling shall sustain the seismic vibrations as per design spectrum IS 1893 for zone 4 vibrations or better. The test shall be carried out by authorized government agency. Valid test report to be submitted along with the technical bid.</p>
		<p>The structure shall be made from heavy duty powder coated CRCA steel sheet (minimum sheet thickness 0.8 to 1.2mm). It shall be securely grouted from roof with help of anchor fastener and GI self-threaded rods. It shall be formed with the help of slotted rolled W sections (stiffener) and Master C section with help of M6 cage nut and bolts.</p>
		<p>Component Specification</p> <ol style="list-style-type: none"> <li>1. Master Section                     <ol style="list-style-type: none"> <li>a. 1.2mm thick GI steel sheet section length 1200mm. the installation to be carried out with runner's spaces at 600/1200mm center to center securely fixed to the hanging + section by means at M6 Nut and bolts.</li> </ol> </li> <li>2. Hanging + Section                     <ol style="list-style-type: none"> <li>a. Specially machine profiled + section. The section shall be 2400 mm long &amp; shall run across the length at the room.</li> <li>b. Centre to Centre distance between + section shall be 1000mm.</li> <li>c. These sections are securely fixed to the slab by means of Metal fastener and 06mm GI rod fully threaded (with hex nut for precision level adjustment)</li> <li>d. The two-master section shall be attached to each other by means at fixing pate &amp; M6 cage nut &amp; bolts.</li> </ol> </li> <li>3. +Section                     <ol style="list-style-type: none"> <li>a. Machine profiled '+' Section to accommodate continues running light</li> <li>b. It shall have provision for fixing acrylic sheet</li> <li>c. This whole assembly shall be hung from roof slab with help of anchor fastener and full threaded GI rod.</li> </ol> </li> </ol>
		<p>Component Specification (Calcium silicate)</p> <ol style="list-style-type: none"> <li>1. Master Section                     <ol style="list-style-type: none"> <li>a. 1.2mm thick CRCA steel sheet section length 1200mm. the installation to be carried out with runner's spaces at 600/1200 mm center to center securely fixed to the hanging + section by means at M6 Nut and bolts.</li> </ol> </li> <li>2. Hanging W Section                     <ol style="list-style-type: none"> <li>a. Specially machine profiled W section 65x15x0.8mm.the section shall be 2400 mm long &amp; shall run across the length at the room.</li> <li>b. Centre to Centre distance between W section shall be 1000mm.</li> <li>c. These sections are securely fixed to the slab by means of Metal fastener and 08mm GI rod fully threaded (with hex nut for precision level adjustment)</li> <li>d. The two-master section shall be attached to each other by means at fixing pate 45x34mm &amp; M6 cage nut &amp; bolts.</li> </ol> </li> <li>3. U Section                     <ol style="list-style-type: none"> <li>a. Machine profiled 'U' Section 150x77x0.6mm section to accommodate continues running light</li> <li>b. It shall have provision for fixing acrylic sheet</li> </ol> </li> </ol>



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		<p>c. This whole assembly shall be hung from roof slab with help of anchor fastener and full threaded GI rod.</p> <p>Plain calcium silicate acoustic boards for false ceiling with 08mm approximately thick, Structure for underside of suspended grid formed of GI perimeter channels. Wood screws and metal expansion raw plugs for fixing with wall. Plastic emulsion paint of approved make and shade for finishing surface of Calcium Silicate Boards. Specification: Calcium Silicate Board is manufactured from a mixture of Portland cement, fine silica, special cellulose fibers and selected fillers to impart durability, toughness, fire and moisture resistance.</p>
9	Lighting and Illumination	<p>a. LED lights</p> <p>i. Brief: - The lights shall be available in flat panels. These shall be designed and developed with slim shape for stylish look. The product shall have better colour rendering index for interior illumination.</p> <p>ii. The LED shall have three basic choices of colours like cool white / warm white / neutral white. The LED lights shall have uniform light distribution without any spots on surface of panel, to make it highly luminous.</p> <p>b. Round LED Lights: - High performance LED downlighter with high system efficacy for good quality and uniform lighting. Conforms to general lighting norms for office and other indoor applications.</p> <p>i. Colour Temperature (K)- 3000 K / 4000 K / 5700K</p> <p>ii. LED Efficacy (lm/W) – 100 to 160</p> <p>iii. CRI &gt;70</p> <p>iv. Power Consumption 6W to 24W</p> <p>v. LED's life &gt;25,000 hours @ L70</p> <p>c. LED based Strip Light for Ceiling: - It will be a continuous rail of LED light, high brightness, neutral, or warm white with wall washing applications. Its slim profile and simple daisy-chain system allows high design flexibility to form long.</p> <p>i. Light source: LED</p> <p>ii. Lumen output: 600 lm/m</p> <p>iii. Light color: 6500K</p> <p>iv. Power consumption: 3W/m to 5W/m</p> <p>v. Operating Voltage Range (V) 100 – 300</p> <p>vi. Operating Frequency (Hz) 50 ± 3%</p> <p>vii. Colour: White</p> <p>viii. Lifetime: 15000 burning hrs. (At L70)</p> <p>d. Wiring for ceiling lights</p> <p>i. For ceiling wiring inter looping will be done and switches will be provided</p> <p>ii. The system of wiring shall consist of PVC insulated copper conductor stranded flexible FRLS wires of 1100 volts grade of insulation, in metallic conduits for all exposed wiring and PVC/ metallic conduits for all concealed wiring. Minimum size of copper conductor shall be 1.5 sq. mm for lighting and 2.5 sq mm for power. Colour code shall be maintained for the entire wiring installation that is Red/Yellow/Blue (or as per Local Standards) for the all-single phases, Black for neutral and Green for earthing.</p> <p>iii. Appropriate ferrule will be used in both the side (LDB Side &amp; Switch's Side).</p>



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		<p>iv. Note – Each Light Fixture will have 3 Wires: Phase, Neutral &amp; Earth individually.</p> <p>e. Switches and Sockets                      i. Compliance to stringent quality norms, Dual shutter mechanism for easy &amp; better fitment Wide &amp; flat switch knob for easy operation. FR grade polycarbonate with high impact resistance, shock proof &amp; UV rays stabilized.</p> <p>f. MCBs                      i. For the control and protection of low voltage installations against overload and short circuits.                      ii. Ripping characteristic: C Curve – 5 to 10 x In                      iii. Rated at 25°C to -50°C                      iv. Isolation function                      v. Double entry points, separate bus bar entry, open mouthed terminal and lift clamps.</p> <p>g. Flooring                      a. Designer acoustic false flooring                      i. Mandatory – Top Surface shall be acoustic laminate flooring. Height above the RCC floor – from 150 to 300mm as per layout.                      ii. The flooring shall be manufactured of fiber reinforced calcium sulphate panels having edges finished with PVC edge band and top surface shall be finished with durable &amp; environment friendly acoustic laminate pasted with special glue serving life of 5 years minimum. Tile Size shall be 600mm X 600mm.                      iii. The Panel shall                      1. Have density of 1600KgM3.                      2. Fire resistance DIN EN 1366-6 2005-02.                      3. Core material thickness shall be minimum 30mm.                      iv. The acoustic laminate shall be made up of twin-layer linoleum built up from 2mm Laminate.                      v. This false floor panel shall rest on Edge support rigid grid system having Galvanized Iron base plate dimensions as 100mm X 100mm. The stringer shall be fixed on pedestal having height adjustment of ±25mm.</p>
10	Designer acoustic flooring	<ul style="list-style-type: none"> <li>To avoid distraction of operators because of unwanted noise generated from movement of chairs/people in the control room it is necessary that the proposed flooring shall damp such impact noises. Flooring shall be Carpet Tile or Plank . Carpet should 100% Solution Dyed Nylon type-6 construction face carpet tile with polyvinyl chloride backing. The product shall be having Comfolene, GermiShield, Markproof, ActiBack, Stainarmour, Nurturefeet, Microbefresh, moist proof and the likes with a total thickness of 5.5 mm to 6.5 mm. Carpet tiles shall be complied with Flammability Test ASTM E648 , Methenamine Pill Test ASTM D2859, Smoke Density Test ASTM E662, Appearance Retention Hexapod test ASTM D5252. The laying work should be carried out by the authorized installer of the Company in India. Carpet Should be Made in India. Manufactures should have LEED Gold Rating Certificate. Made in India with 10 Year Warranty. Flooring shall be decorative type of approved shade, pattern, texture and design and of</li> </ul>

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Sr. No.	Parameter	Minimum Requirement
		<p>approved manufacturer. Dimensions shall be as per the final approved design and site requirement. Flooring shall be laid over concrete floor with adhesive strictly as per manufacturer's specification. Brands chosen would be either Welspun, Interface and Milliken. Levelled floor must be provided by Contractor.</p>
11	Control Desk	<ol style="list-style-type: none"> <li>1. Technical Specifications: - The control desk solution shall conform to high standard of engineering as mentioned in the document; meeting the specified codes, standards and designs. It shall be capable of performing 24X7 operations under the specified environmental condition. The Product must have Bifma Certificate. Brands chosen to be Haworth, HNI, Winsted, Horizon Consoles. All the certificates and reports mentioned below and in BOQ shall be submitted along with the design.             <ol style="list-style-type: none"> <li>b. Structure                 <ol style="list-style-type: none"> <li>i. Made of heavy duty extruded aluminium vertical and Steel horizontal profiles. The Extrusions shall be duly powder coated with 50+ microns over all surfaces. All sheet metal parts shall be finished with a durable, electrostatic powder coating in choice of client colours.</li> <li>ii. To allow future extension and expansion, the system should be Modular in nature and horizontal extension shall be possible. All worktops must have metal inserts on underside for Rigidity, modularity and long service life. The structure shall be rigid enough to withstand BIFMA X5.5 test. The control desk manufacture shall have BIFMA X5.5 Test Facility in house and should be able to certify the product. The structure shall allow easy assembly of Table Tops, Side Supports, Drawer Units, slat wall, gland plate, monitor arms in extremely rigid manner.</li> </ol> </li> <li>3. Test certificate of Worktop, Frame and Structure for following must be submitted with the Bid along with photograph mentioning Test Standard and Result- Distributed load test (Functional and Proof) , Concentrated Load Test ( Proof and Functional ) , Uniform Distributed Load Test and Cyclic Load Test, Impact Stability Test as per BIFMA x 5.5</li> </ol> </li> <li>4. Pedestal Drawer Unit must be as per BIFMAX5.9 Standard and manufacturer Certificate for compliance along with Test Photographs, Test Standards and Performance to be Submitted along with BID. Extendible element cycle test (Slide fatigue test), Functional Load Test, Proof Load Test, Top Load Ease Test - Cyclic Durability Test, Storage Unit Drop Test, Force test for door locks.</li> <li>5. Table top: - The material of the working surface shall be minimum 25 mm thick MDF with High Pressure ANSI/NEMA LD3 certified scratch-resistant Laminate.</li> <li>6. Monitor Arm: - The control desk shall feature ergonomic display mounting arms. It should be able to Hold 2,3 or 4 Monitors of Defined Dimension ( As per Client Requirement ) .The Arm should be able to adjust Monitor Angle, Direction without any problem.</li> <li>g. Shutters &amp; Side Legs: - Front, back shutters shall be of 18mm Laminated MDF Board with premium finish. Side leg shall be of 25mm of the same finish.</li> <li>h. Cable and Wiring: - The desks shall be designed with vertical and horizontal cable raceways to allow for continuous cable management between the cabinets. Wire shall be routed into the cabinet through gland plate.</li> </ol>

Interior of NOC/ SOC/DCIM/ Innovation Centre Room		
Sr. No.	Parameter	Minimum Requirement
		<p>i. Spill Edge - The Control desk rear edge of desktop shall be protected from minimum 5mm high no spill edge, it shall come above desktop surface to prevent liquid from spilling inside the CPU/Equipment Cabinet. Material of edge shall be Polyurethane.</p> <p>j. Hardware: - All hardware must be powder coated Brackets. The hardware fixing Frames and worktops shall only be metal to metal coupling with Metal Inserts and Blunt head screws.</p>

## Section -8 Annexure – 3 Furniture Specifications

Greenfield State Data Centre			
S.No.	DSR / NS	FURNITURE SPECIFICATIONS :	
		<p>SCOPE OF WORK: Contractor shall work out furniture requirements in consultations with the user and submit Detailed drawings with dimensions for approval together with confirmation that the product being supplied is matching with requirements mentioned in the tender . The Counter -confirmation should be from the manufacturer and should be submitted with the Bid. Manufacturers should be from the approved list of makes. All items shall fit as per layout and in case of increase or decrease of actual site dimensions , each item ( Like workstations ) shall be suitably altered to fit at site with proper finishing after adjustments and integration of all electrical and other services as required.</p> <p>Warranty time from the manufacturer if its diffirect from that mentioned below shall be extended to match the times given. In chairs, the chairs shall be warranted against manufacturing defects as provided below. Castors, Base, Seat Breakage, Back breakage are replaceable in warraty. In Modular Furniture, Powder Coating, Lamitate tops are warranted against peeling, change of shape etc as provided in manufacturer's standard warraty. GLass is warrated for 1 month, Chair mesh andFabric mesh, scratches, intentional damage is not covered.</p> <p>Final Manufacturing to be carried out based on approved drawings.</p>	
		<b>DESCRIPTION OF ITEM</b>	<b>UNIT</b>
		<b>Straight Workstations</b>	

**Greenfield State Data Centre**

<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
1	NS	<p>Providing and placing Linear Workstation with laminate pedestal unit as per approved drawings/specifications and layout. In case of increase or decrease of actual site dimensions, workstations shall be suitably altered to fit at site with proper finishing after adjustments. Linear Workstation with laminate pedestal unit, Shall be made of Frame 50 mm thick and vertical Aluminium Extrusions of 1.9 mm to 2mm thickness. Horizontal Member of frame are CRCA 0.8mm Thick. The System is complete hollow system with space for wire reticulation. All the frames will be duly powder coated. All the frames are fastened together by means of M6 NUTS &amp; BOLTS. All the frames are fitted with M10 leveling bolts. board. Raceway :-The raceway cover are sliding type and are integrally fitting inside frame and are made out of 0.8mm - 1mm thick CRCA steel &amp; powder coated. The electrical raceway can be provided below worktop or above worktop. The partition has integrated raceway provided one at skirting level thereby making 2 Raceways. Corner and End Post are made of 1.6mm Thick Aluminium Extrusion, Vertical Trims are made of 1.3mm Thick Aluminium and Horizontal Trims are made of 1.1mm thick Aluminium and are duly powder coated. The free space available within raceway accommodates power, data and communication cables. The cable can be taken into the Frame from the floor from the bottom. Tiles: Fabric Tile: Constructed out of 4mm thick Medium Density Fiber Board (MDF) and covered with Fabric of choice. Laminate Tile: Made out of 5mm - 6 mm thick Pre-laminated Medium Density Fiber Board (MDF). Bottom Row of Steel Tile: Constructed out of 0.7mm CRCA sheet and finished in epoxy powder coating. Can be given with plain / perforations / embossed finishes. Magnetic tile: Constructed out of 0.7mm Galvanized sheet and covered with fabric of choice. Pin up tile is made of 4.5mm Bubble Guard Sheet + Fabric wrapped. Whiteboard marker tiles: Made out of 4mm MDF with 1mm glossy highly wear resistant face laminate. Total thickness is 5mm. Table tops and Gable ends are of 25mm thk Pre-laminated particleboards conforming to IS : 12823 Interior Grade. All Worktops to have Metal Insets for fixing screws. Powder coated M.S. brackets having 2mm thickness fixed to the partition frame support the tabletops. Gable ends are of 25mm thk. both side laminate (BSL) with 2mm PVC edge banding on front side. Gable Ends are fixed with 2mm thick MS brackets to Frame and with 2mm thick Brackets to Worktops. Sealed edge in table top and gable ends are with 2mm thick PVC edge banding on Working side and 0.8mm thick edge banding on non working side. Each Workstation has 3 Drawer Pedestal unit of size 400mm L x 450mm D x 680mm made up of 18mm thk. Prelam particle board conforming to IS : 12823 Interior Grade with 3 Drawer ( 2 Drawer + 1 Filing ) with roller slide mechanism for 2 Drawers and Ball bearing slide for 1 Filing Unit. Prelaminated Particle Board - Action Tesa / Merino / GreenLam. Pedestal Hardware like Rollers, Locks - Ebco/ Hettich / Haffle. Furniture from HNI / Steelcase / Haworth. Warranty shall be 7 Years.</p>	EACH

Greenfield State Data Centre			
S.No.	DSR / NS	FURNITURE SPECIFICATIONS :	
		<b>Free Standing Partition</b>	
2	NS	<p>Providing and placing Partitions as per approved drawings/specifications Partitions shall fit as per layout and in case of increase or decrease of actual site dimensions , Partitions shall be suitably altered to fit at site with proper finishing after adjustments . Providing and placing 1200mm Ht free standing partitions.</p> <p><b>Frame is 50 mm thick</b> and made of Aluminium Extrusions of 1.2 mm to 1.5mm thickness. The System is complete hollow system with space for wire reticulation . All the frames will be duly powder coated . All the frames are fastened together by means of M6 NUTS &amp; BOLTS . All the frames are fitted with M10 leveling bolts.board.Raceway :-The raceway cover are sliding type and are integrally fitting inside frame and are made out of 0.8mm - 1mm thick CRCA steel &amp; powder coated. The electrical raceway can be provided below worktop or above worktop.The partition has two integrated raceway provided one at skirting level and another at the work surface level thus ensuring separation of power and networking cables. The free space available within raceway accommodates power, data and communication cables. The cable can be taken into the Frame from the floor from the bottom. Tiles: Fabric Tile: Constructed out of 5mm thick Medium Density Fiber Board (MDF) and covered with Fabric of choice. Laminate Tile: Made out of 5mm - 8mm thick Pre-laminated Medium Density Fiber Board (MDF) . Bottom Row of Steel Tile: Constructed out of 0.8mm CRCA sheet and finished in epoxy powder coating. Can be given with plain / perforations / embossed finishes.Magnetic tile: Constructed out of 0.8mm Galvanized sheet and covered with fabric of choice. Whiteboard marker tiles: Made out of 4mm MDF with 1mm glossy highly wear resistant face laminate . Total thickness is 5mm . Prelaminated Particle Board - Action Tesa / Merino / GreenLam. Pedestal Hardware like Rollers, Locks - Ebco/ Hettich / Haffle . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .</p>	EACH
		<b>Laminate Storage 1200mm Ht</b>	

<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
3	NS	<p>Providing and placing Prelaminated Particle Board storage as per approved drawings/specifications. Storages shall fit as per layout and in case of increase or decrease of actual site dimensions , storages shall be suitably altered to fit at site with proper finishing after adjustments . Prelaminated Particle Board storage with openable doors of 1200mm(ht), made up of 18mm thick pre laminated particle board with PVC edge banding and locking arrangement.Storage body is made of 18mm thick pre laminated particle Board conforming to IS : 12823 Interior Grade.The back of the unit is made from 18mm pre laminated board. All the exposed edges are with 2mm PVC egde Imported banding &amp; sealed edges are with 0.8mm thick PVC Imported edge banding. The top, side and hinged shutters are sealed with 2mm thick PVC edge banding. Storage has adjustable shelves inside and cam lock, tower bolt and locking strips.The units are assembled by knock down fittings such as Minifix &amp; Dowels. All the hardware and Hinges are from Hettich/Ebco. Storage has Brushed SS finish handles and lock . Prelam storage unit of 1200mm ht and 450mm depth . Prelaminated Particle Board - Action Tesa / Merino / GreenLam. Hardware like Rollers, Locks - Ebco/ Hettich / Haffle . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .</p>	EACH
		<b>Cabin Table</b>	
4	NS	<p>Providing and placing Cabin Table as per approved drawings/specifications. Cabin Table shall fit as per layout and in case of increase or decrease of actual site dimensions , Cabin Tables shall be suitably altered to fit at site with proper finishing after adjustments. Providing and placing Main Table made up of 25mm thk. Prelaminated particle Board with 2mm PVC Edge Banding supported on Gable ends made out of 25mm thk prelam particle boards with 2mm thk PVC edge banding. The Worktops should have metal inserts on underside for modularity. The screw used should be blunt headed and not sharp headed for metal to metal coupling . Modesty panels is in 18mm thk Prelaminated finish. Separate provision for mounting switches on the wall adjoining the tables shall be made by customer as the tables do not come with switch mounting facility. Wire routing / wire management gromets shall be provided on main Table. Side Table made up of 25mm thick Prelaminated particle Board with 2mm PVC Edge Banding supported on Gable ends made out of 25mm thk prelam particle boards with 2mm thk PVC edge banding. Modesty panels are in 18mm thk Prelaminated Particle finish. Side Table has Pedestal unit of size 400mm L x 450mm D x 680mm made up of 18mm thk. Prelam particle board conforming to IS : 12823 Interior Grade with 3 Drawer ( 2 Drawer + 1 Filing ) with roller slide mechanism for 2 Drawers and Ball bearing slide for 1 Filng Unit . Back storage is made up of 18mm thk. prelam particle board having SS finish D handle and Lock. Storage is a combination of 3 drawer pedestal and a hinged door unit . Storage body is made of 18mm thick pre laminated particle Board conforming to IS : 12823. The back of the</p>	EACH

<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
		unit is made from 18 mm prelaminated board. All the exposed edges are with 2mm PVC egde Imported banding & sealed edges are with 0.8mm thick PVC edge banding. The top, side and hinged shutters are sealed with 2mm thick PVC edge banding. The units are assembled by knock down fittings such as Minifix & Dowels. Prelaminated Particle Board - Action Tesa / Merino / GreenLam. Pedestal Hardware like Rollers, Locks - Ebco/ Hettich / Haffle . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years.	
		<b>Cubicle Table</b>	
5	NS	Providing and placing Cubical Table as per approved drawings/specifications. Cubicle Table shall fit as per layout and in case of increase or decrease of actual site dimensions , Cubicle Tables shall be suitably altered to fit at site with proper finishing after adjustments. Providing and placing Main Table completely made up of Prelaminated Particlee board conforming to IS : 12823 Interior Grade with PVC edge banding. Top are with 25mm thk boards with 2mm thick PVC Lipping on User and Visitor Side . The Table tops should have metal inserts on underside for modularity. The screw used should be blunt headed and not sharp headed for metal to metal coupling .Table top is supported on 18mm thick Gable ends and 18mm thk Modesty panels. exposed edges are in 2mm thk PVC edge banding & sealed edges are in 0.8mm thk PVC edge banding. Separate provision for mounting switches on the wall adjoining the tables shall be made by customer as the tables do not come with switch mounting facility.Side storage is made up of 18mm thk. prelam particle board having SS finish D handle and Lock. Storage is a combination of 3 drawer pedestal and a hinged door unit . Storage body is made of 18mm thick pre laminated partical Board conforming to IS : 12823. The back of the unit is made from 18 mm prelaminated board. All the exposed edges are with 2mm PVC egde Imported banding & sealed edges are with 0.8mm thick PVC edge banding. The top, side and hinged shutters are sealed with 2mm thick PVC edge banding. The units are assembled by knock down fittings such as Minifix & Dowels. Prelaminated Particle Board - Action Tesa / Merino / GreenLam. Pedestal Hardware like Rollers, Locks - Ebco/ Hettich / Haffle . Furniture from HNI / Steelcase / Haworth . 7 Year Warranty shall be given.	EACH
		<b>Meeting Table</b>	



<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
6	NS	Providing and placing Meeting Table as per approved drawings/specifications. Meeting Table shall fit as per layout and in case of increase or decrease of actual site dimensions , Meeting Tables shall be suitably altered to fit at site with proper finishing after adjustments. Providing & Fixing of Confetrence table . The Worktop shall be made of 25mm Prelamparticle Board of Grade II , Type-II as per IS:12823 and backing laminate of 0.6mm All the exposed edges are finished with 2mm thick PVC lipping machine pressed. The Table tops should have metal inserts on underside for modularity. The screw used should be blunt headed and not sharp headed for metal to metal coupling .Legs are made of Aluminum Extrusion of 1.6mm thickness with aesthically designed elliptical Cover sections . Legs are designed to facilitate wire management . Cross Member are in CRCA steel and the Beam is made of MS and has size 75x50 mm of 1.5mm thickness in powder coated finish of 50 microns thickness and is connected with legs to allow for traversing of wires horizontally. The beam raceway provided with slots for fixing data and electrical switches and sockets for each user under the table. Prelaminated Particle Board - Action Tesa / Merino / GreenLam . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Reception Table</b>	
7	NS	Providing and supplying Reception Desk as per approved drawings/specifications . It has 25mm thick Worktop and Gable Ends made of pre Laminated Particle Board sealed with PVC Edge Banding. Front and Modesty Panel are 18mm thick Pre Laminated ParticleBoard Sealed with PVC EdgeBanding.. The Counter Top is 25 mm Thick Postformed ParticleBoard. Unit has One Pull out drawer with Lock and Handle. Reception Table has 2 Pedestal unit of size 400mm L x 450mm D x 680mm made up of 18mm thk. Prelam particle board conforming to IS : 12823 Interior Grade with 3 Drawer ( 2 Drawer + 1 Filing ) with roller slide mechanism for 2 Drawers and Ball bearing slide for 1 Filing Unit . Prelaminated Particle Board - Action Tesa / Merino / GreenLam . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Round Meeting Table</b>	
8	NS	Providing and Supplying round meeting table with wire management of size 900mm dia as per approved drawings/specifications. The understructure is made of steel plate 500mm dia. The pole connecting base to table top is made of extruded aluminium and has provision for fixing electrical and data switches and sockets on the pole . The top is made of 25mm thick Prelaminated particle board with 2mm PVC lipping . The worktop has metal inserts on the underside for modularity . The understructure is powder coated.WARRANTY: 5 Years from the date of invoice . Prelaminated Particle Board - Action Tesa / Merino / GreenLam . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Café Table</b>	



<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
9	NS	Providing & Fixing of Cafe table as per approved drawings/specifications . The Worktop shall be made of 25mm Prelamparticle Board of Grade II , Type-II as per IS:12823 and backing laminate of 0.6mm All the exposed edges are finished with 2mm thick PVC lipping machine pressed. Legs are made of powdered coated steel 50mmx 50mm Section. Cross Member are in CRCA steel and the Beam is made of MSof 1.5mm thickness in powder coated finish of 50 microns thickness . The above furniture should be as per specification and sample approved by client. Prelaminated Particle Board - Action Tesa / Merino / GreenLam . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Centre / Corner Table</b>	
10	NS	Providing & Fixing of Centre table as per approved drawings/specifications . Centre table in position completely made of 25mm thick prelaminated particle. The Table have one pull out drawer and another shelf at lower level. 25mm thick particle board Top with edges sealed with PVC lipping. 25mm thick particle board Gable ends with edges sealed with PVC lipping. 18mm thick particle board Modesty panel with edges sealed with PVC lipping. 0-20mm adjustable levelers. 1 Drawer. Prelaminated Particle Board - Action Tesa / Merino / GreenLam . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Locker</b>	
11	NS	Providing & Fixing of Steel Single Tower Locker Cabinets as per approved drawings/specifications . Steel Single Tower Locker Cabinets shall be with in built Locks having dimension of 1800mm H x 460mm D x 390mmW made of 0.8 mm thick CRCA sheet duly powder coated to thickness of 40-60 micron.Each vertical unit has SIX Nos Locker unit. Each unit has independent door with concealed hinges and 7 lever cam lock and label holder the product has leveler for good ground support. All the components are finished 40 to 50 microns thick epoxy polyester powder coating oven baked at 180 to 200 deg.C. The above furniture should be as per specification and sample approved by client. Model LR 6 . Furniture from HNI / Steelcase / Haworth . Warranty shall be 7 Years .	EACH
		<b>Workstation / Reception Chair</b>	

<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
12	NS	Providing and supplying Mid Back Chair (Workstation / Reception Chair) as per approved drawings/specifications .Mid Back Chair shall be as per following specifications Back Height - Medium Back Back Finish - Mesh with adjustable lumbar support Back Frame - Black Color Seat Finish - Fabric - Black Seat Height Adjustment - Pneumatic Mechanism - Synchronized Tilt Back Tilt Lock - Upright Position Back Tilt Tension - Adjustable Armrests Type - 1D Height Adjustable Armpads Type - Metal Base Type - 5-Star in Nylone Base Warranty shall be 7 years . Make of Furniture shall be HNI / Steelcase / Haworth	EACH
		<b>Cabin Main Chair</b>	
13	NS	<b><u>Providing and supplying High Back Chair with head rest (Cabin Main Chair)</u></b> .This is a High back chair with Mesh Back with back tilt tension adjustable . The chair has Adjustable Lumber Support . The Chair has Nylon base with 60 mm twin wheel castors .Chair has 1-D adjustable armrests with PU Pads . Seat size is 500 mm W x 515 mm D and the Chair Height 1135mm - 1225mm . Overall size of the chair is 640mm W x 665mm D x (985 mm-1220mm) H . Furniture from HNI / Steelcase / Haworth. The chair has Pneumatic Gas Lift with Stroke=85 mm . Chair carries a warranty of 7 years.	EACH
		<b>Cubicle Main Chair</b>	
14	NS	<b><u>Providing and supplying High Back Chair with head rest (Cubicle Main Chair)</u></b> .This is a High back chair with Mesh Back with back tilt tension adjustable . The chair mesh is available in 6 different colours ( Green / Ruby / Cinnamon / Magenta / Indigo / Black ) with matching or contrast seat fabric according to the choice of the client..The chair has Adjustable Lumber Support . The Chair has Nylon base with 60 mm twin wheel castors .Chair has 1-D adjustable armrests with PU Pads . Seat size is 490 mm W x 435 mm D and the Chair Height 1135mm - 1225mm . Overall size of the chair is 640mm W x 665mm D x (985 mm- 1220mm) H .The chair has Pneumatic Gas Lift with Stroke=85 mm . Furniture from HNI / Steelcase / Haworth . Chair carries a warranty of 7 years.	EACH
		<b>Visitor Chair</b>	

<b>Greenfield State Data Centre</b>			
<b>S.No.</b>	<b>DSR / NS</b>	<b>FURNITURE SPECIFICATIONS :</b>	
15	NS	<p>Providing and supplying Visitor Chair . Visitor Chair shall be as per following specifications</p> <ol style="list-style-type: none"> <li>1. Leatherette Upholstered Seat &amp; Back</li> <li>2. Seat Size-530 mm W X470 mm D</li> <li>3. Back Size – 530 mm W X460 mm HT</li> <li>4. Base - Powder Coated fixed Base</li> <li>5. Overall Chair Size - 618 mm W X 615 mm D X 815 mm H . Furniture from HNI / Steelcase / Haworth. Chair carries a warranty of 7 years.</li> </ol>	EACH
		<b>Meeting Chair</b>	
16	NS	<p><b>Providing and supplying Medium Back Chair</b> .This is a Medium back chair with Mesh Back with back tilt tension adjustable . The chair mesh is available in 6 different colours ( Green / Ruby / Cinnamon / Magenta / Indigo / Black ) with matching or contrast seat fabric according to the choice of the client . The chair has Adjustable Lumber Support . The Chair has Nylon base with 60 mm twin wheel castors .Chair comes with 1-D adjustable armrests with PU Pads . Seat size is 490 mm W x 435 mm D and the Chair Height 975 mm - 1070 mm . Overall size of the chair is 630mm W x 550 mm D x (975 mm- 1070mm) H . The chair has Pneumatic Gas Lift with Stroke=85 mm . Furniture from HNI / Steelcase / Haworth Chair carries a warranty of 7 years.</p>	EACH
		<b>Café Chair</b>	
17	NS	<p>Providing and supplying Cafe Chair .Cafe Chair shall be as per following specifications</p> <ul style="list-style-type: none"> <li>•Back Finish - Plastic Shell (Red , Orange and Blue colour)</li> <li>•Seat Finish - Plastic Shell (Red , Orange and Blue colour)</li> <li>•Base Type -Sledge base, powder-coated in Silver color</li> <li>•Stackability - up to 6- high on the floor. .Furniture from HNI / Steelcase / Haworth</li> </ul> <p>Seat size - 446 W X 430 D , back height (From Seat to Top of Back Frame) is 410mm . The chair comes with sledge base of size 500 W x 490 D</p>	EACH
		<b>Sofa Sets</b>	
18	NS	<p>Providing &amp; Fixing of sofa Sets.</p> <p>The inside frame is made of seasoned wood and has antitermite treatment. The seat and back are made of foam and is finished in leatherite upholstery. The structure is supported on Polished Solid Wood Legs. Furniture from HNI / Steelcase / Haworth. Leatherite colour and type as per directions of Engineer in Charge. The above furniture should be as per specification and sample approved by client. The Distribution of Number of Seats and Items shall be as per approved plan from the Architect. The Fabric Colour should be as approved by the architect</p>	EACH SET

## Section -9 Annexure – 4 HORTICULTURE AND LANDSCAPING

<b>Name of Work : CONSTRUCTION OF PROPOSED (G+5)NEW DATA CENTRE BUILDING, GUJRAT</b>			
<b>HORTICULTURE AND LANDSCAPING</b>			
<b>Item No.</b>	<b>DSR/ NSI</b>	<b>DESCRIPTION</b>	<b>UNIT</b>
<b>1.HORTICULTURE AND LANDSCAPING</b>			
<b>SCOPE OF WORK</b>			
	1.0	Survey, investigation, planning & construction of Landscape works (both hard & soft) in and around the buildings in the scope of this tender and maintenance of same for Seven years after the completion of work.	
	2.0	Contractor shall prepare prepare concept/ landscape layout based on the existing site layout. This shall be including grassing, water bodies, planters, plantation, street formation and other details for the horticulture works and got approved from the Engineer-in-charge and execute the same including providing unfiltered / recycled water supply lines and installation of pumps as required therein. Development of parks, construction of its toe wall, providing railings, wicket gates, water hydrants, the grassing, creepers and planting trees etc. shall be completed as per the approved concept plan.	
	3.0	Garden features having lawn trees, shrubs, hedge, flower beds, foliages, creepers etc. including hoeing, weeding, pruning, replacement of plants, gap filling, watering, mowing of lawn, grass cutting by lawn mover and brush cutter , removal of garden waste, applying insecticide, pesticide & fertilizers(whenever required) top dressing of lawn with good earth and manure and maintenance of other garden related works as directed by office-in-charge for 7 years .Providing Good Earth, Manure, Fertilizer, Insecticide , Pesticide, Lawn mover and brush cutter with fuel , other Tools & Plants material/articles as required.	
<b>LIST OF WORKS</b>			
<b>1: HORTICULTURE</b>			
1.01	2.12	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm, removing all weeds and other growth with roots by forking repeatedly, breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.	sqm
1.02	2.7	Fine dressing of the ground.	sqm
1.03	2.2	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete .	cum

1.04	2.4	Supplying and stacking at site dump manure from approved source, including carriage upto 5 km complete .Screened through sieve of I.S. designation 16 mm	cum
1.05	2.9	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum
1.06	2.8	Spreading of sludge, dump manure and/or good earth in required thickness as per direction of officer-in-charge	cum
1.07	2.28	Preparation of mounds of various size and shape by available excavated / supplied earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc., lead upto 50 meter and lift upto 1.5 m complete as per direction of Officer-in-charge.	cum
1.08	2.10	Grassing with selection No. 1 grass including watering and maintenance of the lawn for 60 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed.	sqm
1.09	2.16	Providing and fixing M.S. flat iron tree guard 60 cm dia and 2 m high, above ground consisting 4 nos 25 x 6 mm, 2.25 m long and 8 nos 25 x 3 mm 2 m long verticals M.S. flats, riveted to 3 nos 25 x 6 mm M.S. flat iron rings in two halves, fixing together at site with required six numbers of 8 mm dia and 30 mm long bolts, including painting two coats with synthetic enamel paint of approved brand and manufacture over a coat of primer. The tree guard shall be suitably fixed to the ground by embedding four legs of tree guard in pits of suitable dia and to a depth of 25 cm, refilling the pits with soil and ramming, complete in all respect as per satisfaction and direction of Officer-in-charge.	Each
<b>2. TREE PLANTS</b>			
2.01	NS	Supply and planting of Gando baval - Prosopis chilensis plant of height 180- 195 cm. in gunny bag of size 30 cm as per direction of the officer-incharge.	Each
2.02	NS	Supply and planting of Limda (Neem) - Azadirachta indica plant of height 120- 130cm in big polybag of size 25 cm as per direction of the officer-in-charge.	Each
2.03	NS	Supply and planting of Deshi baval -Acacia nilotica plant of height 90-105 cm. in big polybag of size 25 cm as per direction of the officer-in-charge.	Each
2.04	NS	Supply and planting of Mango - Mangifera indica plant of height 60-75 cm. in big poly bag of size 25 cm as per direction of the officer-incharge.	Each
2.05	NS	Supply and stacking of Nilgiri - Eucalyptus sp plant of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each
2.06	NS	Supply and planting of Teak -Tectona grandis plant of height 150-165 cm in bag of size 25 cm as per direction of the officer-in-charge.	Each
2.07	NS	Supply and planting of Ardusa - Ailanthus excelsa 150-165cm in bag of size 25 cm as per direction of the officer-in-charge.	Each

2.08	NS	Supply and Planting of Khijdo/sami - Prosopis cineraria plant of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each
2.09	NS	Supply and planting of Cassia fistula (Amaltash) plant of height 120-135 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each
2.10	7.21	Supply and planting of Chorisia speciosa plant of height 150-165 cm. In big poly bags of size 25 cm as per direction of the officer-in-charge.	Each
2.11	7.24	Supply and planting of Delonix regia (Gulmohar) plant of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge	Each
2.12	7.58	Supply and planting of Mimusops elengi (Maulsri) plant of height 150-165 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each
2.13	7.55	Supply and planting of Michelia champa (Golden Champa)plant of height 90-105 cm. in earthen pots of size 25 cm as per direction of the officer-incharge.	Each
<b>3. SHRUBS</b>			
3.01	8.34	Supply and planting of plant Hibiscus rosasinensis of height 60-75 cm with 5-6 branches in p.bag of size 25 cm as per direction of the officer-in-charge.	Each
3.02	NS	Supply and planting of plant Desomodium gangeticum of ht 45-60 cm well developed in earthen pots of size 20 cm. Per direction of the officer-in-charge.	Each
3.03	NS	Supply and planting of plant Rizophora mucronata well developed with fresh and healthy 30 to 45 cm ht., with bloom in 20 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each
<b>4. CREEPER PLANTS</b>			
<b>4.1</b>	9.4	Supply and planting of Bougainvillea (Variety Butiana, Lady Mary Baring, ahara, Mohan, Scarlet Queen, Varigata, Glabra Formosa, Peruviana Odissi, Partha, Subhra,Thimma, Spectabilis L.N Birla, Refulgens) plant of height 30 cm. to 45 cm. with 2-3 branches in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each
<b>4.2</b>	9.5	Supply and planting of Clerodendrum splendens plant of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each
<b>4.3</b>	9.7	Supply and planting of Ipomea purpurea (Morning glory) plant of height30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each
<b>4.4</b>	9.8	Supply and planting of Tecoma grandiflora plant of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each
<b>4.5</b>	9.14	Providing and stacking of Vernonia elaeagnifolia (curtain creeper) plant of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each
<b>Sub Head-5 MISCL. ITEMS</b>			

<b>5.1</b>	NS	Providing /erecting and fixing complete Sculpture in stone all as per Architect directions with the following parameters (Illustrations of the same shall be supplied before installation) 1) Size/diameter shall be 750/900 mm . 2)Height 1500mm shall be provided all as per Architects Directions/Drawings	01 No
<b>5.2</b>	NS	Providing /erecting and fixing complete Sculpture in Stainless steel all as per Architect directions with the following parameters 1) Sculpture shall be built /fabricated with Stainless steel pipe and tube of grade 304 and shall be erected all as per Architect directions.	01 No
<b>5.3</b>	NS	Providing /erecting and fixing complete Benches made out of Agra /Dholpur stone all as per Architect directions complete.	02 Nos.
<b>5.4</b>	2.39	Complete maintenance of the entire garden features in the garden area i.e. lawn trees, shrubs, hedge, flower beds, foliages, creepers etc. including hoeing,weeding pruning replacement of plants, gap filling, watering, mowing of lawn, grass cutting by lawn mover and brush cutter , removal of garden waste, applying insecticide, pesticide & fertilizers(whenever required) top dressing of lawn with good earth and manure and maintenance of other garden related works as directed by office-in-charge (Cost of Good Earth, Manure, Fertilizer, Insecticide , Pesticide , lawn mover and brush cutter with fuel including T & P material/articles shall be provided by the contractor.)	
	2.39.2	Deploying 1 Mali for Landscape/Plantation Area	7 years

## Section -10 Annexure -5 Declaration and Undertaking by the promoter(s)\* /board of directors

(On Letterhead of Bidder)

Date: DD/MM/YYYY

To  
DGM (Technical)  
Gujarat Informatics Limited  
Block No. 2, 2nd Floor, C & D Wing, Karmayogi Bhavan,  
Sector 10A, Gandhinagar, Gujarat 382010

Tender No: GEM/2022/B/2889326

Dear Sir,

Mr. \_\_\_\_\_ undersigned authorized promoter(s)/board of directors of **M/s <<Name of Company>>** has read RFP clauses for the participation.

We, 1) Shri \_\_\_\_\_  
2) Shri \_\_\_\_\_ and  
3) Shri \_\_\_\_\_, Directors/Promoters of the Company, do hereby jointly and severally undertake to you that if there is any shortfall in the resources of the bidding entity for completing its project and/or for meeting overrun/initial losses and/or for due to any circumstances whatsoever either at the time of starting of the project or subsequently and/or if there is any overrun in the project, we shall make arrangements satisfactory to Purchaser to provide to the Company in those events.

We also hereby jointly and severally undertake to Purchaser that we shall whole and sole responsible in case of bidding entity is not able to complete the project.

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory)

Name :  
Designation :  
Date :  
Company Seal :  
Business Address :



**Section -11 Annexure – 6 Declaration and Undertaking by  
the client for self-build Data Centre  
(On Letterhead of Bidder)**

Date: DD/MM/YYYY

To  
DGM (Technical)  
Gujarat Informatics Limited  
Block No. 2, 2nd Floor, C & D Wing, Karmayogi Bhavan,  
Sector 10A, Gandhinagar, Gujarat 382010  
Tender No: GEM/2022/B/2889326

Dear Sir,

Mr. \_\_\_\_\_ undersigned authorized signatory of **M/s <<Client Company Name>>** have been using the Tier III Data Centre facility established by the <<Bidding Entity Name>>.

Sr. no.	*Facility Description	*Facility details	Supporting Documents (WO details, NDA or client certificate)	Remarks
1				
2				
...				
N				

The above mentioned facility have been used by us from xx/xx/xxxxx. to till date or to xx/xx/xxxx or will be used by us from xx/xx/xxxx to xx/xx/xxxx. All the facilities available are as per the standard and working satisfactorily since its inception.

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory)

Name :

Designation :

Date :

Company Seal :

Business Address :

Note:

\* Facility Description means nature of the services availed by the client i.e. no of Rack with load details, fully managed by client or service provider etc.

\*Facility details means the corresponding address of the facilities being used.

## Section -12 ANNEXURE-7: FORMAT FOR CONSORTIUM AGREEMENT

(On non-judicial stamp paper of Rs 300 value to be purchased in the name of executants companies or as required by the jurisdiction in which executed)

This Consortium Agreement executed on this ..... day  
of..... Two Thousand .....

By:

M/s. .... a Company  
incorporated under the laws  
of..... and having its registered office at  
.....(hereinafte  
r  
called the "Lead Member/First Member" which expression shall include its  
successors); and

M/s. .... a Company  
incorporated under the laws of  
..... and having its  
registered office  
at.....

(hereinafter called the "Second Member" which expression shall include its  
successors)

The Lead Member/First Member and the Second Member shall collectively  
hereinafter be called as the "Consortium Members" for the purpose of  
submitting a proposal (hereinafter called as "Bid") for the work of  
.....(Name of work).....for ..... (Name of project) of M/s  
..... t

o

Gujarat Informatics Limited (GIL), the nodal agency for IT development in  
the state, by the Government of Gujarat (herein after called the `Owner' or  
'GIL'). GIL being a Company incorporated under the Companies Act, 1956  
having its registered office at Block No. 2, 2nd Floor, C & D Wing, Karmayogi  
Bhavan, Sector 10A, Sector 10, Gandhinagar, Gujarat 382010 in response to  
Request for Proposal Document (hereinafter called as "RFP" Document)  
Dated..... for the purposes of  
submitting the bid  
no. .... and entering into a contract in case of award for the work

of .....  
(Name of work).....for ... (Name of project) of GIL.

WHEREAS, the Owner invited bids vide its RFP document no. .... for the work of

..... AND WHEREAS as per document, Consortium bids will also be considered by the Owner provided they meet the specific requirements in that regard.

AND WHEREAS the Pre-qualification bid is being submitted to the Owner vide proposal dated ..... based on the

Consortium Agreement being these presents and the Pre-qualification bid with its Pre-qualification bid forms and submission documents, in accordance with the requirement of Pre-qualification document conditions and requirements have been signed by all the partners and submitted to the Owner.

AND WHEREAS Clause\_\_\_of RFP document stipulates that a Consortium of maximum one company, meeting the requirements stipulated in the RFP document may submit a Proposal signed by Lead Member of the Consortium Members so as to legally bind all the Members of the Consortium who will be jointly and severally liable for the performance and all obligations thereunder to GIL and duly signed Consortium Agreement shall be attached to the Proposal.

NOW THEREFORE, in consideration of the mutual covenants of the members of the Consortium, the sufficiency whereof is hereby acknowledged and other good valuable consideration, we agree as follows:

1. We the members in the Consortium hereby confirm that the name and style of the Consortium shall be Consortium.
2. M/s. .... shall act as Lead Member for self, and for and on behalf of M/s ..... (Second Member) and further declare and confirm that we shall jointly and severally be bound unto the Owner for the successful performance of the obligations under the Request for Proposal (RFP) and resulting Contact Agreement(s) submitted / executed by the Lead Member in the event of the selection of Consortium. Further, the Lead Partner is authorized to incur liabilities and receive instructions for and on behalf of any or all partners of the CONSORTIUM.
3. That M/s\_\_\_\_\_which is the Lead Member of the Consortium shall invest and continue to invest .... % (at least 51% to be invested by Lead Bidder) interest in the

- Consortium for the Lock in Period as specified in the RFP document.
4. That M/s\_\_\_\_\_, (Second Member) shall invest and continue to invest .... % Interest of the Consortium for the Lock in Period as specified in the RFP document.
  5. The composition or the constitution of the consortium shall not be altered without the prior consent of GIL.
  6. The roles and responsibilities of the lead bidder and the second member of the consortium for execution of various components/activities as defined in the RFP document shall be as under:

<b>S. No.</b>	<b>Project Component / Activity</b>	<b>Roles &amp; Responsibility of Lead Bidder</b>	<b>Roles &amp; Responsibility of Second Member of Consortium</b>
1			
2			
3			
4			

7. It is expressly agreed by the members that all members of the consortium shall be held equally responsible for the obligations under the RFP Document, Contract and this Agreement, irrespective of the specific roles/responsibilities undertaken by them.
8. For the purpose of this Agreement, the RFP Document and the Contract, the Lead Partner shall be the single point of contact for the GIL or its nominated agency, shall have the overall responsibility of the management of the Project and shall have single point responsibility for ensuring that all members of the consortium are complying with the terms and conditions set out in the Contract and the RFP Document.
9. All instructions/communications from PMC to the Lead Partner shall be deemed to have been duly provided to all the members of the consortium.
10. If GIL suffers any loss or damage on account of any breach in the stipulation of the Agreements to be entered into by the Consortium Members, upon its selection pursuant to RFP (the "Agreements") or any shortfall in the performance of the Transaction or in meeting the performances guaranteed as per the RFP and the Agreements, the Consortium Members hereby jointly and severally undertake to promptly make good such loss or damages caused to GIL on its demand without any demur or contest. The Owner shall have the right to proceed against anyone of the partners and it shall neither be necessary nor obligatory on the part of the Owner to proceed against the Lead Partner before proceeding against or dealing with the other Member.
11. The financial liability of the Consortium Members to the GIL, with respect to any of the claims arising out of the performance or non-performance of obligations under the RFP and the resulting Agreement(s) shall not be limited so as to restrict or limit the liabilities of any of the Members and the Members shall be jointly and severally liable to GIL.
12. It is expressly agreed by the Members that all the due payments shall be made by the Owner to Lead Bidder only.
13. This Consortium agreement shall be construed and interpreted in accordance with the laws of India and the Courts of Gandhinagar (Gujarat) shall have the exclusive jurisdiction in all matters arising there under.
14. It is also hereby agreed that Lead Member shall, on behalf of the Consortium shall submit the Bid and performance Security as specified by owner in the RFP document.
15. It is further agreed that this Consortium Agreement shall be irrevocable and shall

continue to be enforceable till the same is discharged by GIL.

16. This Agreement shall come into force as of the date of signing and shall continue in full force and effect until the complete discharge of all obligations, concerning the carrying out of the RFP, which have been taken on by the Parties under the Contract, RFP Document and under this Agreement.

17. Any other terms and conditions not in contradiction to the RFP and above mentioned terms and conditions.

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

<p>Common Seal of ..... has been affixed in my/our Lead Member presence pursuant to Board of Director's resolution dated .....</p> <p>1) Witness</p> <p>2) Witness</p>	<p>For and on behalf of M/s..... (Lead Bidder)</p> <p>(Signature of authorized representative) Name : Designation:</p>
<p>Common Seal of ..... has been affixed in my/our Lead Member presence pursuant to Board of Director's resolution dated .....</p> <p>1) Witness</p> <p>2) Witness</p>	<p>For and on behalf of M/s..... (Second member)</p> <p>(Signature of authorized representative) Name : Designation:</p>

## Section -13 Annexure-A: Pre-qualification Compliance Sheet

To be declared in the Lead bidder letter head

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
1	<p><b>Legal Entity</b></p> <p>A company registered under Indian Companies Act, 1956/2013 and subsequent amendments thereto</p> <p><b>OR</b></p> <p>A partnership firm registered under Indian Partnership Act, 1932.</p> <p><b>OR</b></p> <p>partnership firm register under LLP Act, 2008</p> <p><b>OR</b></p> <p>Consortium/Joint Venture (JV) is also allowed. The consortium shall not consist of more than one company and shall be formed under a duly stamped consortium agreement. (Attach Proof). In a consortium, one of the partners shall be designated as a "Lead Partner". Consortium member shall be equally responsible and jointly and severally liable for the successful completion of the entire project. In case of any issues, Lead Partner shall be responsible for all the penalties and liabilities related with this project. The qualification as mentioned <b>at Section 3, clause 3.1, Consortium</b> of chapter "General Terms and Conditions" needs to be complied by the consortium partner for undertaking civil and/or (MEP, Building Services).</p>	<p>Copy of Valid Registration Certificate</p> <p>Copy of Certificates of Incorporation</p> <p>In case of a consortium, a Consortium Agreement must be submitted, duly signed by the consortium members. Also, the legal entity clause applicable for both members of the consortium. Agreement must clearly specify the scope of each member and outline their roles and responsibilities Refer <b>(Section -12 As per Annexure-7)</b></p>		

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
2	The Lead Bidder must have minimum average annual turnover of Rs. 2000 crore, in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 as on 31st March 2022.	CA certified and audited Balance Sheet and Profit & Loss statement for any three of last four audited financial years (2018-19, 2019- 20, 2020-21, 2021-22).  CA certificate mentioning turnover from the said business.		
3	The Lead Bidder should have positive Net-worth in any 3 of last 04 financial year(s) i.e., FY 2018-19, FY 2019-20, FY 2020-21, and FY 2021-22 as on 31st March 2022.	CA certified and audited Balance Sheet and Profit & Loss statement for any three of last four audited financial years (2018-19, 2019- 20, 2020-21, 2021-22).  CA certificate mentioning turnover from the said business.		
4	The Lead Bidder/Consortium partner/JV should have experience of built and implementation of minimum 1 certified Uptime Institute Tier III or TIA-942 Rated III (Design Certified) Data Centre project of having minimum 100+ racks in single project in last 7 years as on publishing date of this tender.  <b>Note:</b> For Self-built Data Center constructed by the bidder for 3rd party commercial use only will be considered as part of completed works. The bidder to submit board of director/statuary auditor/cost auditor & client certificate (using the facility) confirming the value and quantum of the project and achieving the Tier III standards.	FOR Data Centre built for Client  1. Copy of the Work order/Purchase Order  <b>AND</b>  Certificate of completion of the work from client or phase wise completion certificate from client.  2. Uptime/TIA Certification  <b>Note:</b> In case, the Data Centre build for client did not opt the Tier III certification from any certified agency, the bidder should submit client certificate stating that the facility built for Tier III standards with number of		

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
		racks and copy of work order stating built Tier III Data Centre.		
5	<p>During the last 07 years, the Lead Bidder/Consortium partner/JV must have experience of certified Tier-III/IV Data Centre from Uptime Institute or TIA-942 for Central / State Governments, PSUs, Banking &amp; Financial Institutions, Telecom, and IT companies in India as under.</p> <p><b>1. Civil work Experience:</b></p> <p>Single workorder consisting of building &amp; construction experience of Data Centre having minimum built up area of 3500 sq. mtr.</p> <p><b>OR</b></p> <p>Two workorders consisting of building &amp; construction experience of Data Centre having minimum built up area of 2000 sq. mtr</p> <p><b>AND</b></p> <p><b>2. Non-IT work Experience:</b></p> <p>Workorder for Data Centre consisting of SITC of Electrical Distribution &amp; Lighting, Electrical Substation, DG sets with HSD tank, Precision AC/ Chiller Plant, UPS System, Fire Detection &amp; suppression system, Access Control, Lifts and CCTV, BMS, VESDA, Rodent Repellent System etc.</p> <p>Single order of value of INR 60 Crore or more.</p> <p><b>OR</b></p>	<p>1. Copy of work order(s) / Purchase Order and Contract Agreement</p> <p><b>AND</b></p> <p>2. Certificate of timely completion of the work from client or phase wise completion certificate from client.</p> <p><b>OR</b></p> <p>2. Go Live or FAT certificates issued by the customer</p> <p>For self-built Data Centre, the bidder should submit the necessary documented evidence certifying the value of the Data Centre to meet the said criteria certified by board of director/statuary auditor/cost auditor &amp; client certificate (using the facility).</p> <p><b>Note:</b> In case, the Data Centre build for client did not opt the Tier III certification from any certified agency, the bidder should submit client certificate stating that the facility built for Tier III standards with number of racks and copy of work</p>		



Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
	<p>Two orders each having minimum value of INR 35 Crore or more.</p> <p><b>AND</b></p> <p><b>3. O&amp;M work Experience</b></p> <p>The Lead Bidder/Consortium partner/JV must have Data Centre O&amp;M work experience in the Civil and Non-IT domain as under.</p> <p>Single work order value of 100 Cr consisting of O&amp;M work experience for Civil &amp; Non-IT.</p> <p><b>OR</b></p> <p>Two work orders (one work order for O&amp;M of Civil works &amp; one workorder for O&amp;M of Non-IT works) having total combined value of 100 Cr.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li><b>1. In case of Single work order, the above credentials should be complied and clearly defined in Work order with respect to CIVIL, Non-IT and O&amp;M experience.</b></li> <li><b>2. For Self-built Data Center constructed by the bidder for 3rd party commercial use only will be considered as part of completed works. The Bidder to submit board of director/statuary auditor/cost auditor &amp; client certificate confirming the value and quantum of</b></li> </ol>	<p>order stating built Tier III Data Centre.</p>		

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
	<b>the project and achieving the Tier III standards.</b>			
6	The Lead Bidder/Consortium partner/JV should be registered with Council of Architect or should have deployed Principal Architect registered with council of Architect, and registration / membership should be valid as on date, having 7+ years of experience.	Copy of registration certificate and Declaration on Bidder's letterhead stating compliance of this condition.		
7	<p>The Lead bidder/consortium partner/JV jointly must have on its payroll at least 150 Professionals in the Civil Construction domain, Data Centre Electrical, Mechanical, Structural drawing, Cooling, building architecture etc. and other utility Services and having the prior experience in providing the Data Centre Infrastructure maintenance services as on bid submission date. Bidder Must have at least following technical manpower strength on its payroll:</p> <p><b>i.</b> At least 30 number of engineers on its payroll having 10+ years of experience in relevant fields (10 should be Civil engineer, 10 should be electrical engineer, 10 should be mechanical engineer having B.E/B. Tech degree)</p> <p><b>ii.</b> At least 10 qualified professionals having relevant Degree certificate for his position in,</p> <ul style="list-style-type: none"> <li>• Principal structural Consultants (BE/B.Tech. in Civil having 10+ years of relevant experience)</li> <li>• Principal Electrical consultants (BE/ B. Tech with. Electrical having 10+ years of relevant experience)</li> <li>• Principal Mechanical Consultant (BE/ B. Tech with Mechanical having 10+</li> </ul>	<p>HR certificate on company's letterhead stating the points with employee Name, employee ID, Qualification, Certification to be submitted along with copy of the relevant certificate</p> <p><b>Note: (for Point no: iv &amp; v) The Lead bidder/consortium partner/JV may onboard the following resources prior to contract signing between the selected bidder and purchaser.</b></p> <p><b>iv. At least 02 resources should be CDCP/CDCS/CDCE certified.</b></p> <p><b>v. At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/</b></p>		

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
	<p>years of relevant experience)</p> <ul style="list-style-type: none"> <li>• Principal Plumbing Consultant (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Principal Green Building Consultants (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> <li>• Quality Assurance Manager (BE/ B. Tech with Civil having 10+ years of relevant experience)</li> </ul> <p><b>iii.</b> At least 2 no. of Architects (B. Arch.) having 10+ years of relevant experience on its payroll</p> <p><b>iv.</b> At least 02 resources should be CDCP/CDCS/CDCE certified.</p> <p><b>v.</b> At least One Data Centre Design Consultants having ATD (Accredited Tier Designer) certification from Uptime Institute/ Equivalent TIA certification</p> <p><b>vi.</b> At least 05 Project management professional with PMP or Prince-2 certified</p>	<p><b>Equivalent TIA certification</b></p>		
8	<p>The Lead Bidder &amp; Consortium partner / JV should not have been blacklisted by any Government and Public Sector Unit during the last 3 years.</p>	<p>The Lead Bidder &amp; Consortium partner / JV shall submit declaration on their letterhead in this regard as per format given in this corrigendum.</p>		
9	<p>The Lead Bidder should have a local presence of Office in Gujarat and level 3 support (highest escalation) locally in India. And Lead Bidder should be setting up one Project site office in Gandhinagar for day-to-day Project Management &amp; Monitoring activity during entire project life cycle (till Go Live phase)</p>	<p>The Lead Bidder shall submit declaration on their letterhead in along with necessary address proof.</p> <p>In case of no office in Gujarat on bidding date, Bidder needs to submit undertaking if after getting award of order, he shall setup Support center in Gujarat in 30 days' time.</p>		

Sr. No	Eligibility Criteria	Documents to be submitted	Compliance (Y/N)	Reference of Supporting Documents in the Bid with page numbers
10	Tax registration and clearance The Lead Bidder & Consortium partner/JV should furnish following information 1. COI 2. MOA & AOA 3. GST No Income Tax / Pan Number.	Valid documentary proof of: 1. Memorandum of Consortium & Articles of Consortium 2. GST registration document. 3. Income Tax registration / PAN number		
11	The Lead Bidder/Consortium partner/JV must have either of two from following Certificate at the time of bidding, a. ISO 9001:2015 b. ISO/IEC 20000 c. ISO/IEC 27001:2013	Copy of Valid Certificates		
12	The Lead Bidder & Consortium partner /JV from a country which shares a land border with India will be eligible to bid in this tender only if they are registered with Competent Authority as per OM No. 6/18/2019-PPD dated 23rd July 2020 issued by Department of Expenditure, GoI.	Self-certification from bidder as per Annexure H of the RFP.		
13	Mandatory Undertaking/Declaration  The Lead Bidder & Consortium partner / JV should:  a) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended.  b) not have a conflict of interest in the procurement in question as specified in the bidding document.	A Declaration letter as per Annexure-B1: Self-Declaration of the corrigendum.		

## Section -14 Annexure-B: The Lead Bidder's Annual Turnover

### Annual Turnover calculation

(On the Applicant's CA Letterhead)

Date:

This is to certify that we M/s----- are the statutory Auditors of M/s----- and that the below mentioned calculations are true as per the Audited Financial Statements of M/s----- for the below mentioned years. (Any three of last four audited financial years)

Sr. No.	Annual Sales Turnover Calculation	2018-19	2019-20	2020-21	2021-22
1	Total Sales as per the P/L A/c (A)				
2	Less: Custom and/or Excise Duty if included in total Sales as per P/L in Total Sales as per P/L A/C (B)				
3	Less: Sales Tax if included in Total Sales as per P/L A/c (C)				
4	Less: Any other statutory taxes if included in total Sales as per P/L A/C (D)				
5	Less: Any other income from sources other than the normal business source if included in Total Sales as per P/L A/c (E)				
6	Annual Turnover (F) =(A)-(B)-(C)-(D)-(E)				

**The Lead Bidder is required to enclose the audit financial statements for any three of these four years.**

Company Secretary / Statutory Auditor

Name of Signatory:

Lead Bidder Company Name:

Date:

Place:

## Section -15 Annexure-C: The Lead Bidder's Net worth

### Net Worth calculation

(On the Applicant's CA Letterhead)

Date:

This is to certify that we M/s----- are the statutory Auditors of M/s----- and that the below mentioned calculations are true as per the Audited Financial Statements of M/s----- for the below mentioned years. (Any three of last four audited financial years)

S No.	Annual Sales Turnover Calculation	2018-19	2019-20	2020-21	2021-22
1	Paid up Share Capital as per B/S (A)				
2	Add: Free Reserves as per B/S (B)				
3	Less: Deferred Payment if any as per B/S (C)				
4	Amount of probable impact on reserves due to audit qualification (D)				
5	Net Worth (F) =(A)+(B)-(C)-(D)				
6	Annual Turnover (F) =(A)-(B)-(C)-(D)-(E)				

---

**Note: Please attach audited Balance Sheets and IT return statements to confirming the figures mentioned in columns.**

Company Secretary / Statutory Auditor

Name of Signatory:

Lead Bidder Company Name:

Date:

## Section -16 Annexure-D: Citations Format

As per the format below, the Lead Bidder & Consortium partner/ JV should provide information for each project on similar assignments required for pre-qualification and technical evaluation criteria.

Sl. No.	Item	Detail
<b>General Information</b>		
1.	Customer Name/ Government Department	
2.	Details of Contact Person <ul style="list-style-type: none"> <li>• Name:</li> <li>• Designation:</li> <li>• Email:</li> <li>• Phone: &amp; Fax:</li> <li>• Mailing Address:</li> </ul>	
<b>Project Details</b>		
3.	Name of the project	
4.	Government/Non-government	
5.	Start Date/End Date	
6.	Current Status	(Work in Progress (PAT/FAT/Go-Live) OR completed)
7.	Contract Tenure	
8.	Area of the Data Centre	
9.	Effort involved in Payroll person-months in the complete project	
10	Order Value of the project (in Crores)	
11.	Please provide copies of Work Order or Certificate of Completion for completed projects from the customer	
12.		
More than one same table content may be provided for more than one project detail.		

## **Section -17 Annexure-E: Undertaking on litigation (Lead Bidder & Consortium partner/ JV)**

### **Undertaking on litigation(s)**

This is to certify that << COMPANY NAME >> is not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this RFP.

Company Secretary / Authorized Signatory

Name of Signatory:

Lead Bidder/ Consortium partner/ JV Company Name:

Date:

Place:



## Section -18 Annexure-F: Undertaking of Authenticity (Lead Bidder & Consortium partner/ JV)

To:

(Name and address of Procuring Office)

### **Sub: Undertaking of Authenticity for all Equipment Supplied**

**Ref: GIL\_\_\_\_\_ dated 00.00.2022**

1. With reference to the equipment being quoted to you vide our proposal No: \_\_\_\_\_, we hereby confirm that all the components /parts /assembly / software etc. used in the equipment to be supplied shall be original new components / parts / assembly / software only, from respective OEMs of the Equipment/products and that no refurbished / duplicate / second hand components /parts/ assembly / software shall be supplied or shall be used. We also undertake to produce certificate from the Original Equipment Manufacturers (if required by you) in support of the above statement at the time of delivery / installation
2. We also confirm that in respect of licensed operating systems and other software utilities to be supplied, the same will be procured from authorized sources and supplied with Authorized License Certificate (i.e., Product keys on Certification of Authenticity in case of Microsoft Windows Operating System)
3. In case of default and the DST/GIL finds that the above conditions are not complied with, we agree to take back the equipment supplied and return the money paid by you, in full within seven days of intimation of the same by the DST/GIL, without demur or any reference to a third party and without prejudice to any remedies the DST/GIL may deem fit.
4. In case of default and we are unable to comply with above at the time of delivery or during installation, of all equipment already billed, we agree to take back the equipment without demur, if already supplied and return the money if any paid to us by you in this regard.
5. We also take full responsibility of both parts & Service SLA as per the content even if there is any defect by our authorized Service Center / Reseller / SI etc.

Dated this ..... day of.....2022

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(In the capacity of)

Duly authorized to sign Bid for and on behalf of  
\_\_\_\_\_

## **Section -19 Annexure-G: Undertaking on Not Being Blacklisted (Lead Bidder & Consortium partner/ JV)**

### **Undertaking on Not Being Blacklisted**

This is to certify that << COMPANY NAME >> is not blacklisted by the Government of Gujarat or any of its agencies for any reasons whatsoever and not blacklisted by Central / any other State/UT Government or its agencies for indulging in corrupt or fraudulent practices or for indulging in unfair trade practices and not backed out from executing the work after award of the work as on the tender submission date.

Company Secretary / Authorized Signatory

Name of Signatory:

Bidder Company Name:

Date:

Place:

## **Section -20 Annexure-H: Undertaking from (Lead Bidder & Consortium partner/ JV) & OEM on country which shares a land border with India.**

### **On letterhead of Lead Bidder/ Consortium partner/ JV**

Sub: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 published by Ministry of Finance, Dept. of Expenditure, Public Procurement division

Ref: Bid Number: \_\_\_\_\_

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India. I certify that we as a bidder and quoted product from following OEMs are not from such a country or, if from such a country, these quoted products OEM has been registered with competent authority. I hereby certify that these quoted product & its OEM fulfills all requirements in this regard and is eligible to be considered for procurement for Bid number\_\_\_\_\_.

No	Item Category	Quoted Make & Make

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority, otherwise GIL/End user Dept. reserves the right to take legal action on us.

(Signature)

Authorized Signatory of M/s <Name of Company>

### **On letterhead of OEM**

**Sub : Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 published by Ministry of Finance, Dept. of Expenditure, Public Procurement division**

**Ref: Bid Number:** \_\_\_\_\_

Dear Sir,

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India. I certify that our quoted product and

our company are not from such a country, or if from such a country, our quoted product and our company have been registered with competent authority. I hereby certify that these quoted product and our company fulfills all requirements in this regard and is eligible to be considered for procurement for Bid number\_\_\_\_\_.

No.	Item Category	Quoted Make & Model

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority; otherwise, GIL/End user Dept. reserves the right to take legal action on us.

(Signature)

Authorized Signatory of **M/s <<Name of Company>>**

**Section -21 Annexure-I: Local Presence of Lead Bidder**

<b>S No.</b>	<b>Location</b>	<b>Full Address</b>	<b>Phone/ Fax</b>	<b>GST No.</b>	<b>Operational since</b>

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

## Section -22 Annexure-J: Lead Bidder & Consortium partner/ JV's Details

1.	Name of Lead Bidder / Consortium partner / JV			
2.	Name of Contact Person			
3.	Registered Office Address			
4.	Address of the bidder from which bid is submitted			
5.	Year of Establishment			
6.	Type of Firm	Public Limited	Private Limited	Others
	Put Tick (☐) mark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Telephone Number(s)			
8.	Email Address/ Website	Email:	Web - Site:	
9.	Fax No.			
10.	Mobile/	Mobile:		
11.	Service Tax No.			
12.	VAT/CST No:			
13.	PAN NO:			
14.	Area of Specialization			

## Section -23 Annexure-U: Non-Disclosure Agreement (Lead Bidder & Consortium partner/ JV)

### NON-DISCLOSURE AGREEMENT

THIS RECIPROCAL NON-DISCLOSURE AGREEMENT (the "Agreement") is made at Gandhinagar between:

\_\_\_\_\_ constituted under the \_\_\_\_\_ Act,  
\_\_\_\_\_ having its Corporate Centre at \_\_\_\_\_  
\_\_\_\_\_ (hereinafter referred to as "DST/GIL" which expression includes its successors and assigns) of the ONE PART.

And

\_\_\_\_\_ (Hereinafter referred to as "\_\_\_\_\_" which expression shall unless repugnant to the subject or context thereof, shall mean and include its successors and permitted assigns) of the OTHER PART.

And Whereas

1. \_\_\_\_\_ is carrying on business of providing \_\_\_\_\_, has agreed to \_\_\_\_\_ for the DST/GIL and other related tasks.

2. For purposes of advancing their business relationship, the parties would need to disclose certain valuable confidential information to each other. Therefore, in consideration of covenants and agreements contained herein for the mutual disclosure of confidential information to each other, and intending to be legally bound, the parties agree to terms and conditions as set out hereunder.

### NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS UNDER

#### 1. Confidential Information and Confidential Materials:

- (a) "Confidential Information" means non-public information that Disclosing Party designates as being confidential or which, under the circumstances surrounding disclosure ought to be treated as confidential. "Confidential Information" includes, without limitation, information relating to installed or purchased Disclosing Party software or hardware products, the information relating to general architecture of Disclosing Party's network, information relating to nature and content of data stored within network or in any other storage media, Disclosing Party's business policies, practices, methodology, policy design delivery, and information received from others that Disclosing Party is obligated to treat as confidential. Confidential Information disclosed to Receiving Party by any Disclosing Party Subsidiary and/ or agents is covered by this agreement
- (b) Confidential Information shall not include any information that: (i) is or subsequently becomes publicly available without Receiving Party's breach of any obligation owed to Disclosing party; (ii) becomes known to Receiving Party prior to Disclosing Party's disclosure of such information to Receiving Party; (iii) became known to Receiving Party from a source other than Disclosing Party other than by the breach of an obligation of confidentiality owed to Disclosing Party; or (iv) is independently developed by Receiving Party.

- (c) "Confidential Materials" shall mean all tangible materials containing Confidential Information, including without limitation written or printed documents and computer disks or tapes, whether machine or user readable.

## **2. Restrictions**

- (a) Each party shall treat as confidential the Contract and any and all information ("confidential information") obtained from the other pursuant to the Contract and shall not divulge such information to any person (except to such party's own employees and other persons and then only to those employees and persons who need to know the same) without the other party's written consent provided that this clause shall not extend to information which was rightfully in the possession of such party prior to the commencement of the negotiations leading to the Contract, which is already public knowledge or becomes so at a future date (otherwise than as a result of a breach of this clause). Receiving Party will have executed or shall execute appropriate written agreements with its employees and consultants specifically assigned and/or otherwise, sufficient to enable it to comply with all the provisions of this Agreement.
- (b) Receiving Party may disclose Confidential Information in accordance with judicial or other governmental order to the intended recipients (as detailed in this clause), provided Receiving Party shall give Disclosing Party reasonable notice prior to such disclosure and shall comply with any applicable protective order or equivalent. The intended recipients for this purpose are:
  - (1) The statutory auditors of the DST/GIL and
  - (2) Regulatory authorities regulating the affairs of the DST/GIL and inspectors and supervisory bodies thereof
- (c) The foregoing obligations as to confidentiality shall survive any termination of this Agreement
- (d) Confidential Information and Confidential Material may be disclosed, reproduced, summarized or distributed only in pursuance of Receiving Party's business relationship with Disclosing Party, and only as otherwise provided hereunder. Receiving Party agrees to segregate all such Confidential Material from the confidential material of others in order to prevent mixing.
- (e) Receiving Party may not reverse engineer, decompile or disassemble any software disclosed to Receiving Party.

## **3. Rights and Remedies**

- (a) Receiving Party shall notify Disclosing Party immediately upon discovery of any unauthorized use or disclosure of Confidential Information and/ or Confidential Materials, or any other breach of this Agreement by Receiving Party and will cooperate with Disclosing Party in every reasonable way to help Disclosing Party regain possession of the Confidential Information and/ or Confidential Materials and prevent its further unauthorized use.
- (b) Receiving Party shall return all originals, copies, reproductions and summaries of Confidential Information or Confidential Materials at Disclosing Party's request, or at Disclosing Party's option, certify destruction of the same.
- (c) Receiving Party acknowledges that monetary damages may not be the only and / or a sufficient remedy for unauthorized disclosure of Confidential Information and that disclosing party shall be entitled, without waiving any other rights or remedies (as listed below), to injunctive or equitable relief as may be deemed proper by a Court of competent jurisdiction.
  - a. Suspension of access privileges



- b. Change of personnel assigned to the job
  - c. Financial liability for actual, consequential, or incidental damages
  - d. Termination of contract
- (d) Disclosing Party may visit Receiving Party's premises, with reasonable prior notice and during normal business hours, to review Receiving Party's compliance with the term of this Agreement.

#### **4. Miscellaneous**

- (a) All Confidential Information and Confidential Materials are and shall remain the property of Disclosing Party. By disclosing information to Receiving Party, Disclosing Party does not grant any expressed or implied right to Receiving Party to disclose information under the Disclosing Party patents, copyrights, trademarks, or trade secret information.
- (b) Any document provided under this Agreement is provided with RESTRICTED RIGHTS.
- (c) Neither party grants to the other party any license, by implication or otherwise, to use the Confidential Information, other than for the limited purpose of evaluating or advancing a business relationship between the parties, or any license rights whatsoever in any patent, copyright or other intellectual property rights pertaining to the Confidential Information.
- (d) The terms of Confidentiality under this Agreement shall not be construed to limit either party's right to independently develop or acquire Equipment/Product without use of the other party's Confidential Information. Further, either party shall be free to use for any purpose the residuals resulting from access to or work with such Confidential Information, provided that such party shall maintain the confidentiality of the Confidential Information as provided herein. The term "residuals" means information in non-tangible form, which may be retained by person who has had access to the Confidential Information, including ideas, concepts, know-how or techniques contained therein. Neither party shall have any obligation to limit or restrict the assignment of such persons or to pay royalties for any work resulting from the use of residuals. However, the foregoing shall not be deemed to grant to either party a license under the other party's copyrights or patents.
- (e) This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. It shall not be modified except by a written agreement dated subsequently to the date of this Agreement and signed by both parties. None of the provisions of this Agreement shall be deemed to have been waived by any act or acquiescence on the part of Disclosing Party, its agents, or employees, except by an instrument in writing signed by an authorized officer of Disclosing Party. No waiver of any provision of this Agreement shall constitute a waiver of any other provision(s) or of the same provision on another occasion.
- (f) In case of any dispute, both the parties agree for neutral third-party arbitration. Such arbitrator will be jointly selected by the two parties, and he/she may be an auditor, lawyer, consultant or any other person of trust. The said proceedings shall be conducted in English language at Gandhinagar and in accordance with the provisions of Indian Arbitration and Conciliation Act 1996 or any Amendments or Re-enactments thereto.
- (g) Subject to the limitations set forth in this Agreement, this Agreement will inure to the benefit of and be binding upon the parties, their successors and assigns.
- (h) If any provision of this Agreement shall be held by a court of competent jurisdiction to be illegal, invalid or unenforceable, the remaining provisions shall remain in full force and effect.
- (i) All obligations created by this Agreement shall survive change or termination of the parties' business relationship.

#### **5. Suggestions and Feedback**

- (a) Either party from time to time may provide suggestions, comments or other feedback to

the other party with respect to Confidential Information provided originally by the other party (hereinafter "feedback"). Both parties agree that all Feedback is and shall be entirely voluntary and shall not in absence of separate agreement, create any confidentially obligation for the receiving party. However, the Receiving Party shall not disclose the source of any feedback without the providing party's consent. Feedback shall be clearly designated as such and, except as otherwise provided herein, each party shall be free to disclose and use such Feedback as it sees fit, entirely without obligation of any kind to other party. The foregoing shall not, however, affect either party's obligations hereunder with respect to Confidential Information of other party.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2022 at \_\_\_\_\_  
(month) (place)

For and on behalf of \_\_\_\_\_

Name		
Designation		
Place		
Signature		

For and on behalf of \_\_\_\_\_

Name		
Designation		
Place		
Signature		

## **Section -24 Annexure-A1: Declaration of Acceptance of Terms & Conditions of RFP from the Lead Bidder.**

### **DECLARATION OF ACCEPTANCE OF TERMS & CONDITIONS CONTAINED IN THE RFP**

To,  
**Deputy Director (IT)**  
Gujarat Informatics Limited  
Block No. 2, 2nd Floor, C & D Wing, Karmayogi Bhavan,  
Sector 10A, Gandhinagar, Gujarat 382010

Sir,

I have carefully gone through the Terms & Conditions contained in the Tender Document [\_\_\_\_] regarding RFP for Selection of System Integrator for implementation (Design, Build, Commission and O&M) of Greenfield State Data Centre at Gandhinagar, Gujarat.

I declare that all the provisions of this tender document read along with the proposal submitted by my Company. I certify that I am an authorized signatory of my company and therefore, competent to make this declaration. I further certify that, interpretation made by DST/GIL technical committee is the final and binding on me.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the bidder)

Name:

Place:

Designation:

Date:

## Section -25 Annexure-B1: SELF-DECLARATION (to be filled by the Lead Bidder & Consortium partner/ JV)

To,  
{Procuring entity},

In response to the RFP Ref. No. \_\_\_\_\_ dated \_\_\_\_\_ for {Project Title}, as an Owner/ Partner/ Director/ Auth. Sign. of \_\_\_\_\_, I/ We hereby declare that presently our Company/ firm \_\_\_\_\_, at the time of bidding:

- a) possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity.
- b) have fulfilled my/ our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document.
- c) is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/ Central government/ PSU/ UT.
- d) does not have any previous transgressions with any entity in India or any other country during the last three years
- e) does not have any debarment by any other procuring entity
- f) is not insolvent in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and is not the subject of legal proceedings for any of the foregoing reasons.
- g) does not have, and our directors and officers have not been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.
- h) does not have a conflict of interest as mentioned in the bidding document which materially affects the fair competition.
- i) will comply with the code of integrity as specified in the bidding document.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken as per the provisions of the applicable Act and Rules thereto prescribed by GIL, my/ our security may be forfeited in full and our bid, to the extent accepted, may be cancelled.

Thanking you,

Name of the Bidder: -  
Authorized Signatory: -  
Seal of the Organization: -  
Date: Place:

**Section -26 Annexure-D1: The Lead Bidder & Consortium partner/ JV's AUTHORIZATION CERTIFICATE {to be filled by the Lead Bidder & Consortium partner/JV on company letterhead}**

To,  
{Procuring entity},  
\_\_\_\_\_  
\_\_\_\_\_

I/ We {Name/ Designation} hereby declare/ certify that {Name/ Designation} is hereby authorized to sign relevant documents on behalf of the company/ firm in dealing with RFP reference No. \_\_\_\_\_ dated \_\_\_\_\_. He/ She is also authorized to attend meetings & submit technical & commercial information/ clarifications as may be required by you in the course of processing the Bid. For the purpose of validation, his/ her verified signatures are as under.

Thanking you,

Name of the Bidder: -  
Authorized Signatory: -  
Seal of the Organization: -  
Date: Place:

Verified Signature:

## Section -27 Annexure-E1: Authorization Letters from all OEMs to Lead Bidder

To,  
**Deputy Director (IT)**  
Gujarat Informatics Limited  
Block No. 2, 2nd Floor, C & D Wing, Karmayogi Bhavan,  
Sector 10A, Gandhinagar, Gujarat 382010

**Reference:** Request for Proposal (RFP): Selection of System Integrator for implementation (Design, Build, Commission and O&M) of Greenfield State Data Centre

Sir,

We \_\_\_\_\_, (name and address of the manufacturer) who are established and reputed manufacturers of \_\_\_\_\_ having factories at \_\_\_\_\_ (addresses of manufacturing locations) do hereby authorize M/s \_\_\_\_\_ (name and address of the Bidder) to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment manufactured by us.

Yours faithfully,

For and on behalf of M/s \_\_\_\_\_ (Name of the manufacturer)

Signature \_\_\_\_\_

Name :

Designation :

Address :

Date :

Directorate Seal

---

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

## Section -28 Annexure-G1: Format for providing CV of Key Personnel from the Lead Bidder & Consortium partner/ JV

### Curriculum Vitae of Key Personnel's

The bidder shall provide the summary table of details of the manpower that will be deployed on this project during the implementation.

**Table-A**

S No	Type of Resource	Name of Resources	Key Responsibilities	Highest Academic Qualifications and Certifications (e.g., PMP/CDCP /ATD/CCNA/ITIL)	Years of Relevant Experience
1	Project Manager				
2	---				
3	---				
4	---				
5	---				
6	Others				
...					

**Table-B**

Sl. No.	Particulars	Details	Supporting document
1.	Key resource / non-Key resource		
2.	Name of the Personal		
3.	Current Designation/Job title		
4.	Current job responsibilities		
5.	Proposed Role in this project		
6.	Total experience and relevant		

Sl. No.	Particulars	Details	Supporting document
	experience (in years)		
7.	Number of years with the organization and date of joining the firm		
8.	Whether resource is engaged by the firm in its own payrolls	YES/NO	
9.	Summary of Professional / Domain Experience		
10.	Date of Birth		
11.	Academic Qualifications: <ul style="list-style-type: none"> <li>• Degree</li> <li>• Academic institution graduated from</li> <li>• Year of graduation</li> <li>• Specialization (if any)</li> <li>• Key achievements and other relevant information (if any)</li> </ul>		Attach certificate of highest qualification
12.	Professional Certifications/ Training		Attach relevant certificates
13.	Membership of Professional Associations		
14.	Employment Record*		
15.	<ul style="list-style-type: none"> <li>• Details of similar project handled &amp; the role assigned</li> <li>• Prior project experience</li> <li>• Project name</li> <li>• Customer</li> <li>• Key project features in brief</li> <li>• Location of the project</li> <li>• Designation</li> <li>• Role</li> <li>• Responsibilities and activities</li> <li>• Duration of the project</li> </ul>		
16.	Detailed tasks Proposed to be assigned	Work already undertaken that best illustrates capability to handle the tasks	



Sl. No.	Particulars	Details	Supporting document
		assigned**	
17.	Signature of the representative		

I hereby declare that the above-mentioned resource would be available during the project phase of this RFP.

\*Starting with present position, list in reverse order every employment held by the staff member since graduation

\*\*Among the assignments in which the staff has been involved, indicate brief details of the project in which this responsibility was assigned (including nature and duration of duty)

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

## Section -29 Approved Make for Plumbing and Misc. Electrical Items

<b>ELECTRICAL WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
1	HV CIRCUIT BREAKERS / LBS	ABB / SIEMENS/ SCHNEIDER/ L&T/ EATON
2	PROTECTION RELAYS	AREVA/ ABB/ L&T / SIEMENS/ SCHNEIDER
3	HV CABLES	POLYCAB / KEI / HAVELS/FINOLAX/ RR
4	HV CABLE TERMINATION KIT	RAYCHEM/ M-SEAL/ 3M
5	AIR CIRCUIT BREAKER	ABB / SIEMENS/ SCHNEIDER/ L&T/ EATON
6	MCCB	ABB / SIEMENS/ SCHNEIDER/ L&T/ EATON
7	CONTACTOR	ABB / SIEMENS/ SCHNEIDER/ L&T/ EATON
8	BIMETAL RELAYS	ABB / SIEMENS/ SCHNEIDER/ L&T/ EATON
9	CAPACITOR	SIEMENS / DUCATI/ ABB/ L&T/ EPCOS/ SCHNEIDER
10	APFC RELAY	SIEMENS (EPCOS) / L&T/ DUCATI/ SCHNEIDER
11	MCB	SIEMENS/ ABB/ SCHNEIDER/ LEGRAND/ L&T/ HAGER
12	DISTRIBUTION BOARDS	SIEMENS/ SCHNEIDER/ LEGRAND/ L&T/ HAGER / ABB/
13	EARTH LEAKAGE CIRCUIT BREAKER	SIEMENS/ ABB/ SCHNEIDER/ LEGRAND/ L&T/ HAGER
14	RESIDUAL CURRENT CIRCUITBREAKER TIMER	L&T/ SIEMENS/ ABB/ SCHNEIDER/ GE
15	DIGITAL METERS/ LOADMANAGERS	CONZERV/ L&T/ ELMEASURE/ SOCOMEC/SCHNEIDER/ SEIMENS /ABB
16	HRC FUSES & FUSE SETTINGS	L&T/ C&S/ ABB/ SIEMENS/ LITTLE FUSE/ COOPER BUSS MANN
17	LV FLEXIBLE WIRES	RR KABLE/ POLYCAB/ FINOLEX
18	LV POWER / CONTROL CABLES	RR KABLE/ POLYCAB/ FINOLEX
19	LOCAL PUSH BUTTON STATIONS	L&T / BCH / TEKNIC/ SIEMENS/ C&S / SCHNEIDER
20	LUMINARIES/ LAMPS	PHILIPS / SYSKA/ SURYA
21	STREET LIGHT POLES	BAJAJ/ PHILIPS/ OSRAM / WIPRO/ BPP /ASTER, SURYA, VALMONT

<b>ELECTRICAL WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
22	SWITCHES MODULAR	SIEMENS/ /SCHNEIDER / /MK ( WRAP AROUND ), LEGRAND ( MYRIUS ), ABB ( CLASSIC LUMINIA CAMY CORSA ), SCHNEIDER ( OPALE ), L&T ( ORIS ), PHILIPS, HAVELL'S ( CRABTREE )
23	SOCKETS MODULAR	SIEMENS/ /SCHNEIDER / /MK ( WRAP AROUND ), LEGRAND (MYRIUS ), ABB ( CLASSIC LUMINIA CAMY CORSA ), SCHNEIDER ( OPALE ), L&T ( ORIS ), PHILIPS, HAVELL'S ( CRABTREE )
24	PVC FRLS CONDUITS	AKG/ POLYCAB/ PRECISSION/ BEC/ NATIONAL
25	GI CONDUITS	STEEL KRAFT / NATIONAL/ AKG/ BEC
26	RACEWAYS	MK/ LK/ MDS/ PROFAB/ OBO-BETTERMAN/ SCHNEIDER /BEC /STEELWAY/ LEGRAND
27	TERMINALS	WAGO/ PHOENIX/ ELMEX/ SALZER
28	CABLE GLANDS	DOWELLS/ COMET/ HENSEL / LAPP/ 3D/ JAINSONS
29	DIGITAL ELRWITHCBCT	PROK/ MINILEC/ PROTEC/ ELMEASURE
30	LIGHTNING ARRESTOR	LPI (STORMASTER)/ ESE/ NEXUS/ ABB
31	PLCS	ABB/ AB/ OMRON/ SIEMENS/SCHNIDER /ROCKWELL
32	RELAYS (NUMERICAL)	SIEMENS/ ABB/ L&T/ SCHNEIDER
33	CHEMICAL EARTHING	ASHLOK / LPI / INTELEC / GALAXY/ ERICO
34	CONNECTORS	CONNECTWELL/ L&T/ SIEMENS/ GE/ ABB
35	VOLTMETER, AMMETER	SCHNEIDER/ SALZER/ SECURE/ SOCOMEC/ ABB
36	CEILING FAN	USHA/ CROMPTON/ HAVELLS/ SYSKA
37	LAMPS AND FIXTURES	WIPRO/ PHILIPS/ OSRAM/ SYSKA
38	LED	PHILIPHS / WIPRO /KESLEC SCHREDDER
39	LIGHTING CONTROL SYSTEM	ABB/ SCHNEIDER/ SIEMENS/ PHILIPS
40	LIGHTING POLES	WIPRO/ PHILIPS/ BAJAJ
41	SURGE ARRESTOR	ASCO/ EMERSON/ SCHNEIDER/ OBO-BETTERMAN/ERICO /ABB
42	LITHIUM ION BATTERY FOR UPS	LG/ PANASONIC/ DELTA
43	STATIC TRANSFERS WITCH	SCHNEIDER/ EMERSON/ ASCO/ SOCOMEC/ DELTA

<b>ELECTRICAL WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
44	MULTISTRAND COPPER, FRLS ARM OR ED CABLE	CALIPLAST/ POLYCAB/ KEI/ RRKABEL/ HAVELS/FINOLEX
45	GI CONDUIT AND FITTINGS	BEC / AKG /PRECISION /STEELKRAFT
46	PERFORATED GI CABLE TRAY,MEDIUM DUTY	PROFAB /INDIANA /OBO /SLOTCO /PASCO /ENERLAC/ LEGRAND
47	GI TRUNKING	PROFAB / INDIANA/ OBO/ SLOTCO/PASCO/ENERLAC
<b>ELEVATOR WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
1	ELEVATORS	KONE/ OTIS/ MITSUBISHI THYSSENKRUPP/ SCHINDLER
<b>ROOF TOP SOLAR</b>		
<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
1	MODULES	WAAREE/ RENEWSIS/ CITIZEN SOLAR/ TATA
2	INVERTER	DELTA/ HUAWEI/ INGETEAM / RIELLO / FRONIUS
<b>PLUMBING ITEMS:</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
1	WALL MOUNTED WC	HINDWARE / JAQUAR / PARRYWARE
2	CONCEALED CISTREN	HINDWARE / JAQUAR / PARRYWARE
3	ORISSA PAN WC	HINDWARE / JAQUAR / PARRYWARE
4	PVC CISTERN FOR ORISSA PAN	HINDWARE / JAQUAR / PARRYWARE
5	JET SPRAY	JAQUAR / KOHLER / HINDWARE
6	ANGLE VALVE	JAQUAR / KOHLER / HINDWARE
7	UNDER COUNTER WASH BASIN	HINDWARE / JAQUAR / PARRYWARE
8	WALL MOUNTING WASH BASIN	HINDWARE / JAQUAR / PARRYWARE
9	CONSEALED DIVERTOR	JAQUAR / KOHLER / HINDWARE
10	LARGE FLAT BACK URINAL	HINDWARE / JAQUAR / PARRYWARE
11	AUTOMATIC FLUSHIN SYSTEM	JAQUAR / KOHLER / HINDWARE
12	URINAL PARTITION	HINDWARE / JAQUAR / PARRYWARE
13	SS SINK WITHOUT DRAIN BOARD	JAYNA / CROCODILE/ HINDWARE
14	SS SINK WITH SINGLE DRAIN BOARD	JAYNA / CROCODILE/ HINDWARE

<b>ELECTRICAL WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
15	SS SINK WITH DOUBLE DRAIN BOARD	JAYNA / CROCODILE/ HINDWARE
16	COUNTER MOUNTED SINK MIXER WITH SWINGING SPOUT	JAQUAR / KOHLER / HINDWARE
17	WATER HEATER 15 LTR.	JAQUAR / KOHLER / HINDWARE
18	WATER HEATER 25 LTR.	JAQUAR / KOHLER / HINDWARE
19	WATER HEATER 35 LTR.	JAQUAR / KOHLER / HINDWARE
20	WATER HEATER 50 LTR	JAQUAR / KOHLER / HINDWARE
21	WATER COOLER	BLUE STAR/ VOLTAS
22	WATER PURIFIER	KENT/EUREKAFOBES/TATA
23	HAND DRIER	EURONICS/TOSHI
24	TOWEL RAIL	JAQUAR / KOHLER / HINDWARE
25	TOWEL RING	JAQUAR / KOHLER / HINDWARE
26	TOILET PAPER HOLDER	JAQUAR / KOHLER / HINDWARE
27	SOAP DISH	JAQUAR / KOHLER / HINDWARE
28	LIQUIDE SOAP CONTAINER	JAQUAR / KOHLER / HINDWARE
29	COAT HOOK	JAQUAR / KOHLER / HINDWARE
30	2WAY STOP COCK	JAQUAR / KOHLER / HINDWARE
31	2WAY STOP COCK	JAQUAR / KOHLER / HINDWARE
32	BIB COCK	JAQUAR / KOHLER / HINDWARE
33	PILLAR COCK	JAQUAR / KOHLER / HINDWARE
34	SS GRATING	CHILLY/CAMRY/JAYNA / / HINDWARE/ CROCODILE
35	CPVC PIPE & FITTINGS	ASHIRWAD/AJAY
36	UPVC PIPE & FITTINGS (SWR,QUICKFIT)	AKG/SUPREME
37	GUN METAL FLOAT VALVE	ZOLOTO/LEADER
38	RUBBER EXPANSION JOINT	RISISTOFLEX/KANWAL
39	PRV	AIP/ITAP/UTAM
40	WATER METER	KRANTI/KAYCEE
41	TURBINE TYPE FLOW METER	ROCKWIN/FORBES MARSHAL
42	AAV	AIP/SANT
43	DI MANHOLE COVER	NECO/KAPILANCE/HEPCO
44	CLEAN OUT PLUG	NEER/GMGR
45	WC CONNECTOR	AKG/SUPREME
46	CI MANHOLE COVER	NECO/KAPILANCE/HEPCO
47	RCC PIPE	LOCAL APPROVED
48	ALL TYPE OF PLUMBING PUMPS	GRUNDFOS / XYLEM / DP / KIRLOSKAR

**ELECTRICAL WORKS**

<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>LIST OF PREFERRED MAKES</b>
49	RO SYSTEM	NETSOL WATER / SWARNAQUATECH / BRISANZIA / SIMALAB / LON EXCHANGE/ AQUAGAURD/ KENT

## Section -30 Revised Commercial Bid Price (Annexure -R of the RFP)

### Revised Summary of Bid Price:

Sr. No	Bid Price for Schedule I, II and III	Amount without Tax	Amount With Tax
A	Schedule I: Total Capex value for Civil infrastructure/services		
B	Schedule II: Total Capex value for non-IT components/services		
C	Schedule III: Operation & Maintenance (O&M) charges for support up to 7 years from final Go-Live including Manpower		
<b>D</b>	<b>Grand Total (A+B+C)</b>		

### NOTE:

1. Sum Total of Schedule - III would be paid in 28 equated Quarters.
2. CAPEX should not be over 70% of total project cost (i.e. CAPEX + OPEX for 7 years). If any bidder quotes CAPEX as over 70% of total project cost, DST/GIL (Purchaser) shall cap CAPEX at 70% and shall pay 30% of total project cost in 28 equal instalments for seven years post project Go-Live.
3. The Technically qualified bidders shall be required to provide the detailed breakup of entire price bid in sealed envelope before the commercial/financial opening of the tender.
4. L1 bidder after RA process, shall be required to provide the detailed breakup of entire price bid as per RA in sealed envelope within 3 days after RA.
5. L1 will be the lowest sum total of rates of all line items including GST as per GeM.
6. All the below-mentioned line items in Table of Price bid should fully comply with Functional, Technical specifications, scope of work and SLA defined in the RFP and should be including all applicable Licenses, Cables and Accessories, Installation, Commissioning and Configuration charges with 7 years warranty and onsite Support.
7. The quantities mentioned below are indicative for bid evaluation purpose only. Based on actual requirement/specific requirement & as per designed document proposed by the bidder to tenderer.
8. Any increase or decrease in the rates of the applicable taxes, duties or any new levies on account of changes in law shall be to the account of Tenderer.
9. Bidder has to submit separate sealed cover for EMD & financial break up. Also, subject should be super-scribed on sealed cover.
10. In case of consortium, the invoice should be raised by the Lead bidder only and payment shall be paid to Lead bidder only.

## Schedule I: Bid Price Civil

A. Civil & Interiors:				Figure in INR				
Sl. No	Item Description	UOM	Qty	Unit Rate	Total Amt	GST Rate %	GST Amt.	Total Amt with all taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D + F)
1	Civil Infrastructure Work	LOT	1					
	(Pile Work, Structure Work, Earth Work, Concrete Work, reinforced Cement Concrete, Brick Work) AND							
	Other Civil, Interior and Exterior (Façade, Boundary wall, internal roads, landscape) Work							
	(Stonework, Marble Work, Wood & PVC Work, Steel Work, Flooring, Roofing Work, Finishing, Dismantling & Demolishing(if any), Rainwater Harvesting, Road Work, Drainage, Aluminum, Water Proofing Work, Horticulture Work, Structural Glazing and Aluminum Composite Panel, False Ceiling, Raise Floor, Painting / POP, Ramps, / Steps, Fire Rated Doors & Partitions, Landscaping Work, Boundary Wall etc.)							
2	PLUMBING WORKS (INTERNAL)	LOT	1					
	(Sewerage System, Soil Waste Vent Pipes & Fittings, Internal Water Supply, Sanitary Fixtures etc.)							
3	PLUMBING WORKS (EXTERNAL)	LOT	1					
	(Sewerage System, Storm Water Drainage System, External Water Supply System, Tube well & Tube well Pumps, Internal & External Fire Hydrant System, Sanitary Fixtures, Pumping System, Suction & Delivery Pipes & Valves for Water Supply Pumps etc.)							
4	FIRE FIGHTING WORKS	LOT	1					
	(Fire Fighting Pumps & Equipment, Internal & External Fire Hydrant System, Wet Riser & Sprinkler System, Fire Extinguishers etc.)							
5	<b>Additional Land Scope of Work</b>	LOT	1					
	<b>(Parking, Landscaping, Boundary wall with electric fencing and solar roof top at parking area, HORTICULTURE etc. as per the section- 6 and section -9 of this corrigendum)</b>							



<b>B. Modular Furniture:</b>								
Sl. No	Item Description	UOM	Qty	Unit Rate	Total Amt	GST Rate %	GST Amt.	Total Amt with all taxes
1	MODULAR FURNITURE (Furniture for entire building i.e., NOC, SOC, Innovation Centre, Helpdesk, Reception, customer, pantry, Security Cabin, Driver Rest Room, Waiting Room, Conference Room, Meeting Room, Managers Rooms, and other office areas <b>as per the section -7 and Section -8 of this corrigendum.</b> )	LOT	1					
	Modular furniture includes Chairs, desks, walls, ceilings, floorings, Tables, Storage cabinets, acoustic paneling, doors, White Board, Notice Boards, Fire safe storage, Workstations, Personal computers, Water Filter, Sofas, Shoe Rack, Dustbins, etc.							
Sl. No	Item Description	UOM	Qty	Unit Rate	Total Amt	GST Rate %	GST Amt.	Total Amt with all taxes
1	IGBC Rating Certification	No.	1					

**Additional Item**

Sl. No	Item Description	UOM	Qty	Unit Rate	Total Amt	GST Rate %	GST Amt.	Total Amt with all taxes
1	Any other components required to cater to the scope of work mentioned in RFP. (Bidder to specify breakup)	Lot	1					
<b>Grand Total Price in INR for Schedule I</b>								

**Schedule II: Bid Non-IT**

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
<b>A. ELECTRICAL WORKS:</b>								

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
1	Electrical wiring, MCCB & MCB/ELCB & ACB & DB, Cable Trays, Earthing, Lightning Protection System, HV & MV Cable Laying, HV & MV Cable joining & End termination, Civil Items, Light Fixtures, HT Switchgear, Transformers, HT Cable, Battery Charger, HT & LT Panels, Sandwich Bus duct, LT Cables & Cable Trays, Cable Terminations, Raceways, Busbar Trunking System, Power receptacles, Metering Cubicle, Cable Laying, Rubber mats etc.	LOT	1					
2	HT Panel with 1 incomer and 1 outgoing and accessories	Set	2					
3	Metering panel	Set	2					
4	33KV Dry type Transformer (Capacity: 5 MVA)	Nos	2					
5	Transformer Output panel	Nos	Bidder to Propose					
6	HT Cable	Mtr	Bidder to Propose					
7	BUS BAR trunk from Transformer-to-Transformer output panel and DG to DG Sync Panel with all accessories	Mtr	Bidder to Propose					
8	KVM Switch*	Nos	Bidder to Propose					
9	Indoor/Outdoor/Straight Through type heat shrinkable HT cable termination kit	Nos	Bidder to Propose					
*10.1	Diesel Generator (Data Centre continuous rated) 5 MVA	Set	2					
or								
*10.2	Diesel Generator (Data Centre continuous rated) 2.5 MVA		4					
Note: The bidder shall be quoting the price of DG set according to their proposed solution. If bidder has proposed 5 MVA or 2.5 MVA DG set, the bidder should fill the price corresponding to the line item.								
11	HSD tank and accessories	Set	1					
12	DG exhaust stack as manufacturer standard and	Lot	Bidder to Propose					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
	compliance as per CPCB norms.							
13	Fuel piping with valves and accessories.	Set	Bidder to Propose					
14	Fuel Pump with intrinsically safe meter having feature to connect to DCIM for real time fuel consumption monitoring	Set	Bidder to Propose					
15	Cables as per cable schedule with terminations	Lot	1					
16	UPS systems 600 KVA for Critical Load with Li-ion batteries for 30 minutes backup including battery Breakers and all required accessories.	Set	4					
17	UPS systems 250 KVA for Non-Critical Load with Li-ion batteries for 30 minutes backup including battery Breakers and all required accessories.	Set	2					
18	Main LT panel 1 (MLTP 1) with all accessories	Set	1					
19	Main LT panel 2 (MLTP 2) with all accessories	Set	1					
20	LT panel (SDC LPT 2) with all accessories	Set	2					
21	DG Synchronizing Panel (IP 66) outdoor type	Set	1					
22	Copper Earth pit	Nos	Bidder to Propose					
23	GI Earth Pit	Nos	Bidder to Propose					
24	Copper earth Strip with insulation	Mtr	Bidder to Propose					
25	GI Earth Strip with insulation	Mtr	Bidder to Propose					
26	Distribution Board (TPN)	Nos	Bidder to Propose					
27	Distribution Board (SPN)	Nos	Bidder to Propose					
28	Sub mains cabling	Mtr	Bidder to Propose					
29	Light and Power point Wiring	Lot	1					
30	Modular switch board with switches and sockets for wall	Nos	Bidder to Propose					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
31	Modular switch board with switches and sockets for Desk	Nos	Bidder to Propose					
32	MS Conduit with accessories	Mtr	Bidder to Propose					
33	PVC conduit with accessories	Mtr	Bidder to Propose					
34	Flexible MS conduit	Mtr	Bidder to Propose					
35	Flexible PVC conduit	Mtr	Bidder to Propose					
36	Smart LED lights Rectangular	Nos	Bidder to Propose					
37	Smart LED light Round	Nos	Bidder to Propose					
38	Smart LED Lights Square 2'x2'	Nos	Bidder to Propose					
39	Smart LED lights Square 1'x1'	Nos	Bidder to Propose					
40	Occupancy sensor range 6-7 meter	Nos	Bidder to Propose					
41	NEMA (IEC 309) connectors with breaker	Nos	Bidder to Propose					
42	Track bus way (BBT) inside Data Centre with all accessories	Mtr	Bidder to Propose					
43	Tap off box with accessories for track busway system	Nos	Bidder to Propose					
44	UPS output panel with K13 isolation transformer for critical load	Nos	4					
45	HVAC panel	Nos	Bidder to Propose					
46	SVG Panel	Nos	Bidder to Propose					
47	APF Panel	Nos	Bidder to Propose					
48	Industrial Socket for PAC and CAC	Nos	Bidder to Propose					
49	Equipotential grid on DC below raise floor by 25x3 copper strip with insulation	Mtr	Bidder to Propose					
50	Perforated cable tray (factory made galvanized). Please add items for various size	Mtr	Bidder to Propose					
51	MS raceway with cover. (Bidder to Propose the sizes)	Mtr	Bidder to Propose					
52	Ladder tray. Please add items for various size	Mtr	Bidder to Propose					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
53	PVC raceway under PCC floor	Mtr	Bidder to Propose					
54	Wall fans	Nos	Bidder to Propose					
55	Ceiling Fan	Nos	Bidder to Propose					
56	Single line diagram A2 size laminated	Nos	30					
57	Exhaust fan (min 18-inch dia.) with gravity damper	Lot	1					
58	Clamp meter AC, DC, with clamp side suitable to fit in 240 sq. mm single core cable	Nos	2					
59	Intelligent PDU for racks	Nos	300					
60	Server /Network Rack (800 X 1200 mm)	Nos	150					
61	Data Centre Infrastructure Management System	Lot	1					
62	Battery Impedance tester	Nos	1					
63	Thermal Temperature gun	Nos	2					
64	Round bottomed fire buckets-4 Nos	Lot	1					
65	shock treatment chart	Nos	20					
66	Danger boards Signage	Nos	50					
67	Fixing of as built Single line drawing duly laminated / framed in A1 size.	Lot	1					
68	cable route markers with necessary angle iron supports	Lot	1					
69	Temporary lighting, temporary DB, Power Supply to all service vendor for DC construction till Go-live.	Lot	1					
70	Solar Inverter with all cabling, software and required all accessories	Nos	2					
71	Solar panel with frame structure and required all accessories	Nos	Bidder to Propose					
72	Raise floor	Sq.ft	Bidder to Propose					
73	False ceiling	Sq.ft	Bidder to Propose					
74	Intelligent Data cabling system (Copper & Fiber)	lot	Bidder to Propose					
75	Fiber runner	Lot	Bidder to Propose					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
76	Necessary passive cabling and accessories for existing EPABX system (Voice system)	Lot	Bidder to Propose					
77	Passenger Lift (Elevator System)	Set	2					
78	Material Lift (Elevator System)	Set	1					
<b>B. HVAC:</b>								
1	In-row cooling system with all accessories for all Server farm area	Nos	58					
2	Air cooled chiller system 570 TR with all sub-components and accessories	Set	2					
3	SS Piping to connect chiller with In-row cooling with insulation and all accessories (pump, motor, flow meter, valve, etc.) required	Lot	Bidder to Propose					
4	Wall mount Precision Air Handling Units for all IBMS room	Nos	Bidder to Propose					
5	Precision Air Handling (CRAC) Units for all UPS & battery Rooms	Nos	Bidder to Propose					
6	Dehumidifier water line piping with all accessories	Mtr	Bidder to Propose					
7	VRF system for Other Areas	Nos	Bidder to Propose					
8	Comfort AC indoor units	Nos	Bidder to Propose					
9	Refrigerant piping for VRV/VRF system with insulation	Mtr	Bidder to Propose					
10	Cold aisle/Hot aisle containment with door and accessories	Sq. Mtr	Bidder to Propose					
<b>C. SAFETY, SECURITY, SURVEILLANCE:</b>								
1	Addressable fire alarm system with cabling & all accessories	Lot	1					
2	Gas based suppression system for server floor and utility floors (1st , 2nd and 3rd floor)	Lot	1					
3	Aspiration smoke detection system for Server floors (1st & 3rd floors)	Lot	1					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
4	PTZ Camera	Nos	Bidder to Propose					
5	Bullet fixed camera	Nos	Bidder to Propose					
6	Dome camera	Nos	Bidder to Propose					
7	NVR for Close circuit television (CCTV)	Nos	Bidder to Propose					
8	Video management software (VMS) for video analytics	Set	Bidder to Propose					
9	55-inch Display screen (Integrated Security Room)	Nos	1					
10	Door Access control system	Lot	1					
11	Flab Barrier	Nos	Bidder to Propose					
12	Swipe barrier	Nos	1					
13	Full height turnstile	Nos	1					
14	Baggage Screening System (X-Ray Based)	Nos	1					
15	Metal detector Full height	Nos	1					
16	Handheld metal detector	Nos	4					
17	Fire extinguisher	Nos	50					
18	Water leak detection system	Lot	1					
19	Rodent repellent system	Lot	1					
20	Steel fireproof Media storage 340 ltr.	Nos	3					
21	Asset tracking system	Lot	1					
22	Rack access control system	Lot	1					
23	Rack humidity and temp sensor	Lot	1					
24	Workstation for access control system	Nos	Bidder to Propose					
25	Workstation for CCTV	Nos	Bidder to Propose					
26	Workstation for DCIM	Nos	Bidder to Propose					
27	Degausser (for CD, DVD, SATA/HDD drive with receipt printing)	Nos	Bidder to Propose					
28	Mobile Computer Trolley with monitor, keyboard and mouse of desired specifications.	Set	2					
29	Safety Gloves, Jacket, Boot, Goggles, Fireman's axe Etc.	Set	4					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
30	Evacuation Chart	Nos	20					
31	Signage's	Nos	50					
32	Self-illumination tape	Mtr	500					
33	Portable oxygen cylinder with mask	Nos	4					
34	LED torch (Industrial type)	Nos	4					
35	Portable emergency light	Nos	4					
36	Visitor management system with all hardware such as Photo I card printer, Computer, camera and software etc.	Lot	1					
37	Fire Hydrant and water mist System with all subcomponents like Pumps, storage Tanks and accessories (for support areas).	Lot	1					
38	Public Address system	Set	1					
39	Data safe	Nos	2					
<b>D. NOC, SOC &amp; Innovation Centre Infrastructure:</b>								
1	Video Wall for NOC & SOC room (SITC of 7x2 Matrix Video Wall System with Controllers, Cables (Fiber) and accessories complete in all respect & Podium system)	Nos	2					
2	Video Wall for DCIM room & Innovation Centre SITC of 4x2 Matrix Video Wall System with Controllers, Cables (Fiber) and accessories complete in all respect & Podium system	Nos	2					
3	85" LED display on Innovation Centre wall (LH, RH and center side)	Nos	4					
<b>E. MISCELLANEOUS/FMS Items (Indicative but not Limited):</b>								
1	Hand operated forklift	Nos	4					
2	Paper shredder	Nos	4					
3	Water filter with RO facility	Nos	5					
4	Water dispenser	Nos	5					
5	Shoes stand 20 pair shoe capacity	Nos	4					



Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
6	first aid box	Nos	3					
7	DG foundation as per OEM specification	Cu Mtr	Bidder to Propose					
8	DG shed	Lot	1					
9	Wire Mesh partition	Sq. Mtr	Bidder to Propose					
10	Fixed Iron Grill partition	Kg	Bidder to Propose					
11	Key Box	Nos	4					
12	Shoe Shiner (dual shade electrically motor operated with sensor)	Nos	4					
13	Dust bin (Stainless steel), Tile puller (3 cup suction type), Vacuum Cleaner Industrial type, White board, pin up Notice board, etc. but not limited	Lot	1					
14	Hygiene including the maintenance and consumables i.e., stationery and toiletry	Lot	1					
15	Refrigerator 300 Ltr.	Nos	4					
16	Tea/ Coffee Vending machine	Nos	4					
17	Motorized Heavy Duty Trolley, Boom Barrier, RFID System etc.	Lot	1					
<b>F. Installation, commissioning &amp; Project management:</b>								
1	Transport charges, loading, unloading, lifting, shifting and Installation charges of the project	Lot	1					
2	Testing & commissioning charges of the project	Lot	1					
3	Project management charges including manpower deployment charges for the project execution	Lot	1					
4	Project Handover Documentation charges	Lot	1					
<b>G. Certification Cost:</b>								
1	Uptime Tier III Certification of Design of the Data Centre	Lot	1					
2	Uptime Tier III Certification of constructed Facility for all areas of the Data Centre	Lot	1					

Sr. No.	Item Description	UOM	Quantity	Figure in INR				
				Unit Rate	Total Amt.	GST Rate %	GST Amt.	Total Amt. Inc. taxes
		(A)	(B)	(C)	(D) = (B x C)	(E)	(F) = D x E/100	(G) = (D+F)
	Facility to be constructed under this contract							
3	Uptime Tier III Certification of operational sustainability of the Data Centre	Lot	1					
<b>Additional Item</b>								
1	Any other components required to cater the scope of work mentioned in this RFP. (Bidder to specify breakup)	Lot	1					
<b>Grand Total Price in INR for Schedule II</b>								

### Schedule III: Bid Price for O&M including Manpower

<b>Operation &amp; Maintenance (O&amp;M)</b>		
1	*Operation & Maintenance (O&M) charges for support up to 7 years from final Go-Live including Manpower	
<b>Grand Total Price in INR for Schedule III</b>		

\*Year wise O&M breakup with Manpower cost needs to be given by Bidder.

## Section -31 Technical Specifications

### 15.1 2.5 MVA DG Set

Diesel Generator		
Sr. No.	Parameter	Minimum Requirement
1	Scope	This scope covers the Supply, installation, assembly, inspections, seismic qualification and testing at tenderer's works, packaging, supply transportation from place of manufacture to site and unloading at site, storage, handling and transportation of equipment from storage to erection site, complete erection, site testing after erection, commissioning, performance testing of seismically qualified emergency Diesel Generator (DG) units with each of 2500 KVA at 0.8 p.f lagging, 415 V, 3 phase, 3 wire, 50Hz along with all auxiliaries and accessories. It is not the intent to specify completely herein, all details of design and construction of components and their material.
2	General	The components and their material selected shall be suitable for intensive power plant service with high efficiency and necessitates minimum surveillance and maintenance.
		The materials and components not specifically stated in this specification, and which should be necessary for meeting the requirements of this specification. All technical specifications shall be included in the scope. Whether called for specifically or not, all accessories required for operation of DG should be deemed to be considered as part of the tenderer's scope of supply
		The diesel engine should be Reliable, rugged, durable design with four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
		It should be factory designed and tested. It should be with low brake-specific fuel consumption technology
		The DG should be fully prototype tested with certified torsional vibration analysis feature available for management
		The fuel oil system completes with fuel oil day tank, engine driven fuel oil feed pump, isolating valve on the fuel supply line to the day tank, necessary piping & fittings, duplex strainers, valves, filters, instruments and control required between day tank and engine.
		The generator set should be designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002. The generator set should be designed to comply with ISO 8528 regulation.
		The lubricating oil system complete with lube oil sump, engine driven lube oil pump, AC motor driven standby lube oil pump, standby AC motor driven pre-lube oil pump (if the pre lube oil pump to be operated continuously), lube oil cooler, electrical lube oil preheater if envisaged, necessary piping, fittings, valves, filters, strainers, instruments, and control hardware as required.
		The air intake system should complete with filter, silencer (if required), pipes, fittings, supports and other necessary accessories as required.
		The engine exhaust gas system should be complete with turbocharger, exhaust manifold, silencer, exhaust piping up to discharge, insulation, expansion bellows, necessary pipes support, adapters etc. as required

Diesel Generator		
Sr. No.	Parameter	Minimum Requirement
		The design, fabrication, and erection of Exhaust stack / Chimney for each DG set with steel supporting structures should be as per local regulatory norms
		The charge air system should complete with turbocharger, charge air cooler, filter, silencer etc. as required.
		The governing system should complete with instrumentation and controls as required for safe and proper operation of DG set and as specified by the bidder
		The complete instrumentation and control system for DG set should required as specified.
		The alternator should directly coupled with, brushless exciter, automatic voltage regulator, CTs, alarm initiating devices, indicating instruments and other accessories as required. Terminal arrangement shall be suitable for external cable connections.
		All electrical equipment shall be provided with required number of cable glands, lugs and other accessories for connection of cables.
3	Fuel Tank	The capacity fuel tank with 12 hours fuel requirement. The fuel requirement calculations need to be submitted along with technical bid
4	Battery	Dry Maintenance free batteries with leads and terminals.
5	AMF Panel	Inbuilt / Outdoor type AMF panel shall be provided complete protection to engine, alternator, starting & stopping DG set automatically on mains failure / resumption.
6	Monitoring	The DG set should be manageable via DCIM with MODBUS Protocol with RS 485 Communication Port so that all software features like DG Set Status - On/Off, Voltage, Current, Frequency, Power Factor, Alarms, Diesel Level etc. can be monitored on the DCIM through video wall screen.
		<b>Monitoring Features required for below parameters:</b> Phase Voltages & Currents, Frequency, Reverse power, Genset kVA, kW, kWh, kVAR, Power Factor, Canopy Temperature, Lube oil Pressure, Engine Temperature, RPM, Run Hours, number of starts, Fuel Level, Auto / Manual Stop, Battery charge condition, AMF feature
		The DG set should be with modular Control System to easily adapt to any configuration, viz standalone, interlocked, synchronized or grid connected
		The DG set should be with Modbus communication, Synchronization, Remote Monitoring facility through user can view Critical genset parameters on laptop or mobile
		It should give alarm in critical situation like Low fuel level, low lube oil pressure, fuel theft, Engine speed, High Engine temperature, Mains On/ Off, Low/ High battery voltage.
7	Airlet	<ul style="list-style-type: none"> <li>• Aftercooler, fresh water, corrosion resistant coated (air side)</li> <li>• Air inlet shutoff</li> <li>• Air Cleaner</li> <li>• Breather, crankcase, top-mounted</li> <li>• Turbocharger, engine oil lubricated</li> </ul>

Diesel Generator		
Sr. No.	Parameter	Minimum Requirement
8	Cooling	<ul style="list-style-type: none"> <li>• Engine coolant water drains</li> <li>• Front Mounted Turbos</li> <li>• Three-bundle oil cooler.</li> <li>• Water Temperature Regulator</li> <li>• Jacket Water Thermostats</li> </ul>
9	Exhaust:	<ul style="list-style-type: none"> <li>• 457 mm (18 in) Cat bolt pattern</li> <li>• Dry, gas tight, exhaust manifold</li> <li>• Includes adapter, flexible exhaust fitting</li> </ul>
10	Fuel	Duplex
11	Governor	Electronic/ Actuators
12	Lube	Centrifugal oil filters with single shutoff <ul style="list-style-type: none"> <li>• Service side engine mounted on cylinder block inspection covers</li> <li>• Wet oil sump. Includes engine-driven main lubrication pump, installed oil lines, engine-driven oil pump and oil pan.</li> <li>• Oil filler and dipstick</li> <li>• Valve, oil pressure regulating</li> <li>• Valves, crankcase explosion relief</li> </ul>
13	Mounting	<ul style="list-style-type: none"> <li>• Damper, torsional vibration</li> <li>• Engine and Generator Mounting</li> </ul>
14	Starting / Charging	<ul style="list-style-type: none"> <li>• Vane type air starter</li> <li>• Two motors, engine mounted at rear, on left side</li> <li>• Includes air silencer</li> <li>• Line Group for Single Point Custom Connection</li> </ul>
15	Rating	Engine Power Generator Power Engine efficiency (ISO 3046/1) Engine efficiency (nominal)
16	Monitoring System Features	<ul style="list-style-type: none"> <li>• inbuilt monitor to display all engine parameters and alarm annunciation</li> <li>• Annunciation of all engine shutdowns, alarms, and status points</li> <li>• Start/prelude control switch, fuel control switch and emergency stop buttons</li> <li>• Speed control switch with automatic changing to ball head control when a governor failure occurs, if ball head control is available. Contacts are available for customer use.</li> <li>• Selection of local/remote control of engine</li> <li>• Selection of idle/rated control of engine.</li> <li>• Equipped for remote communication</li> <li>• Four 4-20mA outputs (programmable)</li> <li>• Relay contract signals to the remote monitoring system (summary shutdown, summary alarm, local operation/remote, engine running, PLC failure, fuel control and idle /rated).</li> </ul>

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Sr. No.	Parameter	Minimum Requirement
17	Engine	<p>The engine shall be having following features :</p> <ul style="list-style-type: none"> <li>· Stationary,</li> <li>· Fully enclosed</li> <li>· Four (4) stroke direct injection</li> <li>· Generating Suitable BHP</li> <li>· Turbo charged and low temperature with after cooled Radiator cooled 1500 RPM in accordance to BS 5514 and IS: 10002</li> <li>· Compression ignition</li> <li>· Radiator cooled,</li> <li>· Cold battery starting</li> <li>· should be provided with reverse active power protection.</li> <li>· Suitable for black start</li> <li>· Supplied with all accessories.</li> </ul> <p>Engine Design consideration: There is no limitations on the number and frequency of starts in any given period. As per Make/Model, the Controller PCC/DSE (Deepsea) / equivalent shall be mounted on Engine.</p>
		<p><b>Alarms/Trip (Audio and Visual)</b> Minimum following Alarm/Trip indications shall be provided:</p> <ol style="list-style-type: none"> <li>a. Over speed.</li> <li>b. High water temperature.</li> <li>c. Low lube oil pressure.</li> </ol>
		<p><b>Lube-Oil Priming Pump</b> Intermittent operation lube-oil priming pump (an A.C. motor driven ) shall be provided. All necessary accessories/component shall be included for lubrication system i.e. necessary piping, fitting instruments etc..</p>
		<p><b>Instrumentation on Engine</b> Electronic Instrument panel shall be provided with following indications as minimum: -</p> <ol style="list-style-type: none"> <li>a. RPM indication</li> <li>b. Lube oil pressure indication.</li> </ol>
		<ol style="list-style-type: none"> <li>c. Lube oil temperature indication.</li> <li>d. Starting switch with key.</li> <li>e. Water temperature indication.</li> <li>f. Electrical Hour meter</li> <li>g. Emergency stops.</li> </ol>
		<p><b>Day Service Fuel Tank</b></p> <ul style="list-style-type: none"> <li>· Shall be provided with suitable calibration scale.</li> <li>· Made of 2 mm thick MS sheet for required fuel storage capacity for 12 hours DG power back up with all accessories such as inlet pipe connection, oil level indicator, outlet pipe connection, trough to collect spilt oil, air vent pipe with air filter, manhole with cover, low level and full level float valve arrangements with all fittings, interconnections between tanks and engine.</li> <li>· The Fuel to be used for trials and acceptance tests shall be high speed diesel.</li> </ul> <p>First fill HSD per DG set required coolant and lube oil is included in the scope of this contract at no. extra cost</p>

Diesel Generator		
Sr. No.	Parameter	Minimum Requirement
		<p><b>Crank Case</b></p> <ul style="list-style-type: none"> <li>· Having Steel construction with heavy steel plates to form water compartments around the cylinder.</li> <li>· Crank shaft and governor adequate detachable doors shall be provided on both side of the crank case, to facilitate access to the big end and main bearings.</li> <li>· Additional doors shall be provided to facilitate access for clearing of the water jacket. These doors shall also be detachable.</li> </ul>
		<p><b>Camshaft</b></p> <ul style="list-style-type: none"> <li>· Made of induction hardened steel alloy with gear drive, and one of this shall be provided for each block of cylinders.</li> <li>· Built up in replaceable sections of heat-treated precision machined steel with chromium plating.</li> <li>· The fuel injection cams of the split removable type shall be doweled for angular location.</li> <li>· All the cams shall have hardened profiles.</li> </ul>
		<p><b>Crank Shaft</b></p> <ul style="list-style-type: none"> <li>· Made of high tensile strength steel forging and shall have a suitable flange to which the flywheel shall be bolted.</li> <li>· The bearing journals and fillets shall be induction hardened; and fully balanced.</li> </ul>
		<p><b>Main and Big End Bearings</b></p> <ul style="list-style-type: none"> <li>· Shall be detachable shells of high-grade bearing material</li> <li>· Shall be pre-finished.</li> <li>· The dimensions of the big end bearings shall be such that the connecting rods can be withdrawn through the cylinder liners.</li> </ul>
		<p><b>Connecting Rods</b></p> <ul style="list-style-type: none"> <li>· Made of high grade drop forged steel I - beam section, centre to centre length.</li> <li>· The rods shall be rifle drilled for pressure lubrication of piston pin.</li> <li>· The rod shall be tapered at piston pin end provided to reduce unit pressures.</li> <li>· The piston pin of suitable diameter shall be full floating and made of tubular steel and retained by a snap ring.</li> </ul>
		<p><b>Cylinder Liners</b></p> <ul style="list-style-type: none"> <li>· Supported with replaceable wet liners, cast iron alloy, and provided with specially machined grooves in their bores to give an oil retaining surface. These liners shall be easily replaceable without reborng the block.</li> </ul>
		<p><b>Piston</b></p> <ul style="list-style-type: none"> <li>· Made of forged aluminium alloy, cam ground and machined on outer surface.</li> <li>· Shall be oil cooled</li> <li>· The piston shall be fitted with an oil scraper ring, and compression rings of hardened cast iron alloy.</li> </ul>

<b>Diesel Generator</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
		<p><b>Bed Plate</b></p> <ul style="list-style-type: none"> <li>· Shall be Fabricated from M.S. channel of size 200 mm x 75 mm. or 300 mm x 90 mm. as required.</li> <li>· The welding shall be radiographed, and the entire fabrication shall be stress relieved after welding.</li> <li>· The bed plate shall have integral well ribbed diaphragms for supporting the main bearing housings. This plate shall have an integral lube oil pump and shall be mounted with the engine and exciter on a common steel sub-base.</li> </ul>
		<p><b>Exhaust Manifold</b></p> <p>The exhaust manifold shall be</p> <ul style="list-style-type: none"> <li>· Multi-branch, of insulated design utilizing Ni-resist casting.</li> </ul>
		<p><b>Flywheel</b></p> <ul style="list-style-type: none"> <li>· The flywheel, which shall conform to requirements of NEMA/ASA/BS codes, shall be made of mild steel statically balanced after machining and shall have graduated markings around the periphery. This will facilitate checking of valves and fuel pump timing. Barring slots shall be provided around the flywheel rim for hand-barring.</li> </ul>
		<ul style="list-style-type: none"> <li>· <b>Other Auxiliary Equipment/Services</b></li> </ul> <p>These shall be complete, and shall inter-alia include the following: -</p> <ol style="list-style-type: none"> <li>a. Silencer: Exhaust Silencer (2 Nos. per Engine) shall be residential type to reduce the noise level.</li> <li>b. Cooling: The engine shall be Radiator cooled type. Adequate capacity Radiator shall be provided.</li> </ol>
		<p><b>Governing System</b></p> <ul style="list-style-type: none"> <li>· The governor shall be electronic type suitable for class A-1. This shall control the generator frequency and shall be suitable for operation as per the selected battery voltage (24 V DC).</li> <li>· The governor shall be provided with a manually adjustable over speed trip mechanism to automatically shut-off the engine or the fuel supply if the set reaches 120% of rated speed.</li> </ul>
		<ul style="list-style-type: none"> <li>· It shall also provide an engine mounted emergency push button/lever shall be provided. This shall trip the engine when depressed. This lever shall be suitably protected against accidental tripping.</li> </ul>
		<p><b>Painting</b></p> <ul style="list-style-type: none"> <li>· It shall be Bidder's responsibility to paint all exposed metal parts and equipment supplied by Bidder.</li> <li>· All sheet metal work shall undergo a process of phosphating, passivating and then sprayed with high corrosion resistant primer.</li> <li>· The finishing treatment shall be of two coats of synthetic enamel paint of approved colour.</li> <li>· All piping shall be colour coded.</li> </ul>



<b>Diesel Generator</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
		<p><b>Radiator</b></p> <ul style="list-style-type: none"> <li>· The Radiator for cooling lube oil and jacket water shall be as per the Engine requirement.</li> <li>· Fuel injection and valves shall not require frequent adjustment while in service.</li> <li>· All filters like fuel, lubrication oil, by pass etc. shall be provided in the engine and shall be dry, paper element type.</li> <li>· Starting system shall be 24V DC comprising of batteries (24 plates, 180 AH capacity), Voltage regulator and arrangement for initial charging of batteries.</li> </ul>
18	Alternator	<ul style="list-style-type: none"> <li>· Brushless synchronous and suitable for 3 phase 415 Volts, 4 wire, 50Hz, 0.8 p.f, 1500 RPM at 47 degree C ambient temperature.</li> <li>· Supporting Drip proof, screen protected as per IP 23.</li> <li>· Suitable for coupling directly to the diesel engines</li> <li>· Suitable for sustaining a 10% overload for 1 hour in any 12-hour period without injury.</li> <li>· The terminal arrangement for alternator shall be suitable for Cable connections of adequate size to deliver the full load of the alternator.</li> </ul>
		<ul style="list-style-type: none"> <li>· Include one set of suitably rated foot mounted anti - condensation heaters. The alternator shall be Single/double bearing type and self-ventilating.</li> <li>· The alternators shall be Continuous rated and shall have class 'H' insulation designed and built to withstand tropical conditions. It shall generally conform to BS: 5000 (part - 99).</li> <li>· The alternator shall also have a solid-state type automatic voltage regulator (A.V.R.) suitable for single running with control limits of 1% from no load to full load under normal load changes. It shall be of static type and complete with cross current compensation. The regulator shall be provided with voltage adjusting potentiometer, and shall be complete with all alarm contacts, internal wiring, etc.</li> <li>· The Engine and Alternator shall be direct coupled and mounted on a common rigid fabricated steel base frame with suitable vibration isolation system.</li> </ul>
19	Exciter	It should be Self excited, self-regulated, providing alternator output regulation at plus or minus 2.5%.
20	Tests at Manufacturer's Work	<p><b>On DG Set</b></p> <ol style="list-style-type: none"> <li>a. Maximum power load capacity.</li> <li>b. Maximum motor starting capacity</li> <li>c. Endurance test.</li> <li>d. Fuel consumption at full load, 50% load, 75% load and 25% load.</li> <li>e. Engine - Alternator cooling air flow.</li> </ol>

<b>Diesel Generator</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
		<p><b>On the Alternator</b></p> <ul style="list-style-type: none"> <li>a. High voltage tests on stator and rotor windings.</li> <li>b. Insulation resistance of stator and rotor windings.</li> <li>c. Temperature rise test.</li> <li>d. Measurement of resistance of stator and rotor windings.</li> <li>e. Measurement of losses.</li> <li>f. Mechanical balance.</li> <li>g. Load rejection and over speed tests.</li> <li>h. Stator voltage and current tests.</li> <li>i. Stator phase sequence check.</li> </ul>
		<p><b>On the Exciter</b></p> <ul style="list-style-type: none"> <li>a. High voltage tests on stator and rotor winding.</li> <li>b. Insulation resistance of stator and rotor windings.</li> <li>c. Temperature rise test.</li> <li>d. Measurement of resistance of stator &amp; rotor winding.</li> <li>e. Measurement of losses.</li> <li>f. Response ratio test.</li> <li>g. Over speed test.</li> <li>h. Mechanical Balance test.</li> </ul>
		<p><b>On the Automatic Voltage Regulator</b></p> <ul style="list-style-type: none"> <li>a. Sensitivity test.</li> <li>b. Response time test.</li> <li>c. Shop inspection</li> </ul> <p>All routine test as per IS/BS codes shall be conducted on alternator, exciter and AVR.</p>
		<p>The offered DG set rating shall be suitable for ISO 8528 confirming by the Engine Manufacturer.</p>
		<p>The following testing shall be carried out for DG Sets at Manufacturer's work as per ISO 8528 standards,</p> <ul style="list-style-type: none"> <li>ü 75% load: 30 Min.</li> <li>ü 100% load: 15 Min.</li> <li>ü 110% overload: 15 Min.</li> <li>ü Total Testing Time: 1 Hrs.</li> </ul> <p>NOTE : All cost shall be born by Bidders ( including client/its representative visit to the SITE inclusive of travel, lodging/stay etc.). The bidder must test all controls/operating safeties will be checked and proper record will be maintained. The Cost of all Fuel, lubricants etc. required for performance testing as per above at Vendors works shall be borne by vendor. . Load for testing at site shall be arranged by bidder at their own cost</p>
		<p>The bidder should require to keep provision of lube oil and Fuel 12 hours with the DG sets. Load and Fuel required for site Tests shall be borne by bidder only. The costs of man power and arrangement of staff for trial run/running in period will be borne by the bidder.</p>

Diesel Generator		
Sr. No.	Parameter	Minimum Requirement
21	Installations	<p><b>General</b></p> <p>The work shall be executed and measured as per the instructions/guidelines given in this RFP.</p> <p>The work shall be carried out in compliance with the drawings and design as would be issued to the Bidder by the ENGINEER- INCHARGE duly signed and stamped by them. The Bidder shall not take cognizance of any drawings, designs, specifications etc. not bearing ENGINEER-INCHARGE representative's signature and stamp. Similarly, the Bidder shall not take cognizance of instructions given by any other Authority except the instructions given by the Project Manager in writing.</p> <p>The work shall be executed and measured as per metric dimensions given in this RFP.</p> <p>The Bidder shall acquaint himself fully with the partial provisions for supports that may be available in the structure and utilize them to the extent possible. In any case the Bidder shall provide all the supports regardless of provisions that they have been already made. Nothing extra shall be payable for situations where insert plates (for supports) are not available or are not useful.</p>
		<p><b>Measurements</b></p> <p>All measurements shall be taken in accordance with relevant IS codes, unless otherwise specified.</p>
22	DC Battery System	<p>The bidder should consider batteries of 12 Volts lead acid shall be provided. 2 sets of two batteries, each connected in series, shall be connected in parallel according to capacity for each DG set. DG battery backup should be considered 30 minutes. The batteries shall be supplied duly filled charged and acid filled.</p>
23	Pipes	<p><b>Exhaust Silencer Piping</b></p> <ul style="list-style-type: none"> <li>· Heavy-duty MS pipes confirming to Class -B.</li> <li>· Exhaust pipe along with silencer inside the building shall be provided with mineral wool insulation with chicken mesh wrapping and 26 SWG aluminium cladding.</li> <li>· Suitable length of flexible piping shall be used for connecting the exhaust piping to the engine as per the recommendations of the manufacturer.</li> <li>· All terminal connections and pipes joint shall be of welded construction. The terminals of sizes 2" and above shall be butt welded, and of sizes 1.5" and below shall be socket welded, complete with flanges, jointing and fasteners.</li> <li>· All the welding shall be done as per relevant ASME/ASA codes. The Bidder will have to indicate beforehand the welding procedure he proposes to use. After confirmation by the ENGINEER-INCHARGE the procedure which is finalized shall be strictly adhered to.</li> </ul>

<b>Diesel Generator</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
24	Inspection and Testing at Site	<p>The Bidder shall inform well in advance in written to the ENGINEER-INCHARGE before commencement of any site testing. All materials like consumable stores, fuel oil grease, lubricating oil etc. required for the trails shall be arranged by the bidder. All pre-commissioning and commissioning test and checks shall be carried out at site. The Bidder shall be required to produce manufacturer's test certificate for the particular batch of materials supplied to him by the manufacturers. The test carried out shall be as per the relevant standards.</p> <p>For examination and testing of materials and the works at site, the Bidder shall provide necessary testing and gauging equipment as required. All such testing and gauging equipment shall be tested for calibration at any approved laboratory as required by the ENGINEER-INCHARGE.</p> <p>The complete installation should be initially started and checked out for operational compliance by manufacturer's representative.</p>
25	Trials (At Site)	<p><b>Preliminary Trials</b></p> <p>The bidder should do erection of generating sets and before carrying out main trials, preliminary site trials shall be conducted in the presence of the ENGINEER-INCHARGE. Such trials shall include the checking and adjustments of all instrument relays, timers, interlocks and meters. Insulation resistance of stator, rotor and exciter windings shall be checked and reading recorded. A check shall be made for the satisfactory working of all auxiliary motors and their starting accessories supplied with the set.</p> <p><b>Main Trials</b></p> <p>a) Bidder is required to provide first fill of lube oil and Fuel (Full day tank) with the DG sets. Actual Load and Fuel required for site Tests shall be borne by client. Duration of test shall be 2 hour or 4 hours can then be decided later by client.</p> <p>b) D.G. Panel shall be tested for automatic operation by injecting proper current and voltage by a separate source. The satisfactory working of automatic operation shall be tested and necessary adjustments shall be done for relays in the presence of the ENGINEER-INCHARGE and the results shall be recorded in the test sheet at 30 minutes intervals. Alternator efficiencies as determined in works test shall be used as the basis of calculation for fuel consumption rate. A tolerance of 3% shall be allowed on the fuel oil consumption to cover possible errors in measurement. Tests providing the satisfactory performance of all safety and operating controls shall be carried out.</p> <p>Governor trials shall be carried out as laid down in BS: 5514.</p> <p>Alternator insulation resistance and commutation check shall be as per BS: 5000.</p> <p>c) Starting time of sets shall be tested at least five times after sufficient time intervals to allow for cold start. On completion of tests, inspection doors shall be removed and running gears inspected and alignment checked.</p> <p>d) Any further reasonable trial as suggested by the ENGINEER- INCHARGE shall be carried out with no extra charges. All instruments, materials and labour required for carrying out the trials shall be provided by the Bidder.</p> <p>e) Test sheets of trials shall be forwarded in quadruplicate to ENGINEER-INCHARGE.</p>

<b>Diesel Generator</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
26	Witness Test	The tests shall be performed in the presence of ENGINEER- INCHARGE. The bidder shall give at least thirty (30) days advance notice of the date when the tests are proposed to be carried out.
27	Performance Requirement	The D.G. set shall operate upto 110% of rated speed, without undue vibration and noise. The unit shall be capable of delivering rated output at 0.8 p.f. at the generator terminals (after derating of the engine due to site conditions). As soon as the set attains rated speed the transient voltage drop at the generator terminal shall not exceed 10% of rated value.
28	Underground Storage Tank	The underground storage tank shall be 32,000 litres capacity with all accessories such as oil level indicator, inlet pipe connection, outlet pipe connection, drain pipe, air vent pipe, manhole with cover and painting. The tank shall be made out of 8 mm thick MS sheet and shall be rested on concrete pedestals and anchored to prevent uplift when the tank is empty. Anti-corrosive painting shall be provided for the tank.
29	Acoustic Enclosure/Canopy for DG Set	The acoustic enclosure, fabricated from high quality sheet steel of minimum 1.6 or 2 mm thickness finished with powder coating shall be of weather proof construction, designed to reduce noise level to maximum 75 dB at 1 m distance. The enclosure shall be provided with a forced ventilation system to restrict the temperature rise within the enclosure to permissible limits.
30	Standards	The DG set should follow below standards: UL, CSA and CE compliant, OEM should have ISO 9001, ISO 14001, ISO 18001 / ISO 45001 certified

## 15.2 CAT6A SFTP cable and accessories

<b>CAT6A SFTP cable and accessories</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	Cable Construction	The cable is constructed of 4 screened pairs with overall screened tin-plated copper braid. Cable should minimise alien crosstalk, provides excellent signal isolation and provides superior electromagnetic interference (EMI) protection.
2	10G supported	System is compliant with the latest ISO/IEC 11801 A1.1 draft and ratified TIA/EIA 568-B.2-10 for the support of 10GBASE-T.
3	Insulation	Polyethylene layer with 1.4 -1.5 mm Ø
4	Twisting	2 wires to the pair
5	Sheath	LSZH/ LS0H, Gray / white color
6	Conductor	Bare solid copper wire AWG23 (≥ Ø 0.56 mm)
7	Screen material	Tin plated copper braid (≥ 30 % coverage)
8	Sheath Type: LSOH	LSZH/ LS0H - Low Smoke Zero Halogen

<b>CAT6A SFTP cable and accessories</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
9	Screen	Each pair enclosed in Aluminium tape
10	Cable designation	S/FTP Cat.6A 650MHz 4P x AWG23
11	Outer diameter	Nominal 7.6 mm
12	Weight	55 kg / km (approx.)
13	Thermal load	625 MJ / km (Minimum)
14	Tensile force	100 N
15	Bending radius	≥ 30 mm during operation (without load); ≥ 60 mm during installation (with load)
16	Temperature range	During operation -20°C...+ 60°C; During installation 0°C...+ 50°C
17	DC loop resistance	≤ 14.5 Ω / 100 m
18	Resistance unbalance	≤ 2 %
19	Test voltage	1000 V
20	Insulation resistance	≥ 5000 MΩ * km
21	Capacitance	50 pF / m max.
22	Mean characteristic impedance	100 ± 5 Ω
23	Nominal velocity of propagation	Approx. 75 % (Minimum)
24	Propagation delay	≤ 540 ns / 100 m
25	Delay skew	≤ 40 ns / 100 m
26	Transfer impedance	< 10 mΩ / m at 1MHz
27	Packaging	Drum 500 m / Drum 305 m as per OEM standard packing
28	Standards	IEC 60332-1; IEC 60754-1; IEC 60754-2; IEC 61034; EN 50173-1; ANSI/TIA-568-C.2; IEC 61156-5-2
<b>CAT6A STP Shielded Information Outlet</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	Construction	CAT 6A information outlet should be ideal for fast data transmissions and high bandwidth for data and voice, applications. This high-performance Cat. 6A Jack should be perfect for use in 10 Gigabit Ethernet (10GBASE-T) and future high-speed applications up to 500 MHz
2	Protection class IP	IP20
3	connector	Shielded
4	Connector type	Compatible with RJ standard plugs (RJ11, RJ12, RJ45)
5	Category connector	CAT 6A STP
6	Holder for connector / module	Mounting plate
7	Wiring diagram	T568A and T568B

<b>CAT6A SFTP cable and accessories</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
8	Color	Metallic
9	Standard	UL Recognized; IEC 60603-7-51: ISO/IEC 11801; EN 50173-1
<b>Face Plate</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	General	Single Gang square plate with size of 86mm x 86mm
2		Write on labels in transparent plastic window – supplied with plate
3		Label strips space to be available on face plate
4		Pure White / Cream White Color
5		Should be able to support variety of jacks like UTP, STP, Fiber, Coax etc.
<b>CAT6A 24 port STP Jack Panel</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	Construction	24 Port (1U) Cat 6A Shielded Patch Panels should be made from robust sheet metal. These panels should be also supplied with robust removable rear cable management trays (Rod / pipe should be not acceptable) for cable strain relief and neat cable dressing. Port numbering should be provided on the front and rear of the panel and individual ports can be colour coded using connector icon labels for site specific network administration
2	Form factor	Port form on the should be Zig-zag format for even and odd port numbers to have easy installation and maintenance work
3	Termination	Allow for a minimum of 200 re-terminations without signal degradation below standards compliance limit.
4	IDC Type	It should be with IDC contacts that flex not fatigue when terminated
5	10G supported	This system should be compliant with the latest ISO 11801 AMD 1 Class EA and TIA-568-C.2 Cat 6A for the support of 10G BASE-T
6	Electromagnetic Interference (EMI)	Cat 6A Shielded Patch Panel should have Shielded jack connector. This shielded connector should offer superior alien crosstalk suppression, excellent insertion loss, and provides enhanced electromagnetic interference (EMI) protection by utilising robust die-cast zinc alloy connector body housing. This shielded connector should have spring loaded shutter to protect it from dust and contaminates.
7	Wiring diagram	The shielded connector should be dual colour coded for either 568A or 568B wiring schedules.
8	Dust protection	Shutter on each jack port is mandatory of patch panel to have dust protection

<b>CAT6A SFTP cable and accessories</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
9	Physical characteristics	Material: CRS (cold rolled steel) Thickness: Min.1.5mm Coating: Black Powder coat Jack Connector Housing: Zinc Alloy plated Bright Ni/Cu Operating Life: Minimum 750 insertion cycles Contact Material: Copper Alloy Contact Plating: 1.25 micrometres Au/Ni Contact Force: 100g minimum Plug Retention Force: 6.5 kg minimum
10	Mechanical Characteristics	IDC Connector Plastic Housing: Polycarbonate, UL94V-0 rated Operating Life: Minimum 20 reterminations Contact Material: Copper Alloy IDC Contact Plating: Tin Matte finish Contact Force: 100g minimum Wire Accommodation: 22-24 AWG solid
11	Electrical/Optical Characteristics	Interface Resistance: 20mΩ Initial Contact Resistance: 2.5mΩ Insulation Resistance: >100 MΩ
12	Dimensions	24 Port with trays 44mm H x 483mm W x 98mm (approx.)
13	Weight	Approx. up to 1.5 kg
14	Standards	UL Recognized; IEC 60603-7-51; ISO/IEC 11801 EN 50173-1
<b>CAT6A STP patch cord</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
1	Construction	Cat 6A Shielded Patch Cords should be with support high speed data networks for 10-Gigabit Ethernet (10GBASE-T) applications. The patch cable should be made from high quality shielded four pair 26AWG stranded wire. Available in a range of colors and lengths, Cat 6A shielded patch cords should be preterminated with RJ45 shielded plugs and should have overmolded anti-s snag strain relief boots. The patch cord should be IDC category patch cord.
2	10G supported	This system should be compliant with latest ISO/IEC 11801 A1.1 draft and ratified TIA/EIA 568-C.2 for the support of 10G BASE-T. Cat.6A patch cords can be used for connecting the network equipment to patch panels and telecommunications outlets. They should be suitable for frequencies of up to 500 MHz.
3	Conductor	26AWG stranded bare copper Screen material: Aluminium/polyester shield with tinned copper drain wire Max OD: 6.5mm Jacket: LSZH Temperature Range: -20°C to +60°C
4	Mechanical Characteristics	Operating Life: Minimum 750 insertion cycles



<b>CAT6A SFTP cable and accessories</b>		
<b>Sr. No.</b>	<b>Parameter</b>	<b>Minimum Requirement</b>
5	Electrical Characteristics	Max Voltage: 700 VAC, 1 min (60 Hz) Max Current: 1.5A @ 25°C Operating temperature: -20°C to 60°C
6	Standards	Compliant to IEC 60603-7; UL 94-V0; IEC 60603-7-41 / IEC 60603-7-51; IEC 61935-2; ISO/IEC 11801; TIA/EIA-568-B.1-1