

Request for Proposal for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

REF:-RFP NO. BSCL/243/16/620, DATED 04/03/2017

No. 1452

Date: 24-05-2017

Reply to Queries

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
1.	583	Ethernet Switch – Layer 2- Industrial Grade Field Switch:Point no. TR 6.204	All Layer 2 switches at a minimum shall support the following: IPv4/IPv6 • CoS • IP Multicast • Security • Storm Control • Dynamic Trunking Protocol • Spanning Tree Route Guard • Secure Sockets Layer (SSL)/SSH • Network Management • Non-Blocking Type • Support Auto-Sensing • Support Auto-Negotiation	Dynamic Trunking Protocol is OEM specific suggest removing the clause for more inclusiveness in the bidding process	Refer to Corrigendum-3.
2.	582	Ethernet Switch – Layer 2- Industrial Grade Field Switch :Point no. TR 6.195	The distribution switches i.e. switches installed inside field cabinets shall have at least 16 10/100/1000 Base TX ports with at least three (3) 10 Gigabit Ethernet Fibre SFP ports for backhaul connectivity.	As per industry practice 8 and 16 downlink port Hardware architecture generally provides 2 x 10 G ports only 24 port and 48 port switch suggested to provide more than 2 10 G uplink ports ,suggest relaxing this clause to 2 x 10 G uplink ports. Only specific OEM meets this requirements others need to give	Corrigendum-1 already addresses this point.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				24/48 ports downlink make them un competitive.	
3.	584	Ethernet Switch – Layer 2- Industrial Grade Field Switch :Point no. TR 6.213	The device shall have LED indicators for Power, LAN, Signal, RS-232, and Ethernet Link & Activity.	It seems there is a typo since LED indicator has been asked on RS232 ports, Generally LED indicators are required for Power, LAN, Signal & Utilization of the Ports.	Refer to Corrigendum-3.
4.	586	Core Router :- Point no. TR 6.242	<p>The core router at a minimum shall support the following protocols:</p> <ul style="list-style-type: none"> • IPv4/IPv6 • QoS/CoS • IP multicast • General: <ul style="list-style-type: none"> ➤ IEEE 802.1D MAC Bridges ➤ IEEE 802.1p Priority ➤ IEEE 802.1Q VLANs ➤ IEEE 802.1s Multiple Spanning Trees ➤ IEEE 802.1w Rapid Reconfiguration of Spanning Tree • Security: <ul style="list-style-type: none"> ➤ RFC 1492 TACACS+ ➤ RFC 2138 RADIUS Authentication Ø 	LLDP & SNMP is supported and the device is fully managable, acclaimed by several customers globally. In a core router end pint discovery by LLDP-MED is not a function deployed in any scenario. Suggest to relax the clause to LLDP only rather than LLDP-MED	Corrigendum-1 already addresses this point

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			<p>RFC 2866 RADIUS Accounting</p> <ul style="list-style-type: none"> ➤ Secure Sockets Layer (SSL)/ SSH <p>• Network Management:</p> <ul style="list-style-type: none"> ➤ IEEE 802.1AB Link Layer Discovery Protocol (LLDP) <p>• RFC 3031 MPLS (Multi-Protocol Label Switching)</p> <p>• RFC 1098 A Simple Network Management Protocol (SNMP)</p> <p>• RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)</p>		
5.	600	Access Point :- TR 6.382	EN50121-1 EMC ,EN50121-4- Immunity ,EN6061-1-2 Medical UL 2043 ,IEC 61373 Shock and Vibration , IP67 and NEMA 4X	UL 2043 certificate is relevant to the equipment to be placed in ducts or Plenum. However this is being asked on a Outdoor AP which does not require this kind of protection. EN50121-1 EMC, EN50121-4- Immunity, EN6061-1-2, IEC 61373 Shock and Vibration: Are the certificates applicable to Railways deployment and not relevant for this kind of deployment. IP 67 is a globally acclaimed certificate for Outdoor AP's and NEMA certificate is private standard formed by some group of companies. The parameters in NEMA do overlap with IP67 test parameters.	These standards were changed in Reply to Pre-bid queries before. Please refer to Corrigendum-3 for updated clause.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				Its requested to relax the clause to IP67 OR NEMA certificate.	
6.	601	Access Point :- TR 6.397	The Wi-Fi access point shall be IP67 compliant and NEMA 4X rated.	Industry wide IP67 rated equipment are well accepted. Infact NEMA standards and IP67 requirements do overlap. We suggest relaxing the clause to IP67 OR NEMA certificate.	Refer to Corrigendum-3. The IEC 60529 standard will be used as a reference for conversions.
7.	598	Access Point :- FR 6.82	Access points shall have an integrated in-built antenna.	To achieve flexiblity and better signal coverage AP with external antenna s provides more advantage , Moreover seprate geographies may require different pattern of antennas angles (I.e. Horizontal and Vertical antenna s) to achive desired coverage so suggest relaxing the clause as integrated in-built or external antenna	Refer to Corrigendum-3.
8.	600	Access Point :- TR 6.382	The Wi-Fi access point shall be supplied with MIMO sectoral (120x30 degrees) or omni-directional antennas (both in-built) as needed to meet the design requirements of the Project. It shall support multiple unique antenna patterns. The antennas shall have antenna gain required to support the coverage requirements of the Project.	To achieve flexiblity and better signal coverage AP with external antenna s provides more advantage, Moreover seprate geographies may require different pattern of antennas angles (I.e. Horizontal and Vertical antennas) to achive desired coverage so suggest relaxing the clause as integrated in-built or external antenna	Refer to Corrigendum-3.
9.	29 (Addendum)	TR 6.214U	The distribution switches shall be configurable up to a minimum of 16K MAC	The number of mac addresses required on the distribution switches is way too high than the actual	Refer to Corrigendum-3

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			addresses and 4000 multicast routes.	possible requirement. These switches are to be part of Distribution network and being L3 switches, these would not need large Mac address tables. Also the requirement of multicast routes on this level of switches is way too low in actual scenarios. These switches shall be downlinked to access switches and each access switch shall connect to 3-4 cameras. no more than 64-100 multicast routes is required on these switches actually. Request to relax the clause to 2K Mac addresses and 128 Multicast routes.	
10.	689	Servers: Point no: TR 7.652 Network interface	2 X 20GbE LAN ports for providing Ethernet connectivity	20 GbE port is not available in the Market. To get a Bandwidth of 40Gb it should be changed to 4x 10 GbE ports.	Refer to Corrigendum-3.
11.	689	Blade Chassis Specifications TR 7.658	Minimum 6U size, rack-mountable, capable of accommodating minimum 8 or higher hot pluggable blades	6U Sizing is referring to particular OEM. Industry standard is 10U/12U Chasis for 16 blades, Suggest to Change it to 12U, as it gives better cooling per blade, resulting in a low power consumption and more participation by different OEM's.	Refer to Corrigendum-3.
12.	690	Primary Storage TR 7.675	Storage Capacity should be minimum 5 TB (usable, after configuring in offered RAID configuration)	5 TB requirement looks to be too low. in this case, SI Should need to define the capacity required as per the overall solution proposed.	This is a minimum requirement. MSI may increase to meet the overall solution requirements.
13.	690	Primary Storage TR 7.675	Disks should be preferably minimum of 3 TB capacity	Using 3TB disk for 5 TB Storage is something not justified. 3TB disks are only available in SATA/ NL-SAS HDD, which are used for higher capacity and not performance. Bidder	This is a minimum requirement. MSI may increase to meet the overall solution requirements.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				should be allowed to configure the type of disk as per its solution requirement.	
14.			Software Platform: • Must include backup/archive application portfolio required	please specify if a dedicated backup/archiving software is required or Storage level backup software like Snap Shot or Lun Copy is required	Storage level backup software is required.
15.	691	Secondary Storage TR 7.686	Retrieval time: • Retrieval time for any data stored on secondary storage should be max. 4 hours for critical data & 8 hours for other data. This would be taken into account for SLA calculation. (Critical data means any data needing urgent attention by the Judicial System or by Police Dept. for investigation / terrorist treat perception).	This will depend upon Archiving/Backup solution	As per MSI's solution.
16.	396	Cameras Specs TR 4.11	All cameras shall capture high definition video, compress the video using H.264 technique and transmit real-time using fibre optic based communications system.	we are ok however we suggest to use H.265 Compression technique to reduce the bandwidth & Storage requirement	Bidder can propose H.264 or better technique.
17.	396	TR 4.20,	For Fixed Cameras: • Fixed Camera resolution shall be 2048 x 1536 or better	Suggest to Change the resolution to 1920x1080 or better, similar as PTZ camera requirement, with Minimum 30 Mtr IR Range	Refer to Corrigendum-3.
18.	396	TR 4.21	For PTZ Cameras:	Calculation for Lens mentioned in the	Already changed in Corrigendum-1.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			• Lens of 4.3mm-129mm with minimum 35X optical and 12X digital zoom.	RFP comes out to be 30X only however its printed as 35x..Suggest to Change the optioical zoom to min 30X & digital zoom to 16X.	
19.	397	TR 4.22	There shall be a minimum of 100 assignable automatic preset positions.	Suggest to change to min.250 or better for superior technology & healthy competition	As per MSI's solution.
20.	397	Network Video Recorder (NVR), TR 4.28	All equipment shall be designed to provide a usable life of not less than 15 years.	Its way too high cosidering the changes in fast paced environment, suggest to change it to max. 10 years for practical reasons	Refer to Corrigendum-3.
21.	397	TR 4.30	The NVRs shall be support interface using 10/100/1000BaseTX. It shall support a total throughput of at least 700 Mbps.	Suggest to change it to 512 Mbit/s, as per industry standerd and cost optimisation	Refer to Corrigendum-3.
22.	397	TR 4.36	The NVR shall support a minimum of 200 recorded video streams and 20 playback streams with minimum playback of 400 Mbps.	512 (2 Mbit/s) Max	It says minimum. Bidder can propose 512 instead of 400 Mbps.
23.	600	Encryption & Security :- TR 6.380	EN50121-1 EMC ,EN50121-4- Immunity ,EN6061-1-2 Medical UL 2043 ,IEC 61373 Shock and Vibration , IP67 and NEMA 4X	UL 2043 certificate is relevant to the equipment to be placed in ducts or Plenum. However this is being asked on a Outdoor AP which does not require this kind of protection. EN50121-1 EMC, EN50121-4- Immunity, EN6061-1-2, IEC 61373 Shock and Vibration:: Are the certificates applicable to Railways deployment and not relevant for this	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				kind of deployment. IP 67 is a globally acclaimed certificate for Outdoor AP's and NEMA certificate is private standard formed by some group of companies. The parameters in NEMA do overlap with IP67 test parameters. Its requested to relax the clause to IP67 OR NEMA certificate.	
24.	301	TR 1.76	All components of the PA system shall have an operating temperature range of at least +5°C to +60°C and shall have a storage temperature range of 0°C to +80°C.	Request you to change the Operating temperature upto +55 Degree.	Refer to Corrigendum-3.
25.		TR 1.24	The overview camera shall have IR illumination. IR Illuminator can be Internal or external & visibility should be at least 100 m.	By having integrated Inbuilt IR in PTZ deteriorates image quality over a period time as IR LED lights emit strong heat waves with in the camera which affects the sensors there adversely impacting the image quality. Also only specific OEMs can comply to this and quality players cannot meet. Hence change the IR to external as well.	RFP Prevails.
26.	380		Public Address System (PAS)- General	As per RFP: Requirement for Analog PA system. Latest Trend is for IP PA systems which have many Advantages over analog such as Built in Amplifier, VOIP enabled etc. Also Its flexible to use with Open Standards Software. Hence we would recommend to consider IP Based PA Systems	Please refer to clause TR 1.71

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
27.	396	TR 4.30	<p>For Fixed Cameras:</p> <ul style="list-style-type: none"> • The fixed camera shall provide a minimum focal length range of 2.8-10 mm compensated with a minimum 12x digital zoom and shall be remotely controllable from the camera control transmitter at ICOMC. • The fixed camera shall capture video using 1/3" progressive scan CMOS or better. • Fixed Camera resolution shall be 2048 	<p>Fixed Camera resolution required is not a standard resolution, Request you to change to 1920x 1080 as per HDTV and SMPTE Standards. It appears only few OEMs can comply there by restricting quality players to participate. Hence requesting for the change</p>	<p>Refer to Corrigendum-3.</p>
28.	396	TR 4.21	<p>For PTZ Cameras:</p> <ul style="list-style-type: none"> • Camera shall have capabilities of PAN of 360° continuous. • Camera shall have capabilities of Tilt of 180°. • Lens of 4.3mm-129mm with minimum 35X optical and 12X digital zoom. • PTZ camera shall capture video using minimum 1/3" type CMOS sensor or better. • It shall support resolution of 1920x1080 or better. • Camera shall support tilt of 100° either side. The tilt capability shall include both the horizontal (level 	<p>It appears only few camera OEM can comply to this specification and quality players cannot comply. Kindly change the specification as - optical zoom to 30X which meets the lens specification of the tender. Also as per Lens Requirement meets 30x Zoom, Hence request you to consider 30x Optical Zoom</p>	<p>Corrigendum-1 already addresses this point.</p>

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			view) and vertical (downward view) position. If the camera travels beyond straight down, automatic image flip circuitry shall prevent the display of an inverted image. • The pan and tilt mechanism shall be an integral part of the camera.		
29.	557	TR 5.190	Please refer to the CCTV System Specifications as mentioned under Section City Surveillance System.	The type of cameras required for City Surveillance and Smart class rooms are usually different. Please advise for detailed specifications for the same	Refer to Addendum-2.
30.		TR 4.17	The camera shall support audio compression using the G.711 compression algorithm, streaming @ 32Kbps per channel sampled at 8KHz or 16KHz with a 16bit resolution.	Audio functionality for City surveillance is redundant and may not be required due to high disturbance on outdoor conditions. Request you to make this optional	RFP prevails.
31.		TR 4.19	All cameras shall have integral in-built adaptive IR technology. For fixed cameras, the IR shall support a range of at least 30m and for PTZ it shall support a range of at least 200m moving with zoom (adaptive).	By having integrated Inbuilt IR in PTZ deteriorates image quality over a period time as IR LED lights emit strong heat waves within the camera which affects the sensors. Also only specific OEMs can comply to this and quality like Axis cannot meet. Hence change the IR to external as well.	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
32.		TR 4.20	<p>For Fixed Cameras:</p> <ul style="list-style-type: none"> • The fixed camera shall provide a minimum foca length range of 2.8-10 mm compensated with a minimum 12x digital zoom and shall be remotely controllable from the camera control transmitter at ICOMC. • The fixed camera shall capture video using 1/3" progressive scan CMOS or better. • Fixed Camera resolution shall be 2048 x 1536 or better. 	<p>2MP Camera with IR: Lens: 3-10.5mm be maded acceptable. Resolution 1920x 1080.By not having 3-10.5 the competition is restrcited to only few players.Hence kindly allow this change so that quality players could participate</p>	RFP prevails.
33.			MTBF Values	<p>To be changed to 100000 hours as very limited OEMs have over 150000 hours. Over 100000 hours is sufficient to drive quality of the products, thereby allowing fair chance to quality OEMs to participate.</p>	RFP prevails.
34.	600	TR 6.380	<p>EN50121-1 EMC ,EN50121-4- Immunity, EN6061-1-2 Medical, IEC 61373 Shock and Vibration</p>	<p>These regulatory and safety standards are specifically for RAILWAY deployment which has no significance in a smart city deployment. Request to relax the railway specific standards and add generic standards like "EN 300328, EN 301489, UL/IEC/EN 60950, EN 60601-1-1/2" so that leading OEM can qualify to bid.</p>	Refer to Corrigendum-3.
35.	600	TR 6.396	<p>The Wi-Fi access point shall be capable of</p>	<p>Request to amend the clause as "The Wi-Fi access point shall be capable of</p>	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			working at a temperature range of 0 °C to 60 °C and at a humidity of 5% to 95%, non-condensing.	working at a temperature range of 0 °C to 55 °C and at a humidity of 5% to 95%, non-condensing. 55 degree is reasonable temperature endurance as it is not expected to go temperature beyond 55. Request to amend the clause so that leading OEM can qualify.	
36.	602	TR 6.420	The controller shall support minimum 2500 concurrent users	Considering the scalability of controller, supported concurrent number of users is very less. It is suggested to amend the clause as "The controller shall support minimum 25000 concurrent users".	Refer to Corrigendum-3.
37.	584	TR 6.218	The backbone switch/router shall support IP/MPLS connectivity and shall be carrier grade. This clause shall not apply for Server/Workstation switches.	Request amend the clause to allow carrier/enterprise grade products so that leading OEMs can qualify.	RFP prevails.
38.	586	TR 6.228	The switches/routers shall support at least one (1) dual personality port (RJ-45 or USB micro-B) serial console port.	Request remove dual-personality port and kindly consider suitable serial console port (RJ-45 or USB micro-B).	Refer to Corrigendum-3.
39.	586	TR 6.233	The core router shall be chassis based with modular architecture for scalability with Redundant - Route Processor, Power supply, Switching fabric; and shall deliver multiple IP services over a flexible	Route processor and switching fabric are the terms used interchangeably in router's today and we understand the requirement is to achieve redundancy in the same. Request revise the clause accordingly.	As per RFP. Bidder to make sure that redundancy is provided at each level.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			combination of interfaces.		
40.	587	TR 6.244	The core router shall support N+1 hot swappable redundant power supply module with redundant fan modules	We understand the requirement here is to achieve redundancy for power supplies as well as for the cooling mechanism of the router. Request amend as "Minimum 1+1 redundancy for power supplies as well as cooling fan"	Refer to Corrigendum-3.
41.	35 (Corrigendum)	ICOMC_MSI_RFP_BBSR/Type II-Core Router (TR 6.221)	The core router shall have a total switching capacity of at least 3.2Tbps with 400 Gbps per slot. The MSI shall size the port and transceiver as per their detailed design	Capacity of core router has been increased in Corrigendum by 8 times i.e from 400Gbps to 3.2 Tbps with per slot capacity of 400Gbps. This is not compatible with the Network design given in the RFP where 40G backbone ring has been created on 200 Gbps backbone routers; As per the RFP Network Architecture, from WAN side maximum traffic would be 40x6= 240 Gbps. We therefore request you to please ask for a switching capacity of 600Gbps with 200 G per slot bandwidth. A Switching capacity of 600 Gbps will still be more than double the planned traffic flow.	Refer to Corrigendum-3.
42.	587	ICOMC_MSI_RFP_BBSR/General Requirements – Core Router (TR 6.243)	core router shall be powered by 220-240VAC/50Hz input	Generally backbone/core/Server Routers/Switch are powered by DC power for more reliability; We request to please allow an option of DC/AC Power. In case the department is particular for AC Power, we request you to please allow external AC module as per best practices.	Refer to Corrigendum-3.
43.		ICOMC_MSI_RFP_BBSR/Typ	Our recommendation	As this is Backbone Routers, we recommend to have dual power and	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
		e I- Backbone Ethernet Switch Router		redundant controller; We feel that asking for a very high switching capacity (as highlighted in S.No. 1 above) and not asking for dual power is a kind of mismatch.	
44.	27(adendum)	TR 6.214C	The industrial grade switches shall at a minimum carry IP30 rating.	As these hardened switches are getting installed inside IP60 or IP65 rated outdoor cabinets means even water cannot enter the rack space then for the switches installed inside these racks, it is immaterial whether they are IP20 or IP 30. What is required of the switches is that they should be temperature hardened and in this aspect IP 20 or IP30 would not make any difference. We therefore request to please change this to IP20/IP30.	Refer to Corrigendum-3.
45.	70 to 73	Section 2, Appendix 3 - Format of The EMD / Bid Security Section 2, Appendix 3 - Format of The EMD / Bid Security, Clause No : 9 (d)	any unenforceability, illegality or invalidity of any obligation of the Bidder or BSCL under the Bid Documents or any unenforceability, illegality or invalidity of the obligations of the Bank under this Guarantee or the unenforceability, illegality or invalidity of the obligations of any Person under any other document or guarantee or security, to the extent that each obligation under this Guarantee shall remain in	any unenforceability or invalidity of any obligation of the Bidder or BSCL under the Bid Documents or any unenforceability or invalidity of the obligations of the Bank under this Guarantee or the unenforceability or invalidity of the obligations of any Person under any other document or guarantee or security, to the extent that each obligation under this Guarantee shall remain in full force as a separate, continuing and primary obligation, and its obligations be construed accordingly, as if there were no unenforceability or invalidity; and	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			full force as a separate, continuing and primary obligation, and its obligations be construed accordingly, as if there were no unenforceability, illegality or invalidity; and		
46.	833	GCC 40.1	<p>Subject to the provisions of GCC Clause 40, the Client shall pay the Contract Price to the MSI according to the categories and in the manner specified below. The Total Contract Price shall be categorized as:</p> <p>I. Supply and Installation Cost: System Supply & Installation Cost (for providing the Smart City Solutions and achieving Operational Acceptance), which includes all the costs up to the Operational Acceptance;</p> <p>II. Recurrent Cost: Total of all Annual Recurrent Costs during OLP/Warranty Period and Post-Warranty Service (Comprehensive Maintenance) Period.</p> <p>Total Contract Price= Supply and Installation Cost+ Recurrent Cost</p> <p>Within each such</p>	<p>This has reference to the above mentioned tender. In this regard we would like to draw your attention to the payment terms (in GCC 40.1 Page no 833-enclosed) basis which 15 % of the total capex value is payable as equal quarterly installment for 7 years (AMC Period).</p> <p>As you are aware it would be difficult for "Master System Integrator" like us to participate in the bid with such stringent payment conditions. None of the OEM in the industry agree to the credit period beyond 30 days from ex-work dispatch and hence there will be substantial credit gap leading to working capital / fund flow constraints while managing the project finance.</p> <p>Hence we would request you to kindly consider payment of this 15% of CAPEX to the successful bidder against submission of PBG of equivalent amount valid till the end of AMC period upon Go Live (7 years). This will highly enable us to proceed for bid participation and submit a most competitive bid.</p>	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			category, the Contract Implementation Schedule may trigger partial payments for the portion of the total Contract Price for the category corresponding to the goods or services actually Delivered, Installed, or Operationally Accepted, at unit prices and in the currencies specified in the Price Schedules of the Contract Agreement.....		
47.	696	TR 7.743	<p>Original RFP specification: The AC input power shall be 230 VAC +/- 10% at 50/60 Hz +/- 1Hz.</p> <p>Revised specification as per corrigendum: It should be of minimum 400 watt.</p>	<p>The revised specification will force MSIs to quote for energy inefficient power supply based systems which use more than 400W power supplies while OEMs with energy efficient systems that deliver all the desired features while consuming lower than 400W power supply will be disqualified. This is contrary to the Smart City objectives of energy conservation.</p> <p>Please revert to original specification which were good enough (open)</p>	Refer to Corrigendum-3.
48.	586	TR 6.224	RFC 3031 MPLS (Multi-protocol Label Switching) – not for server/workstation switches	<p>Please delete this clause Reason: There are core Routers and so this feature should be specified for Core Router only as MPLS terminates there. Hence there is no need to</p>	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				include this feature in Backbone Switches (which will use more power / cooling & will be higher priced to procure & maintain	
49.	689	TR 7.648	Dual load sharing AC and DC power supplies	Switch should be asked with AC power supply only as All data centres have AC power supply	As per Bidder's solution AC or DC will be acceptable.
50.		TR 7.675	Storage: <ul style="list-style-type: none"> • Storage Capacity should be minimum 5 TB (usable, after configuring in offered RAID configuration) • RAID solution offered must protect against double disc failure. • Disks should be preferably minimum of 3 TB capacity • To store all types of data (Data, Voice, Images, Video, etc.) • Storage system capable of scaling vertically and horizontally 	Storage system capable of scaling vertically OR horizontally Reason: Different OEMs use different architectures (vertical / horizontal) to scale. Specifying "Controller expansion or Horizontal Scalability" will restrict participation of a host of leading storage brands / models	RFP prevails.
51.		TR 7.677	Controllers: <ul style="list-style-type: none"> • At least 2 Controllers in active/active mode • The controllers / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware 	Please amend to "Controllers: The storage system should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware upgrades" Reason: Bidders may want to size & propose fully loaded configuration of controllers from day-one to avoid	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			upgrades.	controller upgrades in the future (and avoid risks in upgradation or technology obsolescence). In such case, storage controller / node upgrade would not be possible.	
52.	688	TR 7.652	Network interface: 2 X 20GbE LAN ports for providing Ethernet connectivity	Please change to industry standard 10GbE LAN ports since 20GbE is non-standard and proprietary / restrictive as per Ethernet standards. Please refer link below. www.ethernetalliance.org/roadmap Please note that all other network switches / ports in the RFP to connect servers is specified as 10GbE port. Hence there is no need for proprietary specification 20 GbE ports.	Refer to Corrigendum-3.
53.	689	Nil	Blade Chassis Specifications	Please change to " Blade Chassis Specifications (if Blade solution is proposed) ". Since as per TR 7.656 (page 689), both Rack mountable & Blade form factors are allowed, an MSI may propose either blade or rack server based solution	Refer to Corrigendum-3.
54.	699	TR 7.808	The server shall have 2x Dual Core Intel Xeon E7-8893 v4, 2.66 GHz, 15 MB Cache, 1333 MHz FSB or better.	This clause is changed as per Corrigendum but is not changed as per Prebid reply. Please clarify	Refer to Corrigendum-3.
55.	700	TR 7.811	The server shall be scalable to 2 processors with each having a minimum of 6 cores per	This line is contradicting to point TR 7.808. Please clarify. As per TR 7.808, the processor is 4 processor scalable	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			processor.		
56.	700	TR 7.816	The Server shall have an Optical Drive 48x SATA CDRW/DVD Combo Drive.	<p>Please amend to latest generation optical drive i.e. "DVD+/-RW, as applicable for density optimised rack servers</p> <p>The existing specifications are of old generation</p>	Bidder may propose better solution. RFP prevails.
57.	700	TR 7.823	Server shall be designed to provide a fully redundant and fault tolerant system and shall be available for 99.99% or greater. The unscheduled down time shall be less than 0.01%.	<p>Please amend to Server "fault tolerant system" or to "fault tolerant solution" i.e.</p> <p>The solution shall be designed to provide a fully redundant and fault tolerant solution and shall be available for 99.99% or greater. The unscheduled down time shall be less than 0.01%.</p> <p>Please note Fault Tolerant System is a different class of server like Mainframe</p>	RFP prevails.
58.	27	Section 5.6, Layer 3 Industrial grade Distribution Switch of Addendum TR 6.214B	The distribution switches i.e. switches installed inside field cabinets shall be industrial grade Layer 3 Ethernet switches and shall have at least 16 10/100/1000 Base TX/FX ports with at least two (2) 10 Gigabit Ethernet Fiber SFP/SFP+ ports for backhaul connectivity.	<p>Amendment Request: The distribution switch will act as a PE device from the perspective of an IP/MPLS architecture & design, where all MPLS services (L3 VPN, L2 VPN, TE etc.) will start. The traffic segregation for different services will start right from the MPLS PE device (distribution switch). For example, segregation of citi wi-fi traffic from TSP , parking sensors etc., will happen right on this MPLS PE box through the use of separate</p>	Refer to TR 6.225 in RFP. IP/MPLS applies to all layer 3 switches/routers except server/workstation switches.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				<p>VRFs/ L3 VPN. We strongly recommend to start the MPLS from the distribution switch and include all the L3 and MPLS related features in this.</p> <p>Assuming that the above query is approved, the distribution switch role will move from a regular layer 2 switch to a MPLS PE router/Switch. Hence, all the industrial grade switch feature set should be removed and the IP/MPLS feature set should be applied to it.</p>	
59.	27	Section 5.6, Layer 3 Industrial grade Distribution Switch of Addendum TR 6.214C	The industrial grade switches shall at a minimum carry IP30 rating.	<p>Removal request: The distribution switch with 16 interfaces is going to be installed as street aggregation layer and SI need to design considering outdoor deployment, hence would not need IP 30 grade specs, it should only be temp hardened with -40 to 65 °C . Further IP MPLS feature set in not very common in industrial grade switches, so request you to remove IP30 compliance for distribution switches and only keep extended temperature range as already defined in RFP i.e. .0°C to +65°C.</p>	Refer to Corrigendum-3.
60.	27	Section 5.6, Layer 3 Industrial grade Distribution Switch of Addendum	The distribution switches shall be configurable up to a minimum of 16K MAC addresses and 4000 multicast routes.	<p>Modification request: Based on the proposed network design for the Smart city, a single distribution switch will at the most aggregate 16 X layer 2 switches and hence the ask for 4000 multicast</p>	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
		TR 6.214U		routes on these switches will be humungous and such a scale will never be required. Request to reduce the ask to 1000 multicast routes instead.	
61.	27	Section 5.6, Layer 3 Industrial grade Distribution Switch of Addendum TR 6.214H	The industrial grade distribution switches shall support operating temperature range of 0°C to +65°C (without any fans) with ambient relative humidity of 5-95%, non-condensing.	Removal Request: Considering the approval on the above queries, this clause for a fanless architecture with temperature support of 0°C - 65 °C will not be required. Request to remove the clause	Refer to Corrigendum-3.
62.	27	Section 5.6, Layer 3 Industrial grade Distribution Switch of Addendum TR 6.214B	The distribution switches i.e. switches installed inside field cabinets shall be industrial grade Layer 3 Ethernet switches and shall have at least 16 10/100/1000 Base TX/FX ports with at least two (2) 10 Gigabit Ethernet Fiber SFP/SFP+ ports for backhaul connectivity.	Addition Request: The switch should have support for both IPv4 and IPv6 from day 1. The switch should be IPv6 LOGO certified.	Please refer to Addendum-1, S.No. 47, TR 6.214J.
63.	602	Section Wi-Fi Controller of RFP TR 6.421	The controller shall support 1+1, 1+N, and N+N backup configurations.	Clarification request: Based on the proposed network design, there will be a maximum of 2 controllers working on HA mode and hence there can only be 1+1 kind of a scenario. Please clarify if there will be any requirement for the support of 1+N and N+N in such a scenario	As per Bidder's solution.
64.	602	Section Wi-Fi Controller of RFP	The controller shall support Static IP routing for both IPv4 and IPv6	Removal Request: Based on the proposed network architecture, the reachability from the	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
		TR 6.423	networks.	AP to the DC will be achieved through the routing devices which will take up the responsibility of the end-to-end reachability in the network. Hence, the capability of routing on the controller will not be required. Request to remove this clause.	
65.	689	Section Blade Chassis Specification of RFP TR 7.664 & TR 7.665	Two hot-plug/hot-swap, redundant 10 Gbps Ethernet or FCoE module with minimum 16 ports (cumulative), having Layer 2/3 functionality Two hot-plugs/hot-swap redundant 16 Gbps Fiber Channel module for connectivity to the external Fiber channel Switch and ultimately to the storage device	Clarification Request: Please clarify if both the clauses are required to be met or meeting one of them would be sufficient.	Refer to Corrigendum-3.
66.	627	Digital Voice Logger	It shall have at least 100 ports and expandable to additional 50 ports in future. The Recording shall be done from Digital extension side and it shall be recorded in digital voice logger which is capable to record calls between extension lines also	Usually number of recording ports should be equal to the number of operators. Hence, the recording ports should be 24 instead of 100. Request you to please modify the same. Moreover, please confirm if an IP based voice logger can be offered instead of a digital voice logger as IP based logger has many advantages	100 accounts for future scalability. IP based voice logger shall be acceptable.
67.	636	Collaboration	The collaboration system shall support a local area network connection between transmitter and	We wish to highlight that collaboration products available in the industry such as Video conferencing endpoints and IP Phones usually	Wired LAN will be acceptable.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			receiver, without having to ride on corporate LAN, and still maintaining capability to connect to corporate LAN as needed	work on a wired LAN connect instead of Wi-Fi connection. Hence, we request you to please modify it to wired LAN	
68.	706	EPABX	It shall support all the standard features like Call Transfer, Call Forward, Call pick-up, Call hold, Call Barge-in, Call Back, Do not disturb, Speed Dialing, Call Parking, Paging (both external and internal), Class of Service, Calling Line Identification (CLI) on digital as well as analog extension and external lines etc.	We request you to please replace digital by IP ,as an IP SIP based EPABX has been asked for	Refer to Corrigendum-3.
69.	706	EPABX	It shall support analog, digital and IP/ Soft phone.	We request you to delete digital as the IP Based phones have been asked for with a SIP based PBX. An IP phone provides more and advanced functionality than a digital phone	Refer to Corrigendum-3.
70.	706	EPABX	It shall have Digital Extension telephone instrument with following features: Display-tilt able Graphical display; • Keys with LED; • Optical call alert RED status LED. • Menu/speaker with RED LEDS	We request you to kindly delete these points as they are more inclined towards digital phone. We request you to consider IP Phones as they have better functionality than digital phones	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
71.	688	Section DC TOR Switch of RFP TR 7.643	• Should support Ring protection	Modification Request: Ring Protection is a feature which is available in the field side deployment of the switches like Metro Ethernet etc. In case of DC switches, loop prevention feature is more important which has the potential to bring down the whole network. Hence, request to modify the clause as : Should support Ring protection / Loop Prevention	Refer to Corrigendum-3.
72.	688	Section DC TOR Switch of RFP TR 7.644	Access Control: Support 802.1x (Port based network access control).	Modification Request: The DC TOR switch will aggregate servers as per the proposed design requirement and hence there is no need to authenticate the identity of the individual servers here. The 802.1x is a feature which is primarily needed to authenticate end users and is required in user LAN. Rather, we can have port based or VLAN based filtering in place to ensure the legitimacy of the end point. Hence , request to modify this clauses as below: Protocols: • Support 802.1X Security standards / Port ACL/VLAN ACL	Refer to Corrigendum-3.
73.	687	Section DC TOR Switch of RFP TR 7.643	Protocols: • Support 802.1X Security standards	Modification Request: The DC TOR switch will aggregate servers as per the proposed design requirement and hence there is no need to authenticate the identity of the individual servers here. The 802.1x is a feature which is primarily	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				<p>needed to authenticate end users and is required in user LAN. Rather, we can have port based or VLAN based filtering in place to ensure the legitimacy of the end point. Hence , request to modify this clauses as below: Protocols: • Support 802.1X Security standards / Port ACL/VLAN ACL</p>	
74.	48	Corrigendum – 1 to the RFP for Selection of MSI for Implementation of Smart Solutions in Bhubaneswar	<p>The Bidder shall have experience on at least two AVL projects for intra-city public transit system with a fleet of at least 50 vehicles wherein the bidder shall have provided AVL system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the AVL system with the Passenger Information sub-system to provide route and ETA (expected travel arrival) to passengers. The AVL projects should have been commissioned within the past 7 (seven) years from the date of submission of the bid and should have been in commercial operations for at least one</p>	<p>As we understand that the scope of the project involves Electronic Ticketing which is a more important component of the project when it comes to the City Transport Operator. However due weightage is not given to experience of carrying out Electronic Ticketing. We suggest that the clause may be modified as follows:</p> <p>The Bidder shall have experience on at least two Smart Transport projects for intra-city / Inter-City public transit system with a fleet of at least 500 buses wherein the bidder shall have provided Smart Transport solution consisting of AVL / Electronic Ticketing system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the Smart Transport system with the Electronic Ticketing / Vehicle Tracking (AVL) / Passenger Information sub-system. The AVL</p>	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			<p>year after successful system acceptance.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 3 Marks</p> <p>2) >2 and ≤5 Projects : 5 Marks</p> <p>3) >5 Projects: 7.5 Marks</p>	<p>projects should have been commissioned within the past 7 (seven) years from the date of submission of the bid and should have been in commercial operations for at least one year after successful system acceptance.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 3 Marks</p> <p>2) >2 and <5 Projects : 5 Marks</p> <p>3) >5 Projects: 7.5 Marks</p>	
75.	584	Section 5 – Technical Requirements	All switches shall have a Mean Time Between Failure (MTBF) of at least 250,000 hours.	All switches shall have a Mean Time Between Failure (MTBF) of at least 20 Years or 175,000 Hours	Refer to Corrigendum-3.
76.	286	Section 5/Technical Requirements	Digital signing of – challan	Digital signing of – challan using FIPS certified HSM through which echallan module will interact and perform the digital signing using the Digital Signatures stored inside it	As per Bidder's solution.
77.	316,333, 338,522	Section 5/Technical Requirements	The system security shall provide features to maintain data integrity, including error checking, error monitoring, error handling and encryption.	The system security shall provide features to maintain data integrity, including error checking, error monitoring, error handling and encryption with FIPS certified Enterprise Key Life cycle Management Hardware to eliminate any kind of vulnerability around Keys as well as to make easy to manage those.	RFP prevails.
78.	709	Section 5/Technical Requirements	All information that flows on the network should be encrypted to ensure safety and privacy of confidential data. The devices at each	All information that flows on the network should be encrypted to ensure safety and privacy of confidential data. The devices at each endpoint of the network should be	As per Bidder's solution. RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			endpoint of the network should be authenticated (using mechanisms based on attributes like passwords).The authentication system used on these endpoint devices shall ensure that only authorized users are sending data over the network and there is no rogue data that is sent to the control systems to generate false alarms or sabotage the systems.	authenticated (using mechanisms based on attributes like passwords).The authentication system used on these endpoint devices shall ensure that only authorized users are sending data over the network and there is no rogue data that is sent to the control systems to generate false alarms or sabotage the systems. PKI for Device authentication to be used such that Device is being provisioned with Keys and whenever they communicate with the master system they are authenticated using those keys/certs.	
79.	599	FR 6.81	Access points shall support 802.11ac wave II multi-user MIMO.	Access points shall support 802.11ac multi-user MIMO.	RFP prevails.
80.	599	FR 6.82	Access points shall have an integrated in-built antenna.	Access points shall have an integrated/external antenna.	Refer to Corrigendum-3.
81.	601	TR 6.382	The Wi-Fi access point shall be Outdoor rated, dual radio, 802.11ac Wave Fi access point shall be Outdoor rated, dual radio, 802.11ac Wave II, 5-GHz and 2.4-GHz. It shall support operations in 802.11a/b/g/n/ac. II, 5-GHz and 2.4-GHz. It shall support operations in 802.11a/b/g/n/ac.	The Wi-Fi access point shall be Outdoor rated, dual radio, 802.11ac Fi access point shall be Outdoor rated, dual radio, 802.11ac, 5-GHz and 2.4-GHz. It shall support operations in 802.11a/b/g/n/ac. II, 5-GHz and 2.4-GHz. It shall support operations in 802.11a/b/g/n/ac.	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
82.	Pg 627	Digital Voice Logger Server, Sec TR 7.159	Digital Voice Logger Server	Is this logger part of the contact centre solution or a separate logger for all extensions?	RFP is clear.
83.	Pg 627	Digital Voice Logger Server, Sec TR 7.160	It shall have at least 100 ports and expandable to additional 50 ports in future.	Why 100 ports required? Are all extensions to be recorded?	RFP is clear.
84.	Pg 627	Digital Voice Logger Server, Sec TR 7.165	Software & hardware required to record the wireless communication.	Software & hardware required to log the traffic of the wireless communication.	Refer to Corrigendum-3.
85.	Pg 627	Automatic Call Distribution (ACD) Requirements, Sec TR 7.167	ACD shall have the following functionality: • Identifying or determining the region from which the call is originating and greeting the caller in English/Hindi/Oriya	Request To Delete	RFP prevails.
86.	Pg 635	Collaboration System, Sec TR 7.107	Collaboration System	Collaboration System as functionality in the Video Conferencing System	RFP is clear.
87.	Pg 637	Video Conferencing (VC) System, Sec TR 7.133	The VC system shall have innovative facial-tracking algorithms to accurately frame all room participants.	Request To Delete	Refer to Corrigendum-3.
88.	Pg 637,	Sec TR 7.138	The VC system shall have the capability to zoom in and follow the person speaking.	Request To Delete	Refer to Corrigendum-3.
89.	Pg 638,	Sec TR 7.149	The VC system shall have	The VC system shall have at a	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			at a minimum, the following video inputs; • 2 x cameras • 1 x HDMI 1.3 • 1 x VGA	minimum, the following video inputs; • 1 x HDMI 1.3 • 1 x VGA/DVI .	
90.	Pg 638,	Sec TR 7.150	The VC system shall have at a minimum, the following Audio input. • 1 x camera • 1 x HDMI • 1 x 3.5 mm stereo line-in	The VC system shall have at a minimum, the following Audio input. • 1 x Microphone (RJ11) • 1 x HDMI • 1 x 3.5 mm stereo line-in.	Refer to Corrigendum-3.
91.	Pg 638,	Sec TR 7.152	The VC system shall have at a minimum, the following other interfaces; • 2 x USB 2.0 • 1 x RS-232 • 8-pin mini-DIN	The VC system shall have at a minimum, the following other interfaces; • 2 x USB 2.0.	Refer to Corrigendum-3.
92.	Pg 649,	Contact Centre Solution (For Helpdesk), Sec TR 7.317	Call Centre representative must have view to unified screen giving both network & service view.	Request To Delete	Refer to Corrigendum-3.
93.	Pg 649,	CTI Server, Data Base Server, Digital Voice Logger Server, Sec TR 7.324 - TR 7.340	CTI Server, Data Base Server, Digital Voice Logger Server, Sec TR 7.324 - TR 7.340	CTI Server, Data Base Server, Digital Voice Logger Server	Minimum requirements have been specified. Bidder may exceed the specifications.
94.	Pg 706	EPABX System, Sec TR 7.866	It shall have provision for at least 100 IP phone extensions expandable to 150 Extensions.	It shall have provision for at least 100 IP phone extensions with 100 IP Phones from day 1 expandable to 150 Extensions.	RFP prevails.
95.	Pg 706	EPABX System, Sec	It shall have maximum loop resistance of 1200	Request To Delete	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
		TR 7.882	ohms at –48 Volts DC for analog trunk lines.		
96.	Pg 706	EPABX System, Sec TR 7.884	It shall have Digital Extension telephone instrument with following features: <ul style="list-style-type: none"> • 4 Programmable keys with dual function; • 10 fixed function keys. • 5 way navigator • Interface - 3.5 mm jack for connecting handset 	It shall have Digital Extension telephone instrument with following features: <ul style="list-style-type: none"> • 3 Programmable keys with dual function; • 8 fixed function keys. • 4 way navigator • Interface - 3.5 mm jack/RJ9/RJ11 for connecting handset 	Refer to Corrigendum-3.
97.	Page-193	Section-5	The Smart Response System will be designed to support monitoring of day to day operations of the city and supplement citizen safety. The business requirements of the Smart Response system include: <ul style="list-style-type: none"> • Coordinated ICOMC response to any incident or event that impacts Bhubaneswar’s multimodal transportation system. • Support Homeland Security through edge surveillance of video data. • Provide a secure and safe environment for the residents of Bhubaneswar by using intelligent analytics and integrated 	3.6. Smart Response and Incident Management System City wide emergency response system where application need to integrate with ambulance, fire, police etc. Bhubaneswar police have other good initiatives like women app, Cyber crime FIR, NHA and Bhubaneswar One etc. Application should follow the international standards of emergency response like 911/112 industry alliance (EENA/911 industry alliance). The application should support ANSI/APCO (American national standards institute/Association of public safety communication officials). The application vendor should be the part of the APCO alliance. The application should support single public safety answering point. It should support the various work like beat management/petrol	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			platform over the surveillance system. • Support active coordination with meteorology department to proactively react to natural disasters and emergencies.	management, unstructured/structured data analysis, Distress call acceleration etc. Application support multi media integration like voice, text and social media. Application should have extended dynamic work flow along with on the fly organization configuration for emergency management. Application should support the multi layer GIS.	
98.	General	General	OEM Evaluation Criteria For 3.6. Smart Response and Incident Management System	<i>Kindly add:</i> The original developer of the quoted solution for Incident Management System software should have the following qualification: 1. The name of the developer of Incident Management System should exist in the list of top ten vendors of the IHS report of 2014/2015 for Asia / World under Incident Management System/CAD & GIS category. Bidder will submit the IHS report copy along with Bid	RFP prevails.
99.	Page-654	Section-5	TR 7.448 Smart City Platform Smart city platform shall include the following core components as a minimum: • Business Rules and SOP definitions – it shall enable users to define the business rules around incidents handling and emergency response as	TR 7.448 Smart City Platform Smart city platform shall include the following core components as a minimum: • Business Rules and SOP definitions – it shall enable users to define the business rules around incidents handling and emergency response as per the agreed SOPs with the Client for a smart city. • Mobility – It shall enable operators and the crew members to access the	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			per the agreed SOPs with the Client for a smart city. • Mobility – It shall enable operators and the crew members to access the workflow task assigned to them and act using the native mobile application. They should be able to close the loop of workflow by acknowledging the real time status of action assigned to them.	workflow task assigned to them and act using the native mobile application. They should be able to close the loop of workflow by acknowledging the real time status of action assigned to them. • alarm correlation, city data analysis over GIS dashboard board for appropriate and real time action. The Smart City Application should also support the multi layer GIS.	
100.	Page-614	General	OEM Evaluation Criteria For 5.7. Intelligent City Operations and Management Centre (ICOMC) FR - 7 Functional Requirements	<i>Kindly add:</i> The original developer of the quoted solution for Incident Management System software should have the following qualification: 1. The name of the developer of Incident Management System should exist in the list of top ten vendors of the IHS report of 2014/2015 for Asia / World under Incident Management System/CAD & GIS category. Bidder will submit the IHS report copy along with Bid	RFP prevails.
101.	305	TR 1.139	The device should have a minimum of 512MB—RAM for smoother functioning	The device should have a minimum of 1 GB— RAM for smoother functioning	RFP prevails.
102.	305	TR 1.140	The handheld should have 1 GB Flash or higher, with an expandable micro SD card which supports capacity of at least 32 GB	The handheld should have 8 GB Flash or higher, with an expandable micro SD card which supports capacity of at least 32 GB	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
103.	306	TR 1.147	The handheld shall have in-built thermal printer and should be able to print on a paper with minimum width of 3 inch. It shall support print speeds of at least 200 dpi, 60 mm per second or better with easy paper loading mechanism. The media type shall be Thermal Paper.	The handheld shall have in-built thermal printer and should be able to print on a paper with minimum width of 2 inch. It shall support print speeds of at least 200 dpi, 60 mm per second or better with easy paper loading mechanism. The media type shall be Thermal Paper.	RFP prevails.
104.	306	TR 1.156	Password or biometric authentication	Password or biometric authentication. Biometric should be AADHAR Compliance STQC approved	RFP prevails.
105.	349	TR 2.107	The handheld shall have internal and external (SD Card) memory.	The handheld shall have internal min 16GB Flash and external (SD Card min 32GB) memory	RFP prevails.
106.	400	Vol 2 - 5.5.1 E-Governance System	To be added	A Hospital Management Solution to be provided with enclosed specification integrated with E-Governance Suite and other health parameters to integrate all the Hospital and Primary Health Centers and Dispenseries in one Umbrella.	RFP prevails.
107.	4054124 13	Vol 2 - 5.5.1 E-Governance System	Request to clarify	Request to provide details	Query not clear.
108.	4054124 13	Vol 2 - 5.5.1 E-Governance System	Request to clarify	Scope of the Connectivity to the Hospitals, Healthcare Center and CCC is not part of this RFP	Query not clear.
109.	684	Vol 2 - 5.7.3 Data Hosting	STPI shall provide airconditioned space for hosting infrastructure for	STPI shall provide airconditioned space for hosting infrastructure for DC at Bhubaneswar. MSI has to setup a Private Cloud with required	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			DC at Bhubaneswar.	Orchestration Layer and EMS as Managed Services in STPI DC	
110.	684	Vol 2 - 5.7.3 Data Hosting	The Disaster Recovery (DR) Site will be of STPI in a different seismic zone and STPI will provide managed services for DR.	The DR needs to be in a Cloud with a Cloud Solution Provider meeting below requirements and the Cloud should be offered with vertical and horizontal elasticity. The Disaster Management Automation and the Security Information and Event Management (SIEM) solution to be offered as a service through the cloud service for the entire project.	RFP is clear.
111.			To be added	Privilege Identity / Access Management (Pim/PAM) to be added as a solution to the RFP to be quoted by MSI	RFP prevails.
112.	132	FR 7.295 , 1.5 ICOMC E2	Firewall, Web Application, UTMDDOS, Advanced Persistent Threat Solution	Web Application Firewall, UTM, DDOS, Advanced Persistent Threat Solution. The Web Application and Anti-DDoS Solution should be provided in a single appliance with a minimum throughput of 10Gbps and to be deployed in high availability mode. The UTM proposed should be a leader in Gartner Magic Quadrant latest report.	RFP prevails.
113.			To be added	The Disaster Management Automation and the Security Information and Event Management (SIEM) solution to be offered as a service through the cloud service for the entire project.	RFP prevails.
114.	691-692	TR 7.679	Cache: • Minimum 128 GB of	Kindly Remove the Cache requirement or minimize it to 4 GB, As for Video/	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			useable cache across all controllers. If cache is provided in additional hardware for unified storage solution, then cache must be over and above 128 GB.	Audio/ Image Data Cache is not required when system is generating & writing continuous data on Storage.	
115.	571	TR 6.57	Handholes shall be made of medium duty HDPE with Polymer Concrete Lid.	<p>HDPE handholes are very specific in design & dimensions and practically will have challenges in deployment as in city network as the depth on all the routes will not be the same and there is high probability of utilities on the probable depths.</p> <p>It was suggested to use RCC NP3 class pre-cast manholes confirming to Dimensions, Design and Strength requirements of Reinforced Concrete Pipes of Class NP3 shall be as per the Table 3 of IS: 458/2003(Fourth Revision) with up-to-date amendment. The minimum wall thickness should be 75 mm. The lid shall be 100 MM thick made of M25 Grade concrete with capable of withstanding a 20T load and tested as per IS12592. These manholes are manufactured locally and are abundantly available with local manufacturers.</p>	As an alternate to HDPE handhole, this will be acceptable.
116.		Sr No 103 of Corrigendum 1:	Usage of 160 MM coilable HDPE ducts for the protection of the duct and the cable on the crossing.	The coilable HDPE ducts are not available in the market. Only availability is in 6mts and 12mts which will lead wastage and deployment challenges. As the	Refer to Corrigendum-3.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				<p>minimum road crossing length in Bhubaneswar is approx. 20mtrs and coupling will be required to join the 6/12mtrs length duct as majority of the crossing will be done by HDD. This will lead to delay in the project execution.</p> <p>The industry standards are to use GI pipes for the exposed areas (Bridges, culverts and railways/major railway crossings) and for minor crossing (Boring), RCC full round will be used; DWC Pipes of 160/133mm can also be used as a physical protection for road crossings.</p>	
117.			<p>The fiber specifications in the RFP are open & old and also not appropriate for city wide network. There has been much advancement in the area of fiber optic cable design.</p>	<p>In India where fiber cuts are extremely high, installation practices are poor results in generation of macro bends. Therefore, right choice in selection of optical fiber type is very critical. It directly impacts the sustainable operations of network with stipulated life time of 25 yrs.</p> <ul style="list-style-type: none"> • Proposal is to have G.657A1 type 144F where the quality and performance level of optical fiber attenuation will be of higher standard and appropriate to the network design for the city wide network. This will also help in improving overall life and performance of the network. • ITU-T G657.A1 fiber have unique advantages over ITU-T G.652.D fiber of lower bend loss. G.657.A1 fiber is versatile in deployment in any 	<p>Bidder may propose a better solution.</p>

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				topology including NLD (National Long Distance), Metro (Intra city) as well as for last mile access applications, whereas G.652.D fiber is suitable only in NLD networks. These advantages provide long lasting sustainable networks with quality of service exceeding life time of 25 years.	
118.	723-724	8.4.2.2. Automatic Number Plate Recognition (ANPR)- Performance/Accuracy	4. Speed Accuracy: should be +/- 5% w.r.t actual speed of the vehicle	Speed Accuracy with +/- 5% w.r.t actual speed of the vehicle is a standard for speed detection and penalty for this range will become a legal matter. Certification to prove this accuracy should be asked for. The certification should be approved by authorized Indian Govt. body, so that the evidence of violation can be shown as an acceptable evidence in the court of law. Also, system should not be acceptable beyond this range (i.e. +/- 5%) and a third party certification should be asked to prove the speed accuracy with this range.	RFP prevails.
119.	52	Section 1	Technical Proposal (Envelope B)	As per the RFP, the project needs to be executed in last 7 years. Request you to please modify the clause as under: The project needs to be commissioned or under operations within 7 yrs from the bid submission date.	Refer to Corrigendum-3.
120.	14	Clause 4.4		Can a subsidiary use the credentials of holding to meet the PQ requirements. Is this also valid when	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				the subsidiary is part of the consortium for this bid	
121.	49	Clause 5.4	Sub-contractors: Allowed for sub-systems / components as defined below: 1) Fibre optic network build, other cabling and fixtures work, and all civil work during implementation. 2) Civil, Electrical and Cabling works related to MSI solution. 3) Infrastructure works at Command and Control Centre. 4) As per BDS for ITB 5.1 (a)	Please confirm that the sub contractors can take up the work for which they have shared their credentials under section 5.1(a)	Yes.
122.	199	3.7.1.1	The vision of BMC is to have an efficient and citizen friendly organization. To achieve this vision, it is proposed that the MSI have a strong back-end IT application such as a COTS or reputed ERP system.	Request to consider bespoke also to have more flexibility in the application	Bespoke shall be acceptable provided majority of the functionality is available out of the box and overall project timelines are met.
123.	72	Section 2. Technical Proposal – Standard Forms	15. For the avoidance of doubt, the Bank's liability under this Guarantee will be restricted to Rs. [____]. The Bank will be liable to pay the amount or any part of the Guarantee only	Request to modify the Paragraph No. 15 as per below format: “Notwithstanding anything contained herein: (a) Our liability under this Bank Guarantee shall not exceed Rs._____ (Rupees_____ only).	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			if BSCL serves a written claim on the Bank in accordance with clause 11 of this Guarantee, on or before (indicate date corresponding to the Proposal validity period and requirement for the period of Bank Guarantee towards EMD).	(b) This bank guarantee shall be valid up to _____ and (c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before _____ (date of expiry of Guarantee).	
124.	484	Section 5	Application Performance Monitoring FR 5.1021	Please share the % / No. of transactions to be monitored concurrently.	As per Bidder's solution.
125.	484	Section 5	Application Performance Monitoring FR 5.1021	How many different network monitoring points will we need? Do they all go through the same switches/load balancers/...?	As per Bidder's solution.
126.		TR 7.683	Secondary Storage (Archival/Backup) can be on any media such as Tapes, Disks, Disk systems, etc. or its combination. (so as to arrive at lower cost per TB)	Is backup and archival separate as per requirement or they are referred as same?	As per RFP.
127.		TR 7.683	Secondary Storage (Archival/Backup) can be on any media such as Tapes, Disks, Disk systems, etc. or its combination. (so as to arrive at lower cost per TB)	Please specify the duration of data to be retained on primary storage before archiving e.g. 6 months, 1 year etc. and duration of data to be kept on archival storage?	All data (except video) to be retained for minimum 6 months.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
128.		TR 7.809	The server shall have 16 GB of RAM and 5 TB of storage as a minimum. The memory shall be scalable to double the capacity configured	Is it mandatory to provide the 5TB HDD at the server, Can we propose as per the solution and reduce in case the application are SAN boot?	RFP is clear.
129.		TR 7.816	The Server shall have an Optical Drive 48x SATA CDRW/DVD Combo Drive.	Difficult to provide in case of blade servers, Please clarify?	RFP is clear
130.		4.12.7.2	Temporary DC at Bhawani Mall to STPI data centre migration	How much downtime allowed when shifting on- premise equipment's from temporary DC to New DC, as it will impact commercials and nature of solution?	To be discussed and finalized with MSI.
131.	405	FR 5.64	Citizen Portal: It shall be a state of the art portal	Can we propose Portal from Open Source Platform	RFP is clear.
132.			Helpdesk - Monitoring, Management and Reporting	If the Helpdesk has to raise tickets for the Citizens' request, it requires a different kind of mechanism e.g. Contact Centre tool / CRM tool. Do we require the same.	RFP is clear.
133.	591		Enterprise Management System (EMS) - Availability - Monitoring, Management and Reporting	Can the vendor Propose Remote implementation and support of monitoring and ticketing tools?	RFP is clear.
134.	591		Enterprise Management System (EMS) - Availability - Monitoring, Management and Reporting	What is expected RPO and RTO for monitoring and Ticketing solution (EMS and Ticketing solution)	As per Smart Governance module.
135.	591		Enterprise Management	What will be the retention period of	Retention period shall be of atleast

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			System (EMS) - Availability - Monitoring, Management and Reporting	the monitoring and ticketing data?	2 quarters.
136.	26	18.6	The price of Services shall be quoted in total for each service (where appropriate, broken down into unit prices). Prices must include all taxes, duties, levies and fees whatsoever. The prices must include all costs incidental to the performance of the Services.	With the advent of GST, the current taxes might not be applicable, as such please allow the following - Any changes in the tax rates, or introduction of new taxes / levies during the contract term, the same shall be applicable accordingly	Client shall bear the stated change.
137.				Please share existing workflows for the various services already in place. Also share the workflows being defined for this project	RFP is clear.
138.				As per the RFP there is a list of Integrations with 3rd party applications. Request you to please define them under the following buckets: - Only view - e.g. Security, Dial 100 - View & Monitor - e.g. Parking, lighting - Full control - e.g. Utilities (ABD)	RFP is clear.
139.				DC & DR - % of replication required eg cameras etc.	Query not clear.
140.	52	Section 1	Technical Proposal (Envelope B)	As per the corrigendum, the PO should state no. of parking bays in that project. The POs issued by the	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				customer specify the access and exit management system or payment system or parking management system, but do not highlight the no. of parking bays. Request you to please modify this clause to accept self certifications / customer email confirmation for the number of parking bays	
141.	52	Section 1	Technical Proposal (Envelope B)	In Smart Parking, Implementations are being done by the Indian company and the work order is being taken by the parent company (registered outside India). We would be able to provide both the documents. Request you to please consider these documents for the PQ requirements.	RFP is clear.
142.	48	Corrigendum – 1 to the RFP for Selection of MSI for Implementation of Smart Solutions in Bhubaneswar	The Bidder shall have experience on at least two AVL projects for intra-city public transit system with a fleet of at least 50 vehicles wherein the bidder shall have provided AVL system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the AVL system with the Passenger Information sub-system to provide route and ETA (expected travel arrival) to	As we understand that the scope of the project involves Electronic Ticketing which is a more important component of the project when it comes to the City Transport Operator. However due weightage is not given to experience of carrying out Electronic Ticketing. We suggest that the clause may be modified as follows: The Bidder shall have experience on at least two Smart Transport projects for intra-city / Inter-City public transit system with a fleet of at least 50 buses wherein the bidder shall have provided Smart Transport solution consisting of AVL / Electronic	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			<p>passengers. The AVL projects should have been commissioned within the past 7 (seven) years from the date of submission of the bid and should have been in commercial operations for at least one year after successful system acceptance.</p> <p>Number of Projects: 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks</p>	<p>Ticketing system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the Smart Transport system with the Electronic Ticketing / Vehicle Tracking (AVL) / Passenger Information sub-system.</p> <p>Number of Projects: 1) 2 Projects : 3 Marks 2) >2 and <5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks</p>	
143.	52	Clause 2.1	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of a parking management platform consisting of at least three Parking Lots* or at least 150 parking bays in a single Parking Lot during last seven (7) years.</p> <p>*Parking Lot - Facility comprising of more than 50 Equivalent Car Spaces having 1) entry/ exit controlled through automated/ semi-automated gates;</p>	<p>The work orders/ Pos have been issued as per the work address of the company and completion certificate as per the registered office. Request you to consider both of these.</p>	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			2) parking management system for occupancy tracking and information dissemination; and 3) automated ticketing & revenue management system		
144.	52	Clause 2.1	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control center for a city wide / campus wide deployment having a minimum value of INR 10 crores per project (excluding civil works) during last seven (7) years.	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control center for a city wide / campus wide deployment having a minimum value of INR 10 crores per project (excluding civil works) during last seven (7) years. The above requirement can be complied with the CCC experience of ITMS or AVL, kindly consider these experiences as well.	RFP is clear.
145.	47	Clause 5.1 a	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Outside Plant Fiber Optic Passive Infrastructure of at least	Please modify this clause as under: In case the Bidder (any member in case of consortium) has done the OFC work for its own network a Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order will not be available. A self certification should	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			200 km or Active infrastructure with at least 100 nodes per project having a minimum value of INR 10 crores per project during last seven (7) years.	be allowed.	
146.	47	Clause 5.1 b	The Bidder (any member in case of consortium) shall have experience of implementation and operations of at least two (2) City wide / campus wide Wi-Fi Projects consisting of over 75 Access Points per project during last seven (7) years.	Please modify this clause as under: In case the The Bidder (any member in case of consortium) has done the Wi-Fi work for its own network a Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order will not be available. A self certification should be allowed.	RFP is clear.
147.	52	Clause 2.1	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control centre for a city wide / campus wide deployment having a minimum value of INR 10 crores per	We have a single PO for CCC separately running in 4 cities of Rajasthan, we will have separate completion certificate for each of the location. Kindly consider these as 4 separate projects.	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
			project (excluding civil works) during last seven (7) years.		
148.				The quantity mentioned in RFP for Kiosks was Integrated MSDK = 150 Nos and Standalone MSDK = 50 Nos, whereas the Corrigendum dated 25/04/2017 mentions the quantities as Integrated MSDK = 50 Nos and Standalone MSDK = 25 Nos. Is this in phase wise manner, or the scope of project stands reduced.	The quantity has been reduced.
149.	172 - Main RFP	5.7.4.5. Uninterruptable Power Supply (UPS)	NA	The specifications given for UPS in this section are suitable for a large capacity central UPS suitable for data centre and Control centres with large load but these requirements are not feasible to met for field UPS where load requirements are quite low. So, please suggest the specifications for field side UPS or a bidder can propose UPS ratings as per his design solutions?	As per Bidder's design and UPS shall be rated for field operations.
150.	58 - Corrigendum	C(2) Corrigendum - 1 to the RFP for Selection of MSI for Implementation of Smart Solutions in Bhubaneswar	Ambient Noise Sensor - 207 Nos.	Can the bidder propose less quantity as per his design solution against mentioned BOQ quantities. As per our solution only one ambient noise sensor is required per amplifier and in this case only 58 amplifiers (1 per zone) are required so only 58 nos. of noise sensors are required.	Refer to Corrigendum-3.
151.		Section 5.6, FR 6.49 SI No. (111)	Each of the Layer 3 switch (Distribution Switch) at the field cabinets shall support	Please suggest the type of switch at field side (Layer-2 or Layer-3) for ITMS system components with exact	RFP is clear.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
		Corrigendum - 1 to the RFP for Selection of MSI for Implementation of Smart Solutions in Bhubaneswar	at least 1 Gbps Tx/Fx port for distribution with backhaul uplinks of 10 Gbps copper /SFP /SFP+ while the Layer 3 switches/routers (backbone) at the POP and ICOMC shall have 10 Gbps support per port. Any attenuators required as part of the overall solution shall be provided by the MSI. Note that all fibre optic SFPs shall be ordered to support minimum 25 km distance for distribution and combination of 25km and minimum 50 km for backbone depending on the distance requirements. This shall be validated by the MSI during the design stage.	no. Of Ethernet and fibre ports for optimization of overall solution. Please also clarify if POE support is required in Industrial grade switch at fields for ITMs system.	
152.	Section 1, 5.1 (a)		Add	<p>Qualification Criteria: Should be a solution that is ready-made and available for sale, lease, or license to the general public. It should have been implemented or being implemented by a large number of System Integrators (3 or more). The OEM should own the Source Code of the software.</p> <p>Mandatory Document: Declaration from the authorized signatory of the</p>	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				OEM	
153.	Section 1, 5.1 (a)		Add	<p>Qualification Criteria:</p> <ul style="list-style-type: none"> The proposed CAD solution must be top 10 in IHS Control Room solution in any one report published in last 3 years. The proposed CAD solution should have been implemented in minimum three (3) projects in Emergency Response (Police, Medical, Fire) in India or abroad in last 5 years. The projects should have CAD solution integrated with GIS solution, AVLS and at least 500 number of MDTs. <p>MDT refers to Mobile Data Terminal – an Android / Windows / IOS based device that displays GIS maps and dispatch related information.</p> <p>Mandatory Document:</p> <ul style="list-style-type: none"> Letter from the authorized signatory of the OEM along with the copy of relevant pages of the report. Documentary evidence from OEM (Copy of Client certificate or Purchase order or Contract). The date of work order or contract should be at least 6 months before date of release of this RFP 	RFP prevails.
154.	Section 1, 5.1 (a)		Add	<p>Qualification Criteria:</p> <p>The proposed CAD solution should have been implemented in at least 2 geographical areas with a population</p>	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				of more than 10 million people. Mandatory Document: Documentary evidence from OEM (Copy of Client certificate or Purchase order or Contract).	
155.	Section 1, 5.1 (a)		Add	Qualification Criteria: The proposed CAD solution must have been operational in a multiagency environment with police, fire, ambulance or any other emergency response agency integration with CAD in at least 2 locations. Mandatory Document: Documentary evidence from OEM (Copy of Client certificate or Purchase order or Contract).	RFP prevails.
156.	Section 1, 5.1 (a)		Add	Qualification Criteria: Should be a solution that is ready-made and available for sale, lease, or license to the general public. The OEM should own the Source Code of the software. Mandatory Document: Declaration from the authorized signatory of the OEM	RFP prevails.
157.	Section 1, 5.1 (a)		Add	Qualification Criteria: The proposed ICOMC software solution must be top 10 in IHS report of any one of last 3 years for Asia / World under Command Centre/CAD/GIS category. Mandatory Document: Letter from the authorized signatory	RFP prevails.

Reply to Queries received from prospective bidders for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

Sl. No.	Page No.	RFP Reference / Clause	Statement in RFP Clause	Query	Response by BSCL
				of the OEM along with the copy of relevant pages of the report.	
158.	Section 5	ICOMC: Interiors		The norms and specifications for control & command centre interiors and control desks are clubbed together. The specifications & Norms for interior & desks are always separate and independent.	Refer to Corrigendum-2.

Sd/-
Chief Executive Officer,
BSCL

Request for Proposal for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

REF:-RFP NO. BSCL/243/16/620 DATED 04/03/2017

Corrigendum – 3

No. 1453

Date: 24-05-2017

In addition to the Corrigendum-1 dated 25/04/2017 and Corrigendum – 2 dated 17/05/17, the following corrections to the RFP NO. BSCL/243/16/620 issued dated 4th March, 2017 is being made in the form of Corrigendum – 3 as provided below. The other terms and conditions of the RFP dated 04/03/2017, Corrigendum 1 dated 25/04/17, Addendum 1 dated 25/04/17 and Corrigendum-2 dated 17/05/2017 remain unchanged.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
1.	Section 1. Instructions to Bidders, A-Definitions, (b), Page 7	“Applicable Law” means the laws and any other instruments having the force of law in the State of Odisha / India, as they may be issued and in force from time to time.	“Applicable Law” means any and all laws, enacted or brought into force and effect by the GoI, the GoO or any local government having jurisdiction over the Master System Integrator or the Smart Solutions Project, including rules, regulations and notifications made thereunder, and judgments, decrees, injunctions, writs and orders of any court of record, as may be applicable to the execution of the Contract, as may be in force and effect during the subsistence of the Contract.
2.	Section 1. Instructions to Bidders, A-Definitions, (ff), Page 9	“Sub-contractor or subcontractor” means a firm or a company engaged by the bidder in accordance with the ITB and / or Standard form of Contract and satisfying following criteria : - a. Should be a company incorporated under Companies Act or a firm registered with competent authority;	“Sub-Contractor or Subcontractor” means any vendor or service provider with whom the Bidder enters into a contract for the supply or execution of any part of the Goods or Services to be provided by the Bidder under the Contract, and shall be a firm or a company engaged by the bidder in accordance with the ITB and satisfying following criteria: -

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>b. Should have been in existence for last five years ending on proposal due date;</p> <p>c. Should have minimum annual average turnover during last three years equal to or more than 50% of the value of sub-contract; and</p> <p>d. Should have experience of having completed similar works during the last five years of value not less than 40% of value of sub-contract.</p>	<p>a. Should be a company incorporated under Companies Act or a firm registered with competent authority;</p> <p>b. Should have been in existence for last five years ending on proposal due date;</p> <p>c. Should have minimum annual average turnover during last three years equal to or more than 50% of the value of sub-contract; and</p> <p>d. Should have experience of having completed similar works during the last five years of value not less than 40% of value of sub-contract.</p>
3.	Section 1. Instructions to Bidders, 4.2 Page 13	None of the member of a given JV/Consortium can be a member of another JV/Consortium for submitting this same bid otherwise all the bids comprising the same member shall stand disqualified. However, a sub-contractor can be a member of more than one JV/Consortium.	No Bidder or member of a Consortium (including shareholders of the Bidder or each member of the Consortium) shall submit another Proposal under this RFP either individually or as a member of another JV/Consortium. If any Bidder or member of a Consortium (including shareholders of the Bidder or member of the Consortium) submits or participates in more than one Proposal, then all such Proposals with the Bidder's or Consortium member's participation shall be rejected and the Bidder shall stand disqualified. However, it is clarified that a Sub-Contractor can be a named Subcontractor of more than one Bidder.
4.	Section 1. Instructions to Bidders, 4.7, Page 14	The Bidder, its contractors or sub-contractors, during the last 3 (three) years, neither failed to perform on any agreement, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder	During the 3 (three) years preceding the Proposal Due Date, the Bidder (and in case of a Consortium, the members) or the Sub-Contractors should not have failed to perform any agreement, as evidenced by imposition of a penalty by an arbitral or judicial

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>or its Contractors or sub-contractors, nor been expelled from any project or agreement nor have had any agreement terminated for breach by such Bidder or its contractors or sub-contractors.</p>	<p>authority or a judicial pronouncement or arbitration award against the Bidder, member of the Consortium or its Sub-Contractors; should not have been expelled from any project or agreement; or should not have had any agreement terminated for breach by such Bidder, member of the Consortium or its Sub-Contractors, and the Bidder shall submit an affidavit to this effect.</p>
5.	<p>Section 1. Instructions to Bidders, 5.1(d), Page 14</p>	<p>that, if a Bidder proposes Subcontractors for services if and as identified in the BDS, these Subcontractors have agreed in writing to serve for the Bidder under the Contract(s) that may result from this bidding; and</p>	<p>that, if a Bidder proposes Subcontractors for providing and Goods and/or Services , these Subcontractors shall have agreed in writing to enter into contracts with the Bidder to serve the Bidder under the Contract(s) that may result from this bidding. This shall be evidenced by undertakings provided by the Subcontractors in the form provided in Appendix 22; and</p>
6.	<p>Section 1. Instructions to Bidders, 5.1(e), Page 14-15</p>	<p>that, in the case of a Bidder not doing business within the Client's country, the Bidder is or will be (if awarded the Contract) represented by an Agent in that country who is equipped and able to carry out the Bidder's maintenance, technical support, training, and repair obligations prescribed in the General and Special Conditions of Contract, and/or Technical Requirements.</p>	<p>that, in the case of a Bidder not doing business within the Client's country, the Bidder is or will be (if awarded the Contract) represented by an agent (which may be a company, limited liability partnership or firm incorporated/registered in India) in that country who is equipped and able to carry out the Bidder's maintenance, technical support, training, and repair obligations prescribed in the Contract, and/or Technical Requirements set out at Section 5. Provided that the Bidder shall be solely liable for the acts and omissions of its agent and all actions of the agent shall be binding on the Bidder.</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
7.	Section 1. Instructions to Bidders, 5.2.2, Page 15	one of the partners shall be nominated as being in charge, and this nomination shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;	one of the partners shall be nominated as being the lead member/partner in charge, and this nomination shall be evidenced by submitting a Joint Bidding Agreement (in the format at Appendix 6) and a power of attorney (in the format at Appendix 18) signed by the legally authorized signatories of all the Consortium partners ;
8.	Section 1. Instructions to Bidders, 17, (b) (iv), Page 23	The EMD/Bid Security: If the Bidder is submitting the EMD in the form of a bank guarantee, it must be in the format set out at Appendix 3;	The EMD/Bid Security being submitted in the form of bank guarantee, must be in the format set out at Appendix 3;
9.	Section 1. Instructions to Bidders, 17 (x), Page 23	Affidavit certifying that the Bidder is not blacklisted in the format set out in Appendix 11;	Affidavit certifying that the Bidder (Consortium members is case of Consortium) and its Sub-Contractors are not blacklisted in the format set out in Appendix 11;
10.	Section 1. Instructions to Bidders, 18.4 Page 26	The prices for Goods offered shall be quoted, including all customs duties, levies, fees, sales and other taxes incurred until delivery of the Goods if the Contract is awarded. In principally, it is estimated that following taxes and charges namely, road permit charges, state entry tax, CST, service tax, Works Contract Tax (VAT) etc. will be applicable for the supply, installation, commissioning, operation and maintenance of the project.	The prices for Goods offered shall be quoted, including all customs duties, levies, fees, sales and other taxes incurred until delivery of the Goods at the project site . In principal, it is estimated that following taxes and charges namely, road permit charges, state entry tax, CST, service tax, works contract tax VAT etc. will be applicable for the supply, installation, commissioning, operation and maintenance of the Smart Solutions Project. The Bidder should carry out its own independent assessment of all the applicable taxes, duties, levies and cess on the Goods. There shall be no escalation in the price quoted by the Bidder in its Financial Proposal on account of the

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			Bidder's failure to take into account any applicable taxes, duties, levies and cess at the time of submission of its Proposal.
11.	Section 2. Technical Proposal, Appendix 1, Page 65	We, the undersigned, offer to provide the Solution, Goods and Services for Master System Integrator for implementation of Smart City Solutions by Bhubaneswar Smart City Limited in Bhubaneswar City of Odisha in accordance with your Request for Proposals dated [Insert Date]. We are hereby submitting our Proposal, which includes the Qualification Documents and our Technical Proposal and Financial Proposal, each in a separate sealed envelope.	We, the undersigned, offer to provide the Solution, Goods and Services for Master System Integrator for implementation of Smart City Solutions by Bhubaneswar Smart City Limited in Bhubaneswar City of Odisha in accordance with your Request for Proposals dated [Insert Date]. We are hereby submitting our Proposal, which includes the Qualification Documents and our Technical Proposal, each in a separate sealed envelope along with Financial Proposal being submitted online through www.tendersodisha.gov.in.
12.	Section 2. Technical Proposal, Appendix Page 66	1(l), if we are selected as the MSI, we undertake the Contract and provide the Goods and Services on the basis of the requirements as defined in the RFP and our proposed Solution.	if we are selected as the MSI, we undertake to execute the Contract and provide the Goods and Services on the basis of the requirements as defined in the RFP and our proposal .
13.	Section 2. Technical Proposal, Appendix Page 67	1(s), We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services no later than the date indicated in Clause 34 (c) of the Bid Data Sheet.	We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services no later than the date indicated in the contract.
14.	Section 2. Technical Proposal, Appendix 5, Page	Financial Qualification of the Bidder	Modified. Please Refer Annexure-C1

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	76		
15.	Section 2. Technical Proposal, Appendix 6 (3), Page 78	Covenants: The Parties hereby undertake that in the event the Consortium is declared the selected Master System Integrator and awarded the Project, the Parties shall enter into a contract for Master System Integrator services (“Contract”) with the Client and for performing all obligations as the Master System Integrator in terms of the Contract for the Project.	Covenants: The Parties hereby undertake that in the event the Consortium is declared the selected Master System Integrator and awarded the Project, the First Party/Partner in Charge shall enter into a contract for Master System Integrator services (“Contract”) with the Client and for performing all obligations as the Master System Integrator in terms of the Contract for the Project, on behalf of all the other Parties.
16.	Section 2. Technical Proposal, Appendix 6 (4)(a), Page 78	Party of the First Part shall be the Partner in Charge of the Consortium and shall have the power of attorney from all Parties for conducting all business for and on behalf of the Consortium during the selection process for the Project and until the Effective Date under the Contract;	Party of the First Part shall be the Partner in Charge of the Consortium and shall have the power of attorney from all the other Parties for conducting all business for and on behalf of the Consortium during the selection process for the Project, including the execution of the Contract;
17.	Section 2. Technical Proposal, Appendix 6 (5), Page 78	Joint and Several Liability: For overall performance of the Contract, the Partner in Charge do hereby undertakes to be jointly and severally responsible for all obligations and liabilities relating to the entire Project and other partners/consortium members undertake to be severally liable for their respective scope in accordance with the terms of the RFP and the Contract.	Joint and Several Liability: For overall performance of the Contract, the Partner in Charge do hereby undertakes to be jointly and severally responsible for all obligations and liabilities relating to the entire Project and other partners/consortium members undertake to be severally liable for their respective scope and roles as specified in clause 4 above , in accordance with the terms of the RFP and the Contract. The partner-in-charge shall ensure and be liable for the overall performance of the Contract.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
18.	Section 2. Technical Proposal, Appendix 6 (8), Page 79	Termination: This Agreement shall be effective from the date hereof and shall continue in full force and effect until the Effective Date under the Contract, in case the Project is awarded to the Consortium. However, in case the Consortium is not selected for award of the Project, the Agreement will stand terminated upon intimation by the Client that it has not been selected and upon return of the EMD by the Client.	Termination: This Agreement shall be effective from the date hereof and shall continue in full force and effect until the expiry or termination of the Contract , in case the Contract is awarded to the Consortium. However, in case the Consortium is not selected for award of the Project, the Agreement will stand terminated upon intimation by the Client that it has not been selected and upon return of the EMD by the Client.
19.	Section 5, 3.2 (General); Pg 179	<ul style="list-style-type: none"> • Bidder's solution shall adhere to the model framework of cyber security requirements set for Smart City (K-15016/61/2016-SC-1, Government of India, Ministry of Urban Development). 	<ul style="list-style-type: none"> • Bidder's solution shall adhere to the model framework of cyber security requirements set for Smart City (K-15016/61/2016-SC-1, Government of India, Ministry of Urban Development) which is provided at Annexure – C2 for reference.
20.	Section 5, TR 6.380	<ul style="list-style-type: none"> • Organization IEEE: <ul style="list-style-type: none"> ➤ IEEE 802.11a/b/g/n/ac • Organization European Standard (EN): <ul style="list-style-type: none"> ➤ EN50121-1 EMC ➤ EN50121-4- Immunity ➤ EN6061-1-2 Medical • Organization Underwriters Laboratory and IEC: <ul style="list-style-type: none"> ➤ UL 2043 ➤ IEC 61373 Shock and Vibration • IP67 and NEMA 4X 	<ul style="list-style-type: none"> • Organization IEEE: <ul style="list-style-type: none"> ➤ IEEE 802.11a/b/g/n/ac • Organization European Standard (EN) • Organization Underwriters Laboratory and IEC • Department of Telecommunications guidelines • Telecom Regulatory Authority of India guidelines

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> Department of Telecommunications guidelines Telecom Regulatory Authority of India guidelines 	
21.	Section 5, TR 6.404	Each controller shall support at least 500 access point nodes at a minimum and shall be scalable as and when required up to 2500 nodes.	Each controller shall support at least 500 access point nodes at a minimum and shall be scalable as and when required up to 2000 access points per controller.
22.	Section 5, TR 6.396	The Wi-Fi access point shall be capable of working at a temperature range of 0°C to 60°C and at a humidity of 5% to 95%, non-condensing.	The Wi-Fi access point shall be capable of working at a temperature range of 0°C to 55°C and at a humidity of 5% to 95%, non-condensing.
23.	Section 5, TR 6.420	The controller shall support minimum 2500 concurrent users.	Clause deleted.
24.	Section 5, FR 6.82	Access points shall have an integrated in-built antenna.	Access points shall have an integrated in-built or external antenna (IP67).
25.	Section 5, FR 6.382	The Wi-Fi access point shall be supplied with MIMO sectoral (120x30 degrees) or omni-directional antennas (both in-built) as needed to meet the design requirements of the Project. It shall support multiple unique antenna patterns. The antennas shall have antenna gain required to support the coverage requirements of the Project.	The Wi-Fi access point shall be supplied with MIMO sectoral (120x30 degrees) or omni-directional antennas (in-built or external) as needed to meet the design requirements of the Project. It shall support multiple unique antenna patterns. The antennas shall have antenna gain required to support the coverage requirements of the Project.
26.	Section 5, TR 6.547	The refresh frequency of DDS shall be $\geq 400\text{HZ}$.	Clause deleted.
27.	Section 5, TR 6.548	The horizontal view angle shall be > 110 degree.	The horizontal view angle shall be > 140 degree.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
28.	Section 5, TR 6.556	Message shall be readable even in broad daylight without any shade & displayed image shall not appear to flicker to the normal human eye (>6000 cd/m ²).	Message shall be readable even in broad daylight without any shade & displayed image shall not appear to flicker to the normal human eye (>5500 cd/m ²).
29.	Section 5, TR 7.742	Other pre-loaded software (open source/ free) shall be Latest version of Adobe Acrobat Reader, Scanning Software (as per scanner offered). These software shall be pre-loaded (at the facility of OEM or any other location) before shipment to Authority offices/locations.	Other pre-loaded software (open source/ free) shall be Latest version of Adobe Acrobat Reader, Scanning Software (as per scanner offered). These software shall be pre-loaded (at the facility of OEM or any other location) before shipment to Authority offices/locations. Open source software can be installed at the time of installation.
30.	Section 5, TR 7.146	Auto calibration feature shall be provided to avoid periodic maintenance.	Auto colour and brightness management mechanism to be provided.
31.	Section 5, TR 7.40	The VDW shall allow for easy maintenance of modules, colour sync systems, etc. where downtime is no greater than twenty (20) minutes.	The VDW shall allow for easy maintenance of modules, colour sync systems, etc. where downtime is no greater than sixty (60) minutes.
32.	Section 5, TR 7.62	The DCMS shall be able to display a minimum of two hundred (200) independent visual sources simultaneously on the VDW in the Operations Room. The sources shall be of 4CIF resolution.	The DCMS shall be able to display a minimum of two hundred (200) independent visual sources simultaneously on the VDW in the Operations Room. The sources shall be of 4CIF or HD resolution.
33.	Section 5, TR 7.63	The DCMS shall be able to display a minimum of twenty (20) independent visual sources simultaneously on all boardroom or auxiliary display device. The sources shall be of 4CIF resolution.	The DCMS shall be able to display a minimum of twenty (20) independent visual sources simultaneously on all boardroom or auxiliary display device. The sources shall be of 4CIF or HD resolution.
34.	Section 5, TR 7.64	The DCMS shall be able to create and add borders and text overlays to individual original video content source.	The DCMS shall be able to add borders to individual original video content source.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		The borders and text overlays shall have selectable options for colour, widths, text size, and flash on/off.	
35.	Section 5, TR 7.91	The display shall utilize LED technology.	The display shall utilize LCD with backlit LED technology.
36.	Section 5, TR 7.93	The display shall have a native resolution of Full HD 1920 x 1080 pixel density.	The display shall have a native resolution of Ultra HD 3840x2160 pixel density.
37.	Section 5, TR 7.105	The display shall be equipped with at least one (1) of each output format including Stereo Mini-Jack, External Speaker Jacks, DVI-D, and RS-232C	The display shall be equipped with at least one (1) of each output format including HDMI, Stereo Mini-Jack, External Speaker Jacks, DVI-D, and RS-232C
38.	Section 5, TR 7.813	The Server shall include (6) PCI-Express x4 or (2) PCI-X 64-Bit/133MHz.	The Server shall include (4) PCI-Express x4 or (2) PCIe interfaces 64-Bit/133MHz.
39.	Section 5, FR 4.9	<p>The surveillance system shall support following Built-in-Analytics for the Cameras:</p> <ul style="list-style-type: none"> • AutoTracker: To detect and track movement in the field of view. • Adaptive Motion Detection: To detect and track object that enter a scene and then triggers an alarm when the object enter a user-defined zone. • Abandoned Object: To detect objects placed within a defined zone and triggers an alarm if the object remains in the zone longer than the user-defined time allows. • Camera Sabotage: Triggers an alarm if the lens is obstructed by spray paint, a cloth or a lens cap. 	<p>The surveillance system shall support following Built-in-Analytics for the Cameras or using central analytics:</p> <ul style="list-style-type: none"> • AutoTracker: To detect and track movement in the field of view. • Adaptive Motion Detection: To detect and track object that enter a scene and then triggers an alarm when the object enter a user-defined zone. • Abandoned Object: To detect objects placed within a defined zone and triggers an alarm if the object remains in the zone longer than the user-defined time allows. • Camera Sabotage: Triggers an alarm if the lens

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Directional Motion: Generates an alarm in a high traffic area when a person or object moves in a specified direction. • Object Removal: To triggers an alarm if the object is removed from a user-defined zone. • Stopped Vehicle: To detect vehicles stopped near a sensitive area longer than the user-defined time allows. • Intrusion Detection – Detect intrusion 	<p>is obstructed.</p> <ul style="list-style-type: none"> • Directional Motion: Generates an alarm in a high traffic area when a person or object moves in a specified direction. • Object Counting: To count the number of objects that enter a defined zone. • Object Removal: To triggers an alarm if the object is removed from a user-defined zone. • Stopped Vehicle: To detect vehicles stopped near a sensitive area longer than the user-defined time allows. • Intrusion Detection: Detect intrusion
40.	Section 5, TR 4.10	Automatic light range circuits shall be included to provide compensation for variations in scene brightness. The circuits shall provide pictures over a light range of 1 million to 1.	Clause deleted.
41.	Section 5, TR 4.16	The camera shall support video compression from 64kbps up to 10Mbps.	The camera shall support video compression up to 6Mbps.
42.	Section 5, TR 4.20	<p>For Fixed Cameras:</p> <ul style="list-style-type: none"> • The fixed camera shall provide a minimum focal length range of 2.8-10 mm compensated with a minimum 12x digital zoom and shall be remotely controllable from the camera control transmitter at ICOMC. • The fixed camera shall capture video using 1/3” progressive scan CMOS or better. 	<p>For Fixed Cameras:</p> <ul style="list-style-type: none"> • The fixed camera shall provide a minimum focal length range of 3-10 mm compensated with digital zoom and shall be remotely controllable from the camera control transmitter at ICOMC. • The fixed camera shall capture video using 1/3” progressive scan CMOS or better.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> Fixed Camera resolution shall be 2048 x 1536 or better. 	<ul style="list-style-type: none"> Fixed Camera resolution shall be 1920 x 1080 or better.
43.	Section 5, TR 4.29	The NVRs shall have a self-diagnostic feature including disk status, CPU usage, motherboard temperature, network status and fan status.	The NVRs/Windows tools shall have a self-diagnostic feature including disk status, CPU usage and network status.
44.	Section 5, TR 4.33	The NVR shall support both Linux and Windows platform.	The NVR shall support Linux or Windows platform.
45.	Section 5, TR 4.34	The NVR shall be capable of digitally signing stored video and digitally sign exported video to ensure chain of trust.	The NVR shall be capable of digitally sign exported video to ensure chain of trust.
46.	Section 5, TR 4.38	<p>Normal state (non-alarm) recording configuration to provide for “Detection” as defined by ULC-317-1997 and as follows:</p> <ul style="list-style-type: none"> Resolution HD Normal Frame rate of 25 FPS 	<p>Normal state (non-alarm) recording configuration to provide for “Detection” and as follows:</p> <ul style="list-style-type: none"> Resolution HD Normal Frame rate of 25 FPS
47.	Section 5, TR 4.39	<p>Alarm state recording configuration to provide for “Recognition” as defined by ULC-317-1997 and as follows:</p> <ul style="list-style-type: none"> Resolution of HD Frame rate of 25 FPS Alarm state recording of one track of audio at 32 Kbit 	<p>Alarm state recording configuration to provide for “Recognition” and as follows:</p> <ul style="list-style-type: none"> Resolution of HD Frame rate of 25 FPS Alarm state recording of one track of audio at 32 Kbit
48.	Section 5, TR 4.52	<p>Users shall be able to view stream statistics on all current video streams, including the following information:</p> <ul style="list-style-type: none"> Frame rate Resolution (SIF, 2SIF, 4SIF, 720p, 1080p, 5MP) 	<p>Users shall be able to view stream statistics on all current video streams, including the following information:</p> <ul style="list-style-type: none"> Frame rate

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Current bit-rate • Audio bit-rate 	<ul style="list-style-type: none"> • Resolution (SIF, 2SIF, 4SIF, 720p, 1080p, 5MP) • Current bit-rate
49.	Section 5, TR 4.50	<p>The software shall allow the removal of interlacing artefacts from 4SIF video using the following criteria:</p> <ul style="list-style-type: none"> • Best performance • Best image quality • Smoothest rendering 	Clause deleted.
50.	Section 5, TR 6.204	<p>All Layer 2 switches at a minimum shall support the following:</p> <ul style="list-style-type: none"> • IPv4/IPv6 • CoS • IP Multicast • Security • Storm Control • Dynamic Trunking Protocol • Spanning Tree Route Guard • Secure Sockets Layer (SSL)/SSH • Network Management • Non-Blocking Type • Support Auto-Sensing • Support Auto-Negotiation 	<p>All Layer 2 switches at a minimum shall support the following:</p> <ul style="list-style-type: none"> • IPv4/IPv6 • CoS • IP Multicast • Security • Storm Control • Secure Sockets Layer (SSL)/SSH • Network Management • Non-Blocking Type • Support Auto-Sensing • Support Auto-Negotiation • Spanning Tree Protocol
51.	Section 5,	The device shall have LED indicators for Power, LAN,	The device shall have LED indicators for Power,

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	TR 6.213	Signal, RS-232, and Ethernet Link & Activity.	Signal, LAN/USB and Ethernet Link & Activity.
52.	Section 5, TR 6.397	The Wi-Fi access point shall be IP67 compliant and NEMA 4X rated.	The Wi-Fi access point shall be IP67 compliant or NEMA 4X rated.
53.	Section 5, 5.7.3 Data Hosting	Servers - TR 7.649-TR7.657	Specifications Deleted.
54.	Section 5, TR 4.28	All equipment shall be designed to provide a usable life of not less than 15 years.	All equipment shall be designed to provide a usable life of not less than 10 years.
55.	Section 5, TR 4.36	The NVRs shall be support interface using 10/100/1000BaseTX. It shall support a total throughput of at least 700 Mbps.	The NVRs shall be support interface using 10/100/1000BaseTX. It shall support a total throughput of at least 512 Mbps.
56.	Corrigendum-1, S.No. 27	All cameras shall have integral in-built adaptive IR technology. For fixed cameras, the IR shall support a range of at least 30m and for PTZ it shall support a range of at least 200m moving with zoom (adaptive).	All cameras shall have integral in-built or external adaptive IR technology. For fixed cameras, the IR shall support a range of at least 30m and for PTZ it shall support a range of at least 200m moving with zoom (adaptive).
57.	Section 5, TR 6.228	The switches/routers shall support at least one (1) dual personality port (RJ-45 or USB micro-B) serial console port.	The switches/routers shall support at least one (1) RJ-45 or USB micro-B serial console port.
58.	Section 5, TR 6.244	The core router shall support N+1 hot swappable redundant power supply module with redundant fan modules.	The core router shall support 1+1 hot swappable redundant power supply module with redundant fan modules.
59.	Addendum-1,	The industrial grade switches shall at a minimum carry	The industrial grade switches shall at a minimum carry

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	Page 27, TR 6.214C	IP30 rating.	IP20 rating. Alternatively, if the switch does not have IP 20 rating, the Bidder may provide external IP 55 rated box for meeting this requirement.
60.	Addendum-1, Page 27, TR 6.214H	The industrial grade distribution switches shall support operating temperature range of 0°C to +65°C (without any fans) with ambient relative humidity of 5-95%, non-condensing.	The industrial grade distribution switches shall support operating temperature range of 0°C to +65°C (fan with filter/without any fans) with ambient relative humidity of 5-95%, non-condensing.
61.	Section 5, TR 6.578	All materials of mounting structure used for smart pole shall be coated by hot-dip galvanizing after all fabrication works has been completed.	All materials of mounting structure used for smart pole shall be coated by hot-dip galvanizing or PU coating after all fabrication works has been completed.
62.	Section 5, FR 6.12	End-to-end fibre optic infrastructure shall include only single mode Optical Fibre Cable (OFC), loose tube, armoured cable configuration rated for outdoor installations.	End-to-end fibre optic infrastructure shall include only single mode Optical Fibre Cable (OFC), loose tube, single sheath metallic steel tape armoured cable configuration rated for outdoor installations.
63.	Section 5.6.3, FR 6.1	Environmental sensor station shall monitor following parameters and include the following integrated sensors inside one station: <ul style="list-style-type: none"> • Carbon Monoxide (CO) sensor • Ozone (O3) sensor • Nitrogen Dioxide (NO2) sensor • Sulphur Dioxide (SO2) sensor • Carbon Dioxide (CO2) sensor • Particulate/SPM Profile (PM10, PM2.5, and TSP) sensor • Temperature sensor • Relative Humidity sensor 	Environmental sensor station shall monitor following parameters and include the following integrated sensors inside one station: <ul style="list-style-type: none"> • Carbon Monoxide (CO) sensor • Ozone (O3) sensor • Nitrogen Dioxide (NO2) sensor • Sulphur Dioxide (SO2) sensor • Carbon Dioxide (CO2) sensor • Particulate/SPM Profile (PM10 and PM2.5) sensor • Temperature sensor • Relative Humidity sensor

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Wind Speed sensor • Wind Direction sensor • Rainfall sensor • Barometric Pressure sensor; and • Noise sensor. 	<ul style="list-style-type: none"> • Wind Speed sensor • Wind Direction sensor • Rainfall sensor • Barometric Pressure sensor; and • Noise sensor.
64.	Section 5, TR 6.582	Anti-Climb Shield	Deleted
65.	Addendum, S.No.47, TR 6.214S	The device shall have LED indicators for Power, LAN, Signal, RS-232, and Ethernet Link & Activity.	The device shall have LED indicators for Power, LAN/USB, Signal and Ethernet Link & Activity.
66.	Addendum, S.No.47, TR 6.214U	The distribution switches shall be configurable up to a minimum of 16K MAC addresses and 4000 multicast routes.	The distribution switches shall be configurable up to a minimum of 2K MAC addresses and 500 multicast routes.
67.	Section 5, TR 6.423	The controller shall support Static IP routing for both IPv4 and IPv6 networks.	Clause Deleted.
68.	Corrigendum-1, S.No.1, FR 6.49 and Addendum 47- TR 6.214A	Note that all fibre optic SFPs shall be ordered to support minimum 25 km distance for distribution and combination of 25km and minimum 50 km for backbone depending on the distance requirements. This shall be validated by the MSI during the design stage.	Note that all fibre optic SFPs shall be ordered to support minimum 10 km distance for distribution and combination of 10 km and minimum 30 km for backbone depending on the distance requirements. This shall be validated by the MSI during the design stage.
69.	Section 5, TR 7.665	Two hot-plugs/hot-swap redundant 16 Gbps Fibre Channel module for connectivity to the external Fibre	Clause Deleted.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		channel Switch and ultimately to the storage device	
70.	Section 5, TR 7.869	It shall support all the standard features like Call Transfer, Call Forward, Call pick-up, Call hold, Call Barge-in, Call Back, Do not disturb, Speed Dialling, Call Parking, Paging (both external and internal), Class of Service, Calling Line Identification (CLI) on digital as well as analog extension and external lines etc.	It shall support all the standard features like Call Transfer, Call Forward, Call pick-up, Call hold, Call Barge-in, Call Back, Do not disturb, Speed Dialling, Call Parking, Paging (both external and internal), Class of Service, Calling Line Identification (CLI) on Digital/IP as well as analog extension and external lines etc.
71.	Section 5, TR 7.876	It shall support analog, digital and IP/ Soft phone.	It shall support analog and IP/Digital soft phone.
72.	Section 5, 7.884	It shall have Digital Extension telephone instrument with following features: <ul style="list-style-type: none"> • Programmable one touch keys; • Display-tilt able Graphical display; • Keys with LED; • Optical call alert RED status LED. • Menu/speaker with RED LEDS • 4 Programmable keys with dual function; • 10 fixed function keys. • Control keys+/- • 5 way navigator • Hands free talking (full Duplex) • No Mechanical parts. • Should support add on key panel module 	Clause Deleted. Industry standard IP telephone is to be provided.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Interface - 3.5 mm jack for connecting handset • Headset with microphone 	
73.	Corrigendum-1, S.No. 130	The Wi-Fi access point shall support: Minimum One PoE+ autosensing port 10/100/1000BASE-T Ethernet network interface (RJ-45) and one SFP/SFP+ for fiber connectivity.	The Wi-Fi access point shall support: Minimum One PoE+ autosensing port 10/100/1000BASE-T Ethernet network interface (RJ-45) and one SFP/SFP+ for fiber connectivity (optional).
74.	Section 5, TR 7.643	Protocols: <ul style="list-style-type: none"> • IPV4, IPV6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1X Security standards • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support • Support up to 1024 VLANs • Support IGMP Snooping and IGMP Querying • Support Multicasting • Should support Loop protection and Loop detection, • Should support Ring protection 	Protocols: <ul style="list-style-type: none"> • IPV4, IPV6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1X Security standards/ Port ACL/VLAN ACL • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support • Support up to 1024 VLANs • Support IGMP Snooping and IGMP Querying • Support Multicasting • Should support Loop protection and Loop detection, • Should support Ring protection/Loop Prevention
75.	Section 5, TR 7.644	Access Control: <ul style="list-style-type: none"> • Support port security • Support 802.1x (Port based network access control). 	Access Control: <ul style="list-style-type: none"> • Support port security • Support 802.1x Security Standards/ Port ACL/VLAN

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication 	ACL <ul style="list-style-type: none"> • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication
76.	Reply to pre-bid queries Dated 25/04/2017 S.No. 507	The AC input power shall be 230 VAC +/- 10% at 50/60 Hz +/- 1Hz. It should be of minimum 400 watt.	The AC input power shall be 230 VAC +/- 10% at 50/60 Hz +/- 1Hz.
77.	Section 5, Page 689	Blade Chassis Specifications	Blade Chassis Specifications (Bidder may choose blade chassis or rack mount server as per detailed solution).
78.	Corrigendum-1, S.No. 96	The server shall have 2x Dual Core Intel Xeon E5-2699 v4, 2.30 GHz, 55 MB Cache, or better.	The server shall have Dual Processor Intel Xeon E5-2600 Series or better.
79.	Section 5, TR 7.811	The server shall be scalable to 2 processors with each having a minimum of 6 cores per processor.	The server shall be scalable to 4 processors with each having a minimum of 6 cores per processor.
80.	Section 5, TR 7.658	Minimum 6U size, rack-mountable, capable of accommodating minimum 8 or higher hot pluggable blades	Rack-mountable, capable of accommodating minimum 8 or higher hot pluggable blades
81.	Section 5, TR 1.76	All components of the PA system shall have an operating temperature range of at least +5°C to +60°C and shall have a storage temperature range of 0°C to +80°C.	All components of the PA system shall have an operating temperature range of at least +5°C to +55°C and shall have a storage temperature range of 0°C to +80°C.
82.	Corrigendum-1, S.No. 122	The core router shall have a total switching capacity of at least 3.2Tbps with 400 Gbps per slot. The MSI shall size	The core router shall have a total switching capacity of at least 2Tbps with 200 Gbps per slot. The MSI shall

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		the port and transceiver as per their detailed design.	size the port and transceiver as per their detailed design.
83.	Section 5, TR 6.243	The core router shall be powered by 220-240VAC/50Hz input as per the design requirements.	The core router shall be powered by 220-240VAC/50Hz input as per the design requirements. In case the router requires DC input, necessary converter shall be provided as part of the solution.
84.		<p>The pole shall be ground base monopole type of minimum 12 meter height and shall be able to support the loading of the mounting structure as given below:</p> <ul style="list-style-type: none"> • Capable of hosting LED light luminaries. • Capable of hosting up to three (3) number of cellular antennas for different cellular providers. • Minimum two (2) number of Wi-Fi Access Points. • Minimum two (2) number of CCTV cameras (embedded inside luminaire housing). • Capable of hosting two number of single cross-arms of 1.5 metre length. • Capable of hosting one network switch and UPS. • Capable of withstanding the weight all the proposed mounting systems and accessories with an additional 30%-40% weight withstanding capacity. 	<p>The pole shall be ground base monopole type of minimum 12 meter height and shall be able to support the loading of the mounting structure as given below:</p> <ul style="list-style-type: none"> • Capable of hosting LED light luminaries. • Capable of hosting up to three (3) number of cellular antennas for different cellular providers. • Minimum two (2) number of Wi-Fi Access Points. • Minimum two (2) number of CCTV cameras (preferably embedded inside luminaire housing). • Capable of hosting two number of single cross-arms of 1.5 metre length. • Capable of hosting one network switch and UPS. • Capable of withstanding the weight all the proposed mounting systems and accessories with an additional 30%-40% weight withstanding capacity.
85.	Section 3.8.1.1, Page 209	A dedicated fibre optic infrastructure shall be provided in a partial-mesh architecture for backbone communications of the Project connecting all the POPs.	A dedicated fibre optic infrastructure shall be provided in a ring architecture for backbone communications of the Project connecting all the POPs.
86.	Section 5,	Layer 3 based Ethernet Switch/Router at all the Point of	Layer 3 based Ethernet Switch/Router at all the Point

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	FR 6.46	Presence (POP) and ICOMC locations for communication between the POPs and ICOMC to support a partial mesh architecture.	of Presence (POP) and ICOMC locations for communication between the POPs and ICOMC to support a ring architecture.
87.	Section 5, TR 6.214	All switches shall have a Mean Time Between Failure (MTBF) of at least 250,000 hours.	All switches shall have a Mean Time Between Failure (MTBF) of at least 175,000 hours.
88.	Section 5, TR 6.232	The switches/routers shall have a Mean Time Between Failure (MTBF) of at least 250,000 hours.	The switches/routers shall have a Mean Time Between Failure (MTBF) of at least 175,000 hours.
89.	Section 5, TR 7.138	The VC system shall have innovative facial-tracking algorithms to accurately frame all room participants.	Clause deleted.
90.	Section 5, TR 7.141	The VC system shall have the capability to zoom in and follow the person speaking.	Clause deleted.
91.	Section 5, TR 7.149	The VC system shall have at a minimum, the following video inputs; <ul style="list-style-type: none"> • 2 x cameras • 1 x HDMI 1.3 • 1 x VGA 	The VC system shall have at a minimum, the following interfaces; <ul style="list-style-type: none"> • 2 x USB 2.0
92.	Section 5, TR 7.150	The VC system shall have at a minimum, the following Audio input. <ul style="list-style-type: none"> • 1 x camera • 1 x HDMI • 1 x 3.5 mm stereo line-in 	The VC system shall have at a minimum, the following Audio input. <ul style="list-style-type: none"> • 1 x Microphone (RJ11) • 1 x HDMI • 1 x 3.5 mm stereo line-in
93.	Section 5,	The VC system shall have at a minimum, the following	The VC system shall have at a minimum, the following

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	TR 7.152	other interfaces; • 2 x USB 2.0 • 1 x RS-232 • 8-pin mini-DIN	other interfaces; • 2 x USB 2.0
94.	Section 5, TR 7.317	Call Centre representative must have view to unified screen giving both network & service view.	Clause deleted.
95.	Section 5, TR 7.882	It shall have maximum loop resistance of 1200 ohms at – 48 Volts DC for analog trunk lines.	Clause deleted.
96.	ITB Clause 17 (c) (xi)	<p>(xi) Details of Key Expert to be deployed for the implementation, operation and management of the project in accordance with Section 1: ITB. Format for CV is presented in Appendix 16;</p> <p>Note: Each CV needs to have been recently signed by the key personnel and/or countersigned by the authorized official of the Firm. At the time of submission of bid proposal, the scanned copies of the signature of key personnel will be allowed but at the time of signing of contract, the original signature will be required. However, in both the cases, original counter signature of Authorized signatory shall be required in original. A CV shall be summarily rejected if the educational qualification of the key personnel proposed does not match with the requirement as given in the RFP. The personnel proposed should possess good working knowledge of English language. No key personnel involved should have attained the age of 70 years at the time of submitting the proposal. The Client reserves the right to ask for proof of age,</p>	<p>(xi) Details of Key Expert to be deployed for the implementation, operation and management of the project in accordance with Section 1: ITB. Format for CV is presented in Appendix 16;</p> <p>Note: Each CV needs to have been recently signed by the key personnel and/or countersigned by the authorized official of the Firm. At the time of submission of bid proposal, the scanned copies of the signature of key personnel will be allowed but at the time of signing of contract, the original signature will be required. However, in both the cases, original counter signature of Authorized signatory shall be required in original. The personnel proposed should possess good working knowledge of English language. No key personnel involved should have attained the age of 70 years at the time of submitting the proposal. The Client reserves the right to ask for proof of age, qualification and experience at any stage of the Project.</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		qualification and experience at any stage of the Project.	
97.	Section 5, TR 7.346	The NTS shall comprise of high resolution display and numeric keypad.	The NTS shall comprise of high resolution display.
98.	Section 5, TR 7.351	The NTS shall have independent time references: GPS, IRIG B, 1PPS, 10 MHz.	The NTS shall have independent/in-built time references: GPS, IRIG B, 1PPS, 10 MHz.
99.	Section 5, TR 7.97	The display shall have a built-in tuner.	The display shall have a built-in/external tuner.
100.	Section 5, TR 7.118	The signal transmitter and receiver pair shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The signal transmitter and receiver pair shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
101.	Section 5, TR 7.187	The room control processors shall support secure industry standard communication protocol. HTTP, HTTPS, SSH, SFTP, SMTP, NTP, DHCP, DNS, ICMP and IPv4.	The room control processors shall support secure industry standard communication protocol.
102.	Section 5, TR 7.198	The room control system shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The room control system shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
103.	Section 5, TR 7.389	The Matrix Switcher shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The Matrix Switcher shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
104.	Section 5, TR 7.407	The audio processor shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The audio processor shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
105.	Section 5, TR 7.413	The audio distribution amplifier shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The audio distribution amplifier shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
106.	Section 5, TR 7.421	The audio extractor shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The audio extractor shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
107.	Section 5, TR 7.432	The distribution amplifier shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The distribution amplifier shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
108.	Section 5, TR 7.442	The AV auto switcher shall be operable between 0 and +50 °C / 10% to 90%, non-condensing.	The AV auto switcher shall be operable between 0 and +40 °C / 10% to 85%, non-condensing.
109.	Section 5, TR 7.148	The VC system shall support following video standard protocols: • H.261, H.263, H.264 AVC • H.263 & H.264 video error concealment	The VC system shall support following video standard protocols: • H.261/ H.263/ H.264 AVC • H.263/ H.264 video error concealment
110.	Section 5, TR 6.455	Precision of O3 sensor shall be less than 2% of reading or better.	Precision of O3 sensor shall be less than 3% of reading or better.
111.	Section 5, TR 6.487	Lower detectable limit of particulate profile sensor shall be less than 1 µg/m3.	Lower detectable limit of particulate profile sensor shall be less than 1 µg/m3 or better.
112.	Section 5, TR 6.520	Equation accuracy shall be ±0.01" Hg (±0.3 mm Hg, ±0.3 hPa/mb) or better.	Clause deleted.
113.	Section 5, TR 6.519	Equation source of the sensor shall be Smithsonian Meteorological tables.	Clause deleted.
114.	Corrigendum-1, S.No. 101	There are three (3) types of ducts for fibre optic laying to fulfil the end-to-end connectivity of the ICT infrastructure: • 2x63mm (OD) HDPE duct for backbone and	There are three (3) types of ducts for fibre optic laying to fulfil the end-to-end connectivity of the ICT infrastructure:

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>distribution infrastructure.</p> <ul style="list-style-type: none"> • 1x160mm (OD) HDPE duct that will act as outer sleeve for backbone/distribution duct where duct to be laid will be under vehicle crossings and heavy traffic area etc. • 1x25mm (OD) HDPE duct to connect every field device access switch location 	<ul style="list-style-type: none"> • 2x63mm (OD) HDPE duct for backbone and distribution infrastructure. • Outersleeve with required diameter (1x160mm as an e.g.) of DWC duct that will act as outer sleeve for backbone/distribution duct where duct to be laid will be under vehicle crossings and heavy traffic area etc. DWC duct shall be as per the acceptable telecommunication standards and best practices in India. • 1x25mm (OD) HDPE duct to connect every field device access switch location
115.	Section 5, FR 7.165	Software & hardware required to record the wireless communication.	Software & hardware required to record the wired/wireless communication.
116.	Section 5, TR 4.27	NVR shall be of N+N configuration with RAID 6 configuration.	NVR shall be of N+N configuration with RAID 6 configuration. The overall architecture shall be such that each POP shall have atleast one (1) NVR which will record all cameras connected to respective POP zones. Moreover, at the central, secondary recording shall also happen for all zones simultaneously. Failing of one (1) POP should automatically have the NVR at second location to take over seamlessly.
117.	Section 5, TR 7.192	<p>UPS shall be integrated with BMS via open protocols. Monitoring of following parameters shall be done via BMS:</p> <ul style="list-style-type: none"> • Battery voltage • DC voltage • Battery charging/discharging status 	<p>UPS shall be integrated with BMS via open protocols. Monitoring of following parameters shall be done via BMS:</p> <ul style="list-style-type: none"> • Battery voltage • DC voltage

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Estimated time before shutdown during battery discharge • Battery charging/discharging current • Load on bypass • UPS in maintenance • Rectifier failure alarm • Inverter failure alarm • Battery discharge status • Low battery warning alarm • Low battery shutdown alarm • Battery disconnect alarm • Overload alarm • Fan failure alarm • Power fuse failure alarm • Output over/under frequency alarm • Static switch unable alarm • Bypass not available alarm; and • Common alarm 	<ul style="list-style-type: none"> • Battery charging/discharging status • Estimated time before shutdown during battery discharge • Rectifier failure alarm • Battery discharge status • Low battery warning alarm
118.	Section 5, FR 5.1384	The ESB supports message record/ replay capability, DFDL standards-based parser for text and binary data, many programming languages (Java, ESQ, PHP, C#, VB, F#, C++) including .Net, natively web services, Graphical Data mapping for transforming XML, text, and binary data, transaction management (Automatic, Commit, Rollback), SSL, SFTP, and LDAP etc.	The ESB supports message record/ replay capability, many programming languages (Java, ESQ, PHP, C#, VB, F#, C++) including .Net, natively web services, Graphical Data mapping for transforming XML, text, and binary data, transaction management (Automatic, Commit, Rollback), SSL, SFTP, and LDAP etc.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
119.	Section 5, FR 3.7	For on-street parking, each sensor shall be able to detect a minimum of 10 parking spots.	For on-street parking, each sensor/gateway shall be able to detect a minimum of 10 parking spots.
120.	Section 5, TR 7.95	The display shall be equipped with an OPS-Compliant Slot.	The display shall be equipped with an OPS-Compliant Slot. As a minimum, media USB for direct plug and play from USB is required.
121.	Section 5, TR 7.104	The boardroom monitor shall equipped with at least one (1) of each input format including HDMI, Display Port, DVI-D, VGA 15-pin D-Sub, RS232C, and Ethernet (RJ45).	The boardroom monitor shall equipped with at least One (1) HDMI port and Ethernet port of input format as a minimum.
122.	Section 5, TR 7.422	The distribution amplifier shall have HDMI & DP connector inputs.	The distribution amplifier shall have HDMI or DP connector inputs.
123.	Section 5, TR 7.138	The VC system shall have innovative facial-tracking algorithms to accurately frame all room participants.	The VC system shall have innovative facial-tracking algorithms/push-to-talk option to accurately frame all room participants.
124.	Addendum-1, Anti-Advanced Persistent Threat (APT), FR 7.318B1	Anti-APT shall be appliance based and support minimum throughput of 2 Gbps with required ports as per Bidder solution.	Anti-APT shall be appliance based and support throughput with required ports as per Bidder solution.
125.	Corrigendum-1, Annexure-D: Section 5.4.1 – Video Management System (VMS),	PTZ Control: <ul style="list-style-type: none"> All PTZ control shall be user-restricted. Users shall be able to configure named preset positions with optional "tool tip" text. Users shall be able to configure named custom 	PTZ Control: <ul style="list-style-type: none"> All PTZ control shall be user-restricted. Users shall be able to simultaneously pan and tilt a PTZ camera displayed in a video pane in any direction and at varying speed by moving

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	FR 4.61	<p>commands with optional "tool tip" text. Commands can be per PTZ type or per camera, as required.</p> <ul style="list-style-type: none"> • Users shall be able to simultaneously pan and tilt a PTZ camera displayed in a video pane in any direction and at varying speed by moving the PC mouse on the video pane. • Users shall be able to zoom a PTZ camera in or out using the PC mouse. • Users shall be able to simultaneously pan, tilt and zoom a PTZ camera displayed in a video pane or monitor using a joy stick on one of the supported CCTV keyboards. • Users shall be able to adjust the focus of a PTZ camera using the on screen PTZ controls or a CCTV keyboard: <ul style="list-style-type: none"> ➤ Focus near ➤ Focus far ➤ Auto-focus • Users shall be able to adjust the iris of a PTZ camera using the on screen PTZ controls or a CCTV keyboard: Open iris-Close-Auto-iris. • Users shall be able to move a PTZ camera to a preset position using the on screen PTZ controls or a CCTV keyboard. • Users shall be able to perform a custom command on a PTZ camera using the on screen PTZ controls (e.g. operate wipers.). 	<p>the PC mouse on the video pane.</p> <ul style="list-style-type: none"> • Users shall be able to zoom a PTZ camera in or out using the PC mouse. • Users shall be able to simultaneously pan, tilt and zoom a PTZ camera displayed in a video pane or monitor using a joy stick on one of the supported CCTV keyboards. • Users shall be able to adjust the focus of a PTZ camera using the on screen PTZ controls or a CCTV keyboard: <ul style="list-style-type: none"> ➤ Focus near ➤ Focus far ➤ Auto-focus • Users shall be able to adjust the iris of a PTZ camera using the on screen PTZ controls or a CCTV keyboard: Open iris-Close-Auto-iris. • Users shall be able to move a PTZ camera to a preset position using the on screen PTZ controls or a CCTV keyboard. • Users shall be able to perform a custom command on a PTZ camera using the on screen PTZ controls (e.g. operate wipers.). • Users shall be able to enter the menu on a PTZ camera using the on screen PTZ controls or a CCTV keyboard (menu options navigated using pan and tilt.). • Users shall be able to hold onto connections to

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<ul style="list-style-type: none"> • Users shall be able to enter the menu on a PTZ camera using the on screen PTZ controls or a CCTV keyboard (menu options navigated using pan and tilt.). • Users shall be able to hold onto connections to PTZ cameras to prevent other users taking control if not moved (overrides the 5 second timeout.). • Users shall be able to take control of a PTZ camera if user has a higher priority than the user currently moving it (overrides PTZ hold.). • Inform user when can't take control of a PTZ camera because another user with a higher priority is controlling it. • Users shall be able to show or hide the on screen PTZ controls. • The Video Management System shall support the following for cameras using the ONVIF interface or Camera Gateway: <ul style="list-style-type: none"> ➤ Pan, tilt and zoom control with mouse and joystick ➤ Go to preset ➤ Set preset 	<p>PTZ cameras to prevent other users taking control if not moved (overrides the 5 second timeout.).</p> <ul style="list-style-type: none"> • Users shall be able to take control of a PTZ camera if user has a higher priority than the user currently moving it (overrides PTZ hold.). • Inform user when can't take control of a PTZ camera because another user with a higher priority is controlling it. • Users shall be able to show or hide the on screen PTZ controls. • The Video Management System shall support the following for cameras using the ONVIF interface or Camera Gateway: <ul style="list-style-type: none"> ➤ Pan, tilt and zoom control with mouse and joystick ➤ Go to preset ➤ Set preset
126.	Corrigendum-1, Annexure-D: Section 5.4.1 – Video Management	<p>Playback on PC Screen or Video Wall:</p> <ul style="list-style-type: none"> • Users shall be able to digitally zoom up to 1000% and scroll replayed video. 	<p>Playback on PC Screen or Video Wall:</p> <ul style="list-style-type: none"> • Users shall be able to digitally zoom up to 10x and scroll replayed video.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	System (VMS), FR 4.63		
127.	Corrigendum-1, Annexure-D: Section 5.4.1 – Video Management System (VMS), FR 4.109	The Video Management System shall clearly mark black screen monitoring viewing windows as being distinct from normal live view windows through background colour and icon.	Clause deleted.
128.	Corrigendum-1, Annexure-D: Section 5.4.1 – Video Management System (VMS), FR 4.158	Users shall be able to grant global permissions to user groups or users (global permissions do not apply to specific objects such as cameras): <ul style="list-style-type: none"> • PTZ hold (allows a user to keep control of a PTZ camera when not moving it) • Video lockout (allows a user to perform a video lockout on any site of camera) 	Users shall be able to grant global permissions to user groups or users (global permissions do not apply to specific objects such as cameras): <ul style="list-style-type: none"> • PTZ hold (allows a user to keep control of a PTZ camera when not moving it).
129.	Section 5.2, Smart Tracking Central System – FR 2.29	When GPRS service is not available or dropped then OBU shall send the positional packets through SMS.	When GPRS service is not available or dropped then OBU shall store the positional packets and send them once the service is restored.
130.	Section 5.2, Smart Tracking Central System – Inner Sign Board, Front, Side and	FR 2.224-FR 2.243	Specifications deleted.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	Rear Sign Board and In bus automatic voice announcement		
131.	Section 5.2, Smart Tracking Central System – Real-Time PIS Display Boards, TR 2.21	PIS shall be used to display information to passengers at each station along the corridor and inside buses as well to provide on-board route for locations.	PIS shall be used to display information to passengers at selected bus stop locations.
132.	Section 5, Service Level Agreement (SLA)	Service Level Agreement (SLA) shall become the part of the Contract between the Client and the MSI. SLA defines the terms of MSI's responsibility in ensuring the timely delivery of the deliverables and the correctness of the deliverables based on the agreed performance indicators as detailed in this section.	Service Level Agreement (SLA) shall become the part of the Contract between the Client and the MSI. SLA defines the terms of MSI's responsibility in ensuring the timely delivery of the deliverables and the correctness of the deliverables based on the agreed performance indicators as detailed in this section. The maximum penalty applicable on quarterly applicable payment for not adhering to the SLA's is capped at 40% of the quarterly applicable payment proposed by the bidder. However BSCL has an option to consider termination of the contract if the penalty exceeds 20% of the quarterly applicable payment to the bidder as per the GCC Clause 18.1.1. (iv) (f).
133.	General Conditions of Contract - 18.1.1. (iv) (f).	If the penalties calculated as per SLA's specified under Service Level Agreement, exceed twenty percent (20%) of the monthly payment of Recurrent Cost (OPEX) for that particular month.	If the penalties calculated as per the rates specified under Service Level Agreement, exceed twenty percent (20%) of the quarterly payment of Recurrent Cost (OPEX) for that particular quarter.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
134.	Section 1, A. General Provisions , (ff) (d)	Should have experience of having completed similar works during the last five years of value not less than 40% of value of sub-contract.	Clause deleted.
135.	Section 5, TR 7.387	<p>The UPS unit shall include Valve Regulated Sealed Maintenance Free Lead Acid Batteries shall be used with a 20 hours discharge rating with a typical lifetime of five (5) years and minimum reserve time of four (4) hours under full load conditions.</p> <p>The battery system design shall be provided with necessary devices to prevent deep discharge beyond recommended limits to prevent the batteries discharging beyond end cell voltage specified by the battery maker. The connections from battery to battery shall be by using copper bus bar strips.</p>	<p>The UPS unit shall include Valve Regulated Sealed Maintenance Free Lithium Ion Batteries. The UPS shall be used with a 20 hours discharge rating with a typical lifetime of five (5) years.</p> <p>The battery system design shall be provided with necessary devices to prevent deep discharge beyond recommended limits to prevent the batteries discharging beyond end cell voltage specified by the battery maker. The connections from battery to battery shall be by using copper bus bar strips. Further, the system shall also include a maintenance by-pass module and battery charger.</p>
136.	Special Conditions of Contract (SCC), GCC 21.7	The MSI shall be given rights to put extra duct and fibre which MSI can monetize. MSI will not share any revenues realized from this monetization with the Client. At any given time, MSI shall consult and agree with the Client the terms and conditions of these rights.	The MSI shall be given rights to put extra duct and fibre, beyond what is required as part of the Contract within the City RoW. The MSI may monetize both ducts and fibre. However, the cost of putting any extra duct or fibre beyond what is required as part of the BoQ shall be borne by the MSI. MSI will not share any revenues realized from this monetization with the Client. At any given time, MSI shall consult and agree with the Client the terms and conditions of these rights for monetization.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
137.	Section 5, 3.9.2. ICOMC	<p>There are a number of functions and systems that shall be managed out of the ICOMC. Depending on the type of systems and functions, they shall be monitored and/or controlled from the ICOMC, and will have the option of sharing a feed to another agency as required via the ICOMC. ICOMC shall integrate all the City Systems procured under the Smart City Mission, which include systems procured through this project and system which are/will be procured as other projects. In addition to systems identified in this RFP, the ICOMC shall seamlessly integrate the following system being procured separately:</p> <ul style="list-style-type: none"> • Existing City Surveillance project implemented by Traffic Police • Existing Street Lighting project • Existing ERP & E-Governance Initiatives • Traffic Signalling • Common Payment Card • Public Bike Sharing System • E-rickshaw • Electricity & Water SCADA Systems • Online GIS Platform – Bhubaneswar One 	<p>There are a number of functions and systems that shall be managed out of the ICOMC. Depending on the type of systems and functions, they shall be monitored and/or controlled from the ICOMC, and will have the option of sharing a feed to another agency as required via the ICOMC. ICOMC shall integrate all the City Systems procured under the Smart City Mission, which include systems procured through this project and system which are/will be procured as other projects. The ICOMC shall be able to provide critical alarms, functionality and shall be able to integrate various dashboards for decision making, while the subsystems shall provide the detailed functionality. It is understood that each of the system provided as part of this contract or through other procurements as detailed in the RFP shall have their respective individual solution. The MSI shall optimize the overall solution to avoid any duplication and to achieve the desired functionality of the RFP. In addition to systems identified in this RFP, the ICOMC shall seamlessly integrate the following system being procured separately:</p> <ul style="list-style-type: none"> • Existing City Surveillance project implemented by Traffic Police • Existing Street Lighting project • Existing ERP & E-Governance Initiatives • Traffic Signalling • Common Payment Card • Public Bike Sharing System

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			<ul style="list-style-type: none"> • E-rickshaw • Electricity & Water SCADA Systems • Online GIS Platform – Bhubaneswar One
138.	Section 5, 4.12.7	<p>ICOMC at Police Headquarters</p> <p>□□ ICOMC – satellite command centre, shall also be installed at Police Headquarters with all the required systems to operate the City command centre.</p>	<p>ICOMC at Police Headquarters</p> <ul style="list-style-type: none"> • ICOMC – a satellite command centre, shall also be installed at Police Headquarters with all the required systems to operate the City command centre. This shall act as an alternate Command and Control Centre to ICOMC in case of any disaster. Under normal operations, this location shall be used for monitoring CCTV video feeds. MSI shall provide all software required to enable this functionality. • In addition, MSI shall provide CCTV video feeds to two (2) more locations in the city (which may tentatively be the Office of Dy. Commissioner of Police, Bhubaneswar and Traffic Control Room) for live monitoring along with all necessary hardware and software as provided below: - <ul style="list-style-type: none"> ○ Each location shall include following hardware as a minimum: <ul style="list-style-type: none"> ❖ 2x2 Video Wall Cubes with Controller (70”) each; ❖ Four (4) Operator Consoles; ❖ One (1) Type III : Server/Workstation Connectivity Ethernet Switch; ❖ Connectivity requirements and any other hardware and software required to enable this functionality.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
139.	Section 5, TR 1.3	The data of TVDS will be stored in Local processing unit (LPU) and LPU should have the storage capacity of minimum 7 days.	The data of TVDS will be stored in Local processing unit (LPU) and LPU should have the storage capacity of minimum one month.
140.	Section 5, TR 7.825	Link load balancer shall be an appliance based solution with minimum 64 bit speed core architecture and purpose built hardware for overall high performance. It shall have a minimum of 64 GB RAM and at least 8x10G SFP+ ports. It shall have minimum of 120 Gbps throughput. Shall support security features like reverse-proxy firewall, sync-flood and denial of service attack protection from day one. It shall support multiple Internet links in active-active load balancing and active-standby failover mode.	Link load balancer shall be an appliance based solution with minimum 64 bit speed core architecture and purpose built hardware for overall high performance. It shall have at least 8x10G SFP+ ports. It shall have minimum of 120 Gbps throughput. Shall support security features like reverse-proxy firewall, sync-flood and denial of service attack protection from day one. It shall support multiple Internet links in active-active load balancing and active-standby failover mode.
141.	Section 5, TR 7.207	<p>Each console shall be capable of accommodating, as a minimum:</p> <ul style="list-style-type: none"> • Operator desk and chair • Three (3) wide-screen 610 mm (24 inch) LED monitors • One (1) standard keyboard • One (1) standard mouse • One (1) set of headset jacks mounted underneath desk • One (1) VOIP telephone • One (1) two-way radio (future) • Free space for paperwork • Desk slats for binder/manual storage; and • One (1) large file drawer for storage 	<p>Each console shall be capable of accommodating, as a minimum:</p> <ul style="list-style-type: none"> • Operator desk and chair • One (1) Workstation with three (3) wide-screen 610 mm (24 inch) LED monitors • One (1) standard keyboard • One (1) standard mouse • One (1) set of headset jacks mounted underneath desk • One (1) VOIP telephone • One (1) two-way radio (future) • Free space for paperwork • Desk slats for binder/manual storage; and

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			<ul style="list-style-type: none"> • One (1) large file drawer for storage
142.	Corrigendum-1, S.No. 2	<p>ICOMC: Data Hosting</p> <p>The hosting requirements of the project shall be met via a hybrid architecture that includes:</p> <ul style="list-style-type: none"> • On-premises; and • Data Centre (located at STPI). <p>Overall, the objective of this architecture is to optimize the number of on-site servers without compromising the overall performance of the system.</p> <p>Hosting space will be provided at the STPI Data Centre in Gothapatna, Bhubaneswar. STPI Data centre will be a standard Tier III Data Centre and will provide all the basic amenities (redundant power, UPS, HVAC, physical security, rack space). All the servers, storage and other IT infrastructure at the STPI data centre have to be provided by the MSI. Expenses of leasing the rack space at STPI Data Centre (DC) and all the bandwidth requirement will be under MSI scope. For budgeting purposes, standard rack rate at STPI Data Centre is approximately INR 10 Lakhs per annum for 6.5 kW per rack. Bidder has an option of procuring bandwidth from STPI or any third party. STPI DC in Bhubaneswar is currently under implementation and is expected to be operational by end of December 2017. However, operational deadline can extend till six months.</p>	<p>ICOMC: Data Hosting</p> <p>The hosting requirements of the project shall be met via a hybrid architecture that includes:</p> <ul style="list-style-type: none"> • On-premises; and • Data Centre (located at STPI). <p>Overall, the objective of this architecture is to optimize the number of on-site servers without compromising the overall performance of the system.</p> <p>Hosting space will be provided at the STPI Data Centre in Gothapatna, Bhubaneswar. STPI Data centre will be a standard Tier III Data Centre and will provide all the basic amenities (redundant power, UPS, HVAC, physical security, rack space). All the servers, storage and other IT infrastructure at the STPI data centre have to be provided by the MSI. Expenses of leasing the rack space at STPI Data Centre (DC) and all the bandwidth requirement will be under MSI scope. For budgeting purposes, standard rack rate at STPI Data Centre is provided at Annexure-C3. Bidder has an option of procuring bandwidth from STPI or any third party. STPI DC in Bhubaneswar is currently under implementation and is expected to be operational by end of December 2017. However, operational deadline can extend till six months.</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>Hosting of data during the interim period before STPI DC is operational shall also be under the scope of the MSI. During this interim period, MSI shall host data either through On-Premises solution or through Cloud. MSI can opt for On-Premises solution using servers supplied for STPI DC. Setting up of entire infrastructure for interim DC which include but not limited to cooling, redundant power, physical security, UPS, racks, IT equipment, all hardware, software, storage etc. will be under the scope of the MSI. Interim DC shall be set up at temporary command and control centre in Bhawani Mall. MSI to ensure all components associated with interim data centre which includes but not limited to servers, networking equipment, lighting, cooling, storage etc. are made power redundant.</p> <p>Alternatively, MSI can also host smart city data through a Cloud Service Provider approved by Government of India norms. All costs associated with hosting data on the Cloud during the interim period including uplink, downlink, storage, networking, bandwidth etc. to be borne by the Bidder. Bidder to ensure the applications as part of Bhubaneswar Smart City are Cloud ready for hosting it on Cloud.</p> <p>It shall be the responsibility of the MSI to migrate all data and shifting all hosting infrastructure from interim DC or Cloud to STPI DC, whenever it is operational.</p> <p>The Disaster Recovery Centre (DRC) will also be provided at STPI DRC. Location of the DRC can be either Mohali or Chennai, as deemed appropriate. STPI DRC will provide all the basic amenities (redundant power, UPS, HVAC, physical security, rack space). All the servers, storage and</p>	<p>Hosting of data during the interim period before STPI DC is operational shall also be under the scope of the MSI. During this interim period, MSI shall host data either through On-Premises solution or through Cloud. MSI can opt for On-Premises solution using servers supplied for STPI DC. Setting up of entire infrastructure for interim DC which include but not limited to cooling, redundant power, physical security, UPS, racks, IT equipment, all hardware, software, storage etc. will be under the scope of the MSI. Interim DC shall be set up at temporary command and control centre in Bhawani Mall. MSI to ensure all components associated with interim data centre which includes but not limited to servers, networking equipment, lighting, cooling, storage etc. are made power redundant.</p> <p>Alternatively, MSI can also host smart city data through a Cloud Service Provider approved by Government of India norms. All costs associated with hosting data on the Cloud during the interim period including uplink, downlink, storage, networking, bandwidth etc. to be borne by the Bidder. Bidder to ensure the applications as part of Bhubaneswar Smart City are Cloud ready for hosting it on Cloud.</p> <p>It shall be the responsibility of the MSI to migrate all data and shifting all hosting infrastructure from interim DC or Cloud to STPI DC, whenever it is operational.</p> <p>The Disaster Recovery Centre (DRC) will also be provided at STPI DRC. Location of the DRC can be either Mohali or Chennai, as deemed appropriate. STPI DRC will provide all the basic amenities</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause																
		<p>other IT infrastructure at the STPI DRC shall be provided by the MSI. Expenses associated with leasing of rack space at STPI DRC, link between the DC and DCR, replication of data and all the bandwidth requirement will be under MSI scope. DRC at both the locations are currently operational. For budgeting purposes, standard rack rate at STPI Data Recovery Centre is approximately INR 3.5 Lakhs per annum for 3.5 kW per rack and additional @ INR 1.1 lakhs per annum for every additional 1 kw. MSI shall also coordinate with STPI DRC in Mohali or Chennai for budgeting purposes of hosting data at DRC. MSI can either procure bandwidth from STPI DRC or from any third party. Maintenance of DC and DRC shall also be under the scope of the MSI.</p>	<p>(redundant power, UPS, HVAC, physical security, rack space). All the servers, storage and other IT infrastructure at the STPI DRC shall be provided by the MSI. Expenses associated with leasing of rack space at STPI DRC, link between the DC and DCR, replication of data and all the bandwidth requirement will be under MSI scope. DRC at both the locations are currently operational. As a minimum, MPLS links from two (2) separate ISPs shall be provided for connectivity among Project site, DC and DRC. For budgeting purposes, standard rack rate at STPI Data Recovery Centre is provided at Annexure-C3. MSI shall also coordinate with STPI DRC in Mohali or Chennai for budgeting purposes of hosting data at DRC. MSI can either procure bandwidth from STPI DRC or from any third party. Maintenance of infrastructure provided for DC and DRC shall also be under the scope of the MSI.</p> <p>NOTE: Any benefit due to reduction in the charges specified at Annexure – C3, subsequent to negotiations between BSCL and STPI or otherwise, shall be transferred to the client.</p>																
143.	Section 5 – 3.9.1	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Space Description</th> <th>No.</th> <th>Requirements (tentative)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ICOMC</td> <td>1</td> <td>Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each </td> </tr> </tbody> </table>	S. No.	Space Description	No.	Requirements (tentative)	1	ICOMC	1	Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each 	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Space Description</th> <th>No.</th> <th>Requirements (tentative)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ICOMC</td> <td>1</td> <td>Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each </td> </tr> </tbody> </table>	S. No.	Space Description	No.	Requirements (tentative)	1	ICOMC	1	Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each
S. No.	Space Description	No.	Requirements (tentative)																
1	ICOMC	1	Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each 																
S. No.	Space Description	No.	Requirements (tentative)																
1	ICOMC	1	Approx. 10,000 sq. ft. double height area consisting of: <ul style="list-style-type: none"> Video Wall – 16X4 Cubes of 70 inch each 																

Sl. No	Ref. Section No. (as per RFP document)	Original Clause				Modified Clause			
					<ul style="list-style-type: none"> • Central Operations Area • Large Board Room (War Room) -1 • Cabin – 3 • Board Room – 1 • Visitors’ Gallery – 1 • Rack Room • No of Operators (in a shift): 30 				<ul style="list-style-type: none"> • Central Operations Area • Large Board Room (War Room) -1 • Cabin – 3 • Board Room – 1 • Visitors’ Gallery – 1 • Rack Room • No of Operators (in a shift): 30
		2	Command Control Centre – Type 1	3	Approx. 5,000 sq. ft. overseeing the ICOMC video wall; consisting of: <ul style="list-style-type: none"> • Video Wall – 3X2 Cubes of 70 inch each • Operations Area • Cabin – 1 • Board Room – 1 • No of Operators (in a shift): 10 	2	Command Control Centre – Type 1	3	Approx. 3,500 sq. ft. overseeing the ICOMC video wall; consisting of: <ul style="list-style-type: none"> • Video Wall – 3X2 Cubes of 70 inch each • Operations Area • Cabin – 1 • Board Room – 1 • No of Operators (in a shift): 10
		3	Command Control Centre – Type 2	1 2	Approx. 2,000 sq. ft.; consisting of: <ul style="list-style-type: none"> • Large Display – 70 inch screen • Operations Area 	3	Command Control Centre – Type 2	12	Approx. 1,500 sq. ft.; consisting of: <ul style="list-style-type: none"> • Large Display – 70 inch screen

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause								
		<table border="1"> <tr> <td data-bbox="573 328 645 451"></td> <td data-bbox="645 328 815 451"></td> <td data-bbox="815 328 875 451"></td> <td data-bbox="875 328 1328 451"> <ul style="list-style-type: none"> • Cabin – 1 • No of Operators (in a shift): 5 </td> </tr> </table>				<ul style="list-style-type: none"> • Cabin – 1 • No of Operators (in a shift): 5 	<table border="1"> <tr> <td data-bbox="1350 328 1422 451"></td> <td data-bbox="1422 328 1570 451"></td> <td data-bbox="1570 328 1637 451"></td> <td data-bbox="1637 328 2063 451"> <ul style="list-style-type: none"> • Operations Area • Cabin – 1 • No of Operators (in a shift): 5 </td> </tr> </table>				<ul style="list-style-type: none"> • Operations Area • Cabin – 1 • No of Operators (in a shift): 5
			<ul style="list-style-type: none"> • Cabin – 1 • No of Operators (in a shift): 5 								
			<ul style="list-style-type: none"> • Operations Area • Cabin – 1 • No of Operators (in a shift): 5 								
144.	4.12.7.4. ICOMC: Interiors Page no 263	<p>NORMS</p> <p>The ICOMC interiors shall be state of the art adhering to the various best practices norms for control centres, including:</p> <p>Development of ergonomic reports for the ICOMC covering Human Factors Engineering (HFE), ISO9241 (Ergonomic requirements for office work with visual display terminals - VDTs) and ISO11064 (Ergonomic Design of Control Centres)</p> <ul style="list-style-type: none"> • The proposed interior material should meet to basic control room norms, including but not limited to: <ul style="list-style-type: none"> <input type="checkbox"/> ASTM E84 or equivalent fire norms, <input type="checkbox"/> high scratch resistant surfaces, <input type="checkbox"/> Bhubaneswar seismic zone (Zone 3) compliance, and <input type="checkbox"/> Green Guard passed Desk for ensuring safe environment for operators. 	<p>NORMS</p> <p>A. Norms for Command Control Centre: -</p> <p>The ICOMC interiors shall be state of the art adhering to various best practices norms for control centre wherein the scope includes designing, engineering, supply & installation of 24X7 Critical Control Room Interiors. It shall be designed properly in terms of Aesthetics, Ergonomics and Functionality. Various aspects should be considered while designing Control Room area to create ideal work place, considering physiological aspects such as line of sight and field of vision and cognitive factors such as concentration and perceptivity as per latest ISO Ergonomic Norms. The following norms shall be adhered to : -</p> <ol style="list-style-type: none"> i. The entire wall paneling and partition system must be 100% modular with type self inter lockable panels. ii. Quality Certifications for Control Room (Wall Paneling/ Partition & Ceiling) - <ul style="list-style-type: none"> ○ ASTM standards, as applicable from time to time, for Wall Paneling & Partition tiles. ○ Compliant to IS and ISO standards. ○ must be Greenguard certified. 								

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			<ul style="list-style-type: none"> ○ The proposed interior system should be modular, scalable & Sustainable and shall comply to ISO 11064 (Ergonomic Design of Control Centres). ○ All material / finished components should be rugged enough to handle 24/7, 365 days VOC's (within permissible limits) working environment. <p>B. Norms for Command Control Centre: -</p> <p>Console Design- Desk to ensure compliance to latest ISO ergonomic norms for control rooms.</p> <ul style="list-style-type: none"> i. Working Surface Material- Greenguard tested Console desk's Top / working surface ii. Physical Structure- Consoles must be of 100% modular design, facilitating future equipment retrofits and full reconfigurations without requiring any major modification to the structure or exterior elements. Console must comply to ISO 9241 (Ergonomic Requirements for office work with visual display terminals – VDT). iii. Equipment Mounting- The workstation shall be able to house computer equipment's, Ethernet Points, Power Distribution Unit. The CPUs shall be mounted on Slide out CPU trays (mounted on Heavy duty slides) for ease in maintenance, all of these equipment's should be concealed from direct human view. iv. Frame material - Made of heavy duty Aluminium alloy Extrusions. These Extrusions

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			<p>shall be duly powder coated over all the surfaces. The desk must have qualified seismic zone 3 or better tests.</p> <p>v. Monitor Arms and Rear Walls-</p> <ul style="list-style-type: none"> ▪ Die cast mounted Aluminum articulated arm; fixed firmly on MS Pole with powder coating mounted on its rear wall also made of aluminum ▪ Monitor and Functional holder shall guarantee optimum viewing distance. All ergonomic aspects shall be taken in to account. It shall be capable for mounting all type of LCD/LED display with Dimensions between 17” to 27” using suitable brackets/additional base plate ▪ For configuration of working position, it shall allow the technical staff to rotate/ tilt/ raise/the monitors as well as fix their adjustment in a quick and easy manner
145.	Section 6, Contract Agreement, Article 3.2, Pg. 750	If the conditions listed under 3.1 are not fulfilled within two (2) months from the Effective Date as per GCC Clause 10 , because of reasons not attributable to the MSI, the Parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Achieving Operational Acceptance and/or other relevant conditions of the Contract.	If the conditions listed under 3.1 are not fulfilled within two (2) months from the Date as per GCC Clause 11 , because of reasons not attributable to the MSI, the Parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Achieving Operational Acceptance and/or other relevant conditions of the Contract.
146.	Section 6, GCC 1. Definitions (o);	“Contract Agreement” means the agreement entered into between the Client and the MSI using the form of Contract Agreement contained in the Sample Forms Section of	“Contract Agreement” means the agreement entered into between the Client and the MSI using the form of Contract Agreement contained in Section 6 of the

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	Pg. 753	the Bidding Documents and any modifications to this form agreed to by the Client and the MSI. The date of the Contract Agreement shall be recorded in the signed form.	RFP and any modifications to this form agreed to by the Client and the MSI. The date of the Contract Agreement shall be recorded in the signed form.
147.	Section 6, GCC 1. Definitions (p); Pg. 753	“Contract” shall have the meaning ascribed to it in clause 1 of the Form of Contract.	“Contract Price” or “Price” or “Total Value of Contract” shall mean the aggregate amount specified in Article 2.1 of the Contract Agreement, which is payable by the Client to the MSI for provision of the Goods and Services in accordance with this Contract.
148.	Section 6, GCC 1. Definitions (s); Pg. 754	“Defect Liability Period” (also referred to as the “Warranty Period”) means the period of validity of the warranties given by the MSI commencing at date of the Operational Acceptance Certificate of the System or Subsystem(s), during which the MSI is responsible for defects with respect to the System (or the relevant Subsystem[s]) as provided in GCC Clause 57 (Defect Liability).	“Defect Liability Period” (also referred to as the “Warranty Period” or “ Defect Liability (Warranty) Period ”) means the period of validity of the warranties given by the MSI in relation to the System or part thereof commencing at date of the Operational Acceptance Certificate of the System or Subsystem(s), during which the MSI is responsible for rectifying defects with respect to the System (or the relevant Subsystem[s]) as provided in GCC Clause 57 (Defect Liability).
149.	Section 6, GCC 1. Definitions (u); Pg. 754	“Deliverable Due Date” means, with respect to a particular Deliverable, the date by which such Deliverable (in a final and approved form) is required to be submitted by the MSI to the Client for all the Modules, as specified in the Work Schedule.	“Deliverable Due Date” means, with respect to a particular Deliverable, the date by which such Deliverable (in a final and approved form) is required to be submitted by the MSI to the Client for each Module, as specified in the work schedule submitted by the MSI as a part of its Proposal in the format at Appendix 21 of Section 2 of the RFP.
150.	Section 6, GCC 1. Definitions (bb);	“Good Industry Practices” means the exercise of that degree of skill, diligence and prudence, and those	“Good Industry Practices” means the exercise of that degree of skill, diligence and prudence, and those

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
	Pg. 754	practices, methods, specifications and standards of safety and performance, as may change from time to time and which would reasonably and ordinarily be expected to be used and exercised by a skilled and experienced MSI engaged in the performance of services of the type, size and nature similar to the Services required by MSI under this Contract.	practices, methods, specifications and standards of safety and performance, as may change from time to time and which would reasonably and ordinarily be expected to be used and exercised by a skilled and experienced contractor engaged in the performance of services of the type, size and nature similar to the Services required by MSI under this Contract.
151.	Section 6, GCC 1. Definitions (ff); Pg. 755	“LOA” means Letter of Award.	“LOA” means the letter of award issued to the selected Bidder pursuant to the RFP for its appointment as the MSI
152.	Section 6, GCC 1. Definitions (ss); Pg. 756	“Project Manager” of the Client shall be either the Client’s Project Manager or the Client’s authorized representative.	“Project Manager” means a Person appointed by the Client as the project manager for the Smart Solutions Project.
153.	Section 6, GCC 1. Definitions (uu); Pg. 756	“RFP” means Request for Proposal dated along with schedules, annexures, appendices and any subsequent amendment issued by the Client for appointment of the MSI.	“RFP” means Request for Proposal dated 4 March 2017 along with schedules, annexures, appendices and the subsequent amendments (including addenda and corrigendum) issued by the Client for appointment of the MSI.
154.	Section 6, GCC 1. Definitions (ww); Pg. 756	“Section” means a section of the contract;	“Section” means a section of the RFP or the contract, as applicable;
155.	Section 6, GCC 1. Definitions (yy); Pg. 756	“Solution” means the Goods and Services to be performed by the MSI pursuant to this Contract, as described in Section 5 – Technical Requirements.	“Solution” means the Goods to be supplied and Services to be performed by the MSI pursuant to this

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
			Contract, as described in Section 5 – Technical Requirements.
156.	Section 6, GCC 1. Definitions (zz); Pg. 756	“Taxes” means all taxes, duties, imposts, levies and charges pursuant to any law (whether currently in force or coming into force on or after the Effective Date), including income tax, service tax, value added tax, central sales tax, customs duty excise duty, fees, cess, octroy, entry tax, and any interest, surcharge, penalty or fine in connection therewith.	“Taxes” means all taxes, duties, imposts, levies and charges pursuant to any law (whether currently in force or coming into force on or after the Effective Date), including income tax, service tax, value added tax, central sales tax, customs duty excise duty, fees, goods and services tax , cess, octroy, entry tax, and any interest, surcharge, penalty or fine in connection therewith.
157.	Section 6, GCC: Effectiveness of Contract 10.1; Pg. 758	This Contract shall come into force and effect on the date (the “Effective Date”) of issuance of Letter of Award (LOA) to the MSI.	This Contract shall come into force and effect on the date on which the conditions specified in Article 3 of Contract Agreement are fulfilled (the “Effective Date”)
158.	Section 6, GCC: Commencement of Contract 11.1; Pg. 758	The MSI shall submit in writing an acceptance of LOA and start the Project with Kick-off meeting no later than the date specified in the SCC.	The MSI shall submit in writing an acceptance of LOA, ensure compliance to conditions of Article 3 and start the Project with Kick-off meeting from the effective date which shall be no later than the date specified in the SCC.
159.	Section 6, GCC: Change or Modifications or Variations 14.3; Pg. 759	No change made necessary because of any default of the MSI in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Achieving Operational Acceptance	deleted

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
160.	Section 6, GCC: Change or Modifications or Variations 14.3; Pg. 759	Moreover, the Client and MSI will agree, during development of the Project Plan, to a date prior to the scheduled date for Operational Acceptance, after which the Technical Requirements for the System shall be “frozen.” Any Change initiated after this time will be dealt with after Operational Acceptance.	Moreover, the Client and MSI will agree, during development of the Project Plan to be approved by the Client as per Clause 46, to a date prior to the scheduled date for Operational Acceptance on or before which the Technical Requirements for the System shall be “frozen”. Any Variation initiated after this date will be dealt with after Operational Acceptance.
161.	Section 6, GCC: Change or Modifications or Variations 14.10; Pg. 762	If due to any reason the MSI and Client are not able to finalize a change in the system (ex: including a hardware component or a software functionality which was not anticipated earlier), the Client reserves a right to get the change executed by any other third party. However the component or functionality being a part of the comprehensive system, the original MSI shall have obligation to support any integration effort required whatsoever and extend full co-operation to the third party and the Client.	If due to any reason the MSI and Client are not able to finalize a Variation in the System (ex: including a hardware component or a software functionality which was not anticipated earlier), the Client reserves a right to get the change executed by any other third party. However the component or functionality being a part of the comprehensive System, the MSI shall have obligation to support any integration effort required whatsoever and extend full co-operation to the third party and the Client.
162.	Section 6, GCC: Change in Law 15.1; Pg. 762	For the purposes of this Contract, “Change in Law” means the occurrence of any of the following events after the date of execution of the Contract: (i) the modification, amendment or repeal of any existing Applicable Law; (ii) the enactment, promulgation, bringing into effect, adoption of any new Applicable Law; (iii) change in the interpretation or application of any Applicable Law by any Authority; (iv) the introduction of a requirement for the MSI to obtain any new approval or permit or the unlawful revocation of an	For the purposes of this Contract, “Change in Law” means the occurrence of any of the following events after the date of execution of the Contract: (i) the modification, amendment or repeal of any existing Applicable Law; (ii) the enactment, promulgation, bringing into effect, adoption of any new Applicable Law; (iii) change in the interpretation or application of any Applicable Law by any Authority; (iv) the introduction of a requirement for the MSI to obtain any new approval or permit or the unlawful revocation of an

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>applicable approval or permit; or (v) the introduction of any new Tax or a change in the rate of an existing Tax.</p> <p>Change in Law does not include: (i) any change in the (Indian) Income Tax Act, 1961 with regard to the taxes on the income of the MSI; (ii) any statute that has been published in draft form or as a bill that has been placed before the legislature or that has been passed by the relevant legislature as a bill but has not come into effect prior to the date of the Contract and which is a matter of public knowledge; or (iii) a draft statutory instrument or delegated legislation that has been published prior to the date of the Contract, which is under the active consideration or contemplation of the Gol or GoO and which is a matter of public knowledge.</p>	<p>applicable approval or permit; or (v) the introduction of any new Tax or a change in the rate of an existing Tax (including the notification of rates of the goods and services tax(GST)).</p> <p>Change in Law does not include: (i) any change in the (Indian) Income Tax Act, 1961 with regard to the taxes on the income of the MSI; (ii) any statute that has been published in draft form or as a bill that has been placed before the legislature or that has been passed by the relevant legislature as a bill but has not come into effect prior to the date of the Contract and which is a matter of public knowledge; or (iii) a draft statutory instrument or delegated legislation that has been published prior to the date of the Contract, which is under the active consideration or contemplation of the Gol or GoO and which is a matter of public knowledge.</p>
163.	Section 6, GCC: Change in Law 15.2; Pg. 762	<p>If, after the date of this Contract, there is any Change in Law which:</p> <ul style="list-style-type: none"> (i) increases the cost incurred by the MSI in deploying the Project; and/or (ii) affects the Project Schedule. <p>then the MSI may notify the Client and appropriate adjustments shall be made to the Total Value of Contract to account for the Change in Law. The notice shall be accompanied by all supporting documents, details and information required by the Client to assess the claims of the MSI. Provided that, if a Change in Law becomes applicable as a result of a delay by the MSI, then the MSI</p>	<p>Subject to Clause 37.4, if, after the date of this Contract, there is any Change in Law which:</p> <ul style="list-style-type: none"> (i) increases the cost incurred by the MSI in deploying the Project; and/or (ii) affects the Implementation Schedule. <p>then the MSI may notify the Client and appropriate adjustments shall be made to the Total Value of Contract to account for the Change in Law. The notice shall be accompanied by all supporting documents, details and information required by the Client to assess the claims of the MSI. Provided that, if a Change in Law becomes applicable as a result of a delay by the MSI,</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>shall not be entitled to any adjustment in the Total Value of Contract and/or the Project Schedule.</p> <p>Where it is not possible to address the effect of a Change in Law (through an adjustment in the Total Value of Contract and/or the Project Schedule), the Parties shall agree on a mechanism, including amending the terms of the Contract, to mitigate the adverse effects of the Change in Law to MSI. If the Parties are unable to reach an agreement within thirty (30) days of the notification of a Change in Law, then the matter shall be referred to dispute resolution in accordance with GCC Clause 20.</p>	<p>then the MSI shall not be entitled to any adjustment in the Total Value of Contract and/or the Implementation Schedule.</p> <p>Where it is not possible to address the effect of a Change in Law (through an adjustment in the Total Value of Contract and/or the Implementation Schedule), the Parties shall agree on a mechanism, including amending the terms of the Contract, to mitigate the adverse effects of the Change in Law to MSI. If the Parties are unable to reach an agreement within thirty (30) days of the notification of a Change in Law, then the matter shall be referred to dispute resolution in accordance with GCC Clause 20.</p>
164.	Section 6, GCC: Joint Venture 16.1; Pg. 763	<p>If the MSI is a Joint Venture/Consortium of two or more firms, the Partner in Charge shall be jointly and severally liable and other members / partners shall be severally bound to the Client for the fulfilment of the provisions of the Contract and shall designate partner in charge to act as a leader with authority to bind the Joint Venture/Consortium as well as each member of the Joint Venture / Consortium. The composition or constitution of the Joint Venture/Consortium shall not be altered without the prior consent of the Client.</p>	<p>If the MSI is a Joint Venture/Consortium of two or more firms, the Partner in Charge and each other Party to the extent of their respective scopes, shall be jointly and severally liable to the Client for the fulfilment of the provisions of the Contract. The composition or constitution of the Joint Venture/Consortium as specified in the Joint Bidding Agreement submitted as part of the Proposal shall not be altered for the duration of the Contract without the prior consent of the Client.</p>
165.	Section 6, GCC: Termination 18.1.1 (iv) (b); Pg. 764	<p>has without valid reason failed to commence work on the System promptly;</p>	<p>has without valid reason failed to commence work on the System as per Clause 11.1;</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
166.	Section 6, GCC: Termination 18.1.1 (iv) (d); Pg. 764	refuses or is unable to provide sufficient materials, services, or labour to execute and complete the System in the manner specified in the Agreed and Finalized Project Plan furnished under GCC Clause 46 at rates of progress that give reasonable assurance to the Client that the MSI can attain Operational Acceptance of the System by the Time for Achieving Operational Acceptance, as extended ;	refuses or is unable to provide sufficient materials, services, or labour to execute and complete the System in the manner specified in the Agreed and Finalized Project Plan furnished under GCC Clause 46 at rates of progress that give reasonable assurance to the Client that the MSI can attain Operational Acceptance of the System by the Time for Achieving Operational Acceptance, as may be extended from time to time
167.	Section 6, GCC: Termination 18.1.2; Pg. 765	<p>Without prejudice to other provisions of this Contract, upon the occurrence of a MSI Event of Default, the Client may deliver a notice to the MSI specifying the nature of the breach and giving a cure period of thirty (30) days to the MSI to cure the MSI Event of Default.</p> <p>Provided that, in case of occurrence of a MSI Event of Default set out in Clauses 18.1.1(ii), or 18.1.1 (iv), the Client shall have the right to terminate the Contract immediately, without any obligation to provide a cure period.</p>	<p>Without prejudice to other provisions of this Contract, upon the occurrence of a MSI Event of Default, the Client may deliver a notice to the MSI specifying the nature of the breach and giving a cure period of thirty (30) days to the MSI to cure the MSI Event of Default.</p> <p>Provided that, in case of occurrence of a MSI Event of Default set out in Clauses 18.1.1 (ii), 18.1.1 (iii), 18.1.1(iv) or 18.1.1(v), the Client shall have the right to terminate the Contract immediately, without any obligation to provide a cure period.</p>
168.	Section 6, GCC: Termination 18.1.3; Pg. 765	Subject to Clause 18.1.2, and except in case of the event set out at Clause 18.1.1 (iii), if by the end of the cure period, the MSI has not remedied the MSI Event of Default or taken steps to remedy the MSI Event of Default to the satisfaction of the Client, then the Client shall have the right to issue a termination notice, upon which this Contract shall terminate forthwith.	Subject to Clause 18.1.2, , if by the end of the cure period, the MSI has not remedied the MSI Event of Default or taken steps to remedy the MSI Event of Default to the satisfaction of the Client, then the Client shall have the right to issue a termination notice, upon which this Contract shall terminate forthwith.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
169.	Section 6, GCC: Termination 18.1.7 (a); Pg. 767	<p>If the termination takes place before the Operational acceptance, the cost of completing the System by the Client as per the Contract shall be determined. If the sum that the MSI is entitled to be paid, pursuant to GCC Clause 18.1.6 (a), plus the reasonable costs incurred by the Client in the completing the Scope of Work, exceeds the Total cost, the MSI shall be liable to reimburse such excess money to the Client. If such excess is greater than the sums due to the MSI under GCC Clause 18.1.6, the MSI shall pay the balance to the Client, and if such excess is less than the sums due to the MSI under GCC Clause 18.1.6(a), the Client shall pay the balance to the MSI. The Client and the MSI shall agree in writing, on the computation described above and the manner in which any sums shall be paid.</p>	<p>If the termination takes place before the Operational Acceptance, the cost of completing the System by the Client as per the Contract shall be determined. If the sum that the MSI is entitled to be paid, pursuant to GCC Clause 18.1.6 (a), plus the reasonable costs incurred by the Client in the completing the Solution, exceeds the Total Value of Contract, the MSI shall be liable to reimburse such excess money to the Client. If such excess is greater than the sums due to the MSI under GCC Clause 18.1.6, the MSI shall pay the balance to the Client, and if such excess is less than the sums due to the MSI under GCC Clause 18.1.6 (a), the Client shall pay the balance to the MSI. The Client and the MSI shall agree in writing, on the computation described above and the manner in which any sums shall be paid.</p>
170.	Section 6, GCC: Termination 18.1.9 ; Pg. 769	<p>Without prejudice to other provisions of this Contract, upon the occurrence of a Client Event of Default, the MSI may deliver a notice to the Client specifying the nature of the breach and giving a cure period of thirty (30) days to the Client to cure the Client Event of Default.</p> <p>Provided that, in case of occurrence of a Client Event of Default set out in Clauses 18.1.8 (iii) or 18.1.18 (iv), the MSI shall have the right to terminate the Contract immediately, without any obligation to provide a cure period.</p>	<p>Without prejudice to other provisions of this Contract, upon the occurrence of a Client Event of Default, the MSI may deliver a notice to the Client specifying the nature of the breach and giving a cure period of thirty (30) days to the Client to cure the Client Event of Default.</p> <p>Provided that, in case of occurrence of a Client Event of Default set out in Clause 18.1.8 (iv), the MSI shall have the right to terminate the Contract immediately, without any obligation to provide a cure period.</p>

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
171.	Section 6, GCC: Termination 18.1.15; Pg. 770	The Client may at any time terminate the Contract, for any reason, by giving the MSI a notice of termination that refers to this GCC Clause 18c.	The Client may at any time terminate the Contract, without assigning any reason, by giving the MSI a notice of termination that refers to this GCC Clause 18c.
172.	Section 6, GCC: Termination 18.1.17 (c); Pg. 771	any amount to be paid by the MSI to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges	any Breakage Costs reasonably incurred by the MSI as a direct result of termination of the Contract
173.	Section 6, GCC: Termination 18.1.17 (e); Pg. 772	the cost of satisfying all other obligations, commitments, and claims that the MSI may in good faith have undertaken with third parties in connection with the Contract and that are not covered by GCC Clause 18.1.17 (a) through (d) above.	deleted
174.	Section 6, GCC: Settlement of Disputes 20; Pg. 775	Disputes shall be settled by arbitration in accordance with the following provisions: a) The seat of the arbitration shall be India and the arbitration proceedings shall be held in Bhubaneswar; b) The English language shall be the official language for all purposes;	Subject to Clause 67, disputes shall be settled by arbitration in accordance with the following provisions: a) The arbitration will be conducted by a sole arbitrator mutually appointed by the Parties. If the Parties are unable to mutually agree on the appointment of a sole arbitrator then the dispute shall be settled by a panel of three arbitrators, with each Party nominating one arbitrator and the third arbitrator being appointed by the two arbitrators so appointed by each Party.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		<p>c) The arbitration shall be governed by the (Indian) Arbitration and Conciliation Act, 1996, as amended from time to time;</p> <p>d) Responsibility of payment for all costs of arbitration shall be as per the arbitration award; and</p> <p>e) The decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.</p>	<p>b) The seat of the arbitration shall be India and the arbitration proceedings shall be held in Bhubaneswar;</p> <p>c) The English language shall be the official language for all purposes;</p> <p>d) The arbitration shall be governed by the (Indian) Arbitration and Conciliation Act, 1996, as amended from time to time;</p> <p>e) Responsibility of payment for all costs of arbitration shall be as per the arbitration award; and</p> <p>f) The decision of the sole arbitrator or of a majority of the arbitrators (as the case may be) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.</p> <p>This Contract shall be governing by the laws of India and the courts at Bhubaneshwar shall have exclusive jurisdiction in relation to matters arising under or in connection with this Contract.</p>
175.	Section 6, GCC: Law Applicable 21.8; Pg. 777	The MSI shall comply with all laws in force in India. The laws will include all national, provincial, municipal, or other laws that affect the performance of the Contract and are binding upon the MSI. The MSI shall indemnify and hold harmless the Client from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the MSI or its personnel, including the Subcontractors and their personnel, but without prejudice	The MSI shall comply, and shall ensure that its Subcontractors comply with all Applicable Laws (and the laws of the country from which MSI operates) in performing the Services. The MSI shall indemnify and hold harmless the Client Indemnified Parties from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising out of or in connection with the violation of any Applicable Laws by the MSI or its Subcontractors or

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		to GCC Clause 33. The MSI shall not indemnify the Client to the extent that such liability, damage, claims, fines, penalties, and expenses were caused or contributed to by a fault of the Client.	their personnel. . However, the MSI shall not indemnify the Client to the extent that such liability, damage, claims, fines, penalties, and expenses were caused or contributed to by a fault of the Client
176.	Section 6, GCC: Law Applicable 21.10; Pg. 777	The MSI shall acquire in its name all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings that are necessary for the performance of the Contract, including, without limitation, visas for the MSI's and Subcontractor's personnel and entry permits for all imported MSI's Equipment. The MSI shall acquire all other permits, approvals, and/or licenses that are not the responsibility of the Client under GCC Clause 33.2 and that are necessary for the performance of the Contract.	The MSI shall acquire in its name, or ensure that its Subcontractors acquire in their name, in relation to Services being performed or Goods being supplied by them , all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings that are necessary for the performance of the Contract, including, without limitation, visas for the MSI's and Subcontractor's personnel and entry permits for all imported MSI's Equipment. The MSI shall acquire or cause its Subcontractors to acquire all other permits, approvals, and/or licenses that are not the responsibility of the Client under GCC Clause 33.2 and that are necessary for the performance of the Contract.
177.	Section 6, GCC: Total Value of Contract 36.2 (a); Pg. 787	in the event of a Change in the System pursuant to GCC Clause 14 or to other clauses in the Contract;	in the event of a Variation in the System pursuant to GCC Clause 14 or other clauses specifically providing for an increase in the Contract Price ;
178.	Section 6, GCC: Securities 39 (c) (iii); Pg. 788	The security shall automatically become null and void once all the obligations of the MSI under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The	The security shall automatically become null and void once all the obligations of the MSI under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The security shall be returned

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		security shall be returned to the MSI no later than twenty-eight (28) days after its expiration;	to the MSI no later than the days specified in the SCC ;
179.	Section 6, GCC: Mode of Billing and Payment 40.1; Pg. 789	<p>The MSI's request for payment shall be made to the Client in writing, accompanied by an invoice describing, as appropriate, the System or Subsystem(s), Delivered, Pre-commissioned, Installed, and Operationally Accepted, and by documents submitted pursuant to GCC Clause 49.5 and upon fulfilment of other obligations stipulated in the Contract.</p> <p>The Contract Price shall be paid as specified in the SCC.</p>	<p>The Contract Price will be paid by the Client to the MSI in accordance with the Payment Schedule as specified in SCC. The MSI's request for payment shall be made to the Client in writing, accompanied by an invoice describing, as appropriate, the System or Subsystem(s), Delivered, Pre-commissioned, Installed, and Operationally Accepted, and by documents submitted pursuant to GCC Clause 49.5 and upon fulfilment of other obligations stipulated in the Contract.</p> <p>The Contract Price shall be paid as specified in the SCC.</p>
180.	Section 6, GCC: Mode of Billing and Payment 40.3; Pg. 789	Payments shall be made promptly by the Client, but in no case later than forty five (45) days after submission of a valid invoice by the MSI	Payments shall be made promptly by the Client, but in no case later than forty five (45) days after submission of a valid invoice by the MSI (along with all necessary supporting documents).
181.	Section 6, GCC: Interest on delayed payments 41.1; Pg. 790	If the Client had delayed payments beyond forty five (45) days after the due date or within the period set forth in the Contract, interest shall be paid to the MSI on any amount due by, not paid on, such due date for each day of delay at the annual rate stated in the SCC.	If the Client had delayed undisputed payments beyond forty five (45) days after the due date or within the period set forth in the Contract, interest shall be paid to the MSI on any amount due by, not paid on, such due date for each day of delay at the annual rate stated in the SCC.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
182.	Section 6, GCC: Copyright 42.3 (b); Pg. 790	To any location or to any third party service provider if the Client decides to outsource the ITS maintenance to a third party	To any location or to any third party service provider if the Client decides to outsource the maintenance of the solution, system or any sub-system to a third party
183.	Section 6, GCC: Copyright 42.3; Pg. 791	The MSI shall protect the Client from any liabilities arising there from. The MSI shall indicate all those components in the software, if any, that cannot be bound by this condition explicitly while responding to the bid, and supporting with the corresponding evidence for the same.	The MSI shall ensure that the terms of license in respect of the Standard Software and Standard Materials are such that they permit the Client to assign, license or transfer its right to use the Standard Software and Standard Materials in the manner set out above. The MSI shall indemnify the Client from any liabilities arising from such assignment or transfer by the Client. The MSI shall indicate all those components in the System Software, if any, that cannot be bound by this condition explicitly while responding to the bid, and supporting with the corresponding evidence for the same.
184.	Section 6, GCC: Project Plan 46.2; Pg. 797	The MSI shall formally present to the Client the Project Plan in accordance with the procedure specified in the SCC.	The MSI shall formally present to the Client the draft project plan in accordance with the procedure specified in the SCC. The project plan finally approved by the Client shall be the Finalised Project Plan .
185.	Section 6, GCC: Design and Engineering 48.1.1; Pg. 797	The MSI shall execute the detailed design and the implementation activities necessary for successful installation of the System in compliance with the provisions of the Contract or, where not so specified, in accordance with good industry practice;	The MSI shall execute the detailed design and the implementation activities necessary for successful installation of the System in compliance with the provisions of the Contract or, where not so specified, in accordance with good industry practice;

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		The MSI shall be responsible for any discrepancies, errors or omissions in the specifications, drawings, and other technical documents that it has prepared, whether such specifications, drawings, and other documents have been approved by the Project Manager or not, provided that such discrepancies, errors, or omissions are not because of inaccurate information furnished in writing to the MSI by or on behalf of the Client.	The MSI shall be responsible for any discrepancies, errors or omissions in the specifications, drawings, and other technical documents that it has prepared, whether such specifications, drawings, and other documents have been approved by the Project Manager or not.
186.	Section 6, GCC: Design and Engineering 48.1.2; Pg. 798	The MSI shall be entitled to disclaim responsibility for any design, data, drawing, specification, or other document, or any modification of such design, drawings, specification, or other documents provided or designated by or on behalf of the Client, by giving a notice of such disclaimer to the Project Manager.	Deleted
187.	Section 6, GCC: Design and Engineering 48.3.6; Pg. 798	The Project Manager's approval, with or without modification of the document furnished by the MSI, shall not relieve the MSI of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager or inaccurate information furnished in writing to the MSI by or on behalf of the Client;	The Project Manager's approval, with or without modification of the document furnished by the MSI, shall not relieve the MSI of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager which are technically incorrect;
188.	Section 6, GCC: Procurement, Delivery and Transport 49.1; Pg. 800	Subject to related Client's responsibilities pursuant to GCC Clauses 33 to 35 and Clause 37, the MSI shall manufacture or procure and transport all the Information Technologies, Materials, and other Goods in an expeditious and orderly manner to the Project Site.	The MSI shall manufacture or procure and transport all the information technologies, materials, and other Goods in an expeditious and orderly manner to the Project site.

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
189.	Section 6, GCC: Commissioning and Operational Acceptance 54.3.5 (b); Pg. 812	if the failure to achieve Operational Acceptance within the specified time period is a result of the failure of the Client to fulfil its obligations under the Contract, then the MSI shall be deemed to have fulfilled its obligations with respect to the relevant technical and functional aspects of the Contract, and GCC Clause 57.3 shall not apply	if the failure to achieve Operational Acceptance within the specified time period is a result of the failure of the Client to fulfil its obligations under the Contract, then the MSI shall be deemed to have fulfilled its obligations with respect to the relevant technical and functional aspects of the Contract, and GCC Clause 55.2 & 55.3 shall not apply
190.	Section 6, GCC: Defects Liability 57.7 (b); Pg. 812	any designs, specifications, or other data designed, supplied, or specified by or on behalf of the Client or any matters for which the MSI has disclaimed responsibility, in accordance with GCC Clause 48.1.2.	any designs, specifications, or other data designed, supplied, or specified by or on behalf of the Client
191.	Section 6, GCC: Care of the system 63.1; Pg. 818	The Client shall become responsible for the care and custody of the System or Subsystems upon their Delivery. The Client shall make good at its own cost any loss or damage that may occur to the System or Subsystems from any cause from the date of delivery until the date of Operational Acceptance of the System or Subsystems, pursuant to GCC Clause 54 (Commissioning and Operational Acceptance), excepting such loss or damage arising from acts or omissions of the MSI, its employees, or subcontractors	Save and except as provided in Clause GCC 63.3, the MSI shall be responsible for the care and custody of the System or Subsystems prior to and after their Delivery on site. The MSI shall make good at its own cost any loss or damage that may occur to the System or Subsystems from any cause from the date of delivery until the date of Operational Acceptance of the System or Subsystems, pursuant to GCC Clause 54 (Commissioning and Operational Acceptance), excepting such loss or damage arising from acts or omissions of the Client.
192.	Section 6, GCC: Care of the system 63.2 (c); Pg. 819	any use of or reliance upon any design, data, or specification provided or designated by or on behalf of the Client, or any such matter for which the MSI has disclaimed responsibility in accordance with GCC Clause 48.1.2.	any use of or reliance upon any design, data, or specification provided or designated by or on behalf of the Client,

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
193.	Section 6, GCC: Force Majeure 65.1; Pg. 821	<p>“Force Majeure” shall mean any event beyond the reasonable control of the Client or of the MSI, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected and shall include, without limitation, the following:</p> <ul style="list-style-type: none"> (a) War, hostilities, or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy, and civil war; (b) Rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion, and terrorist acts; (c) Confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler, or any other act or failure to act of any local state or national government authority; (d) Strike, sabotage, lockout, embargo, import restriction, port congestion, shipwreck, shortage or restriction of power supply, epidemics, quarantine, and plague; (e) Earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves, or other natural or physical disaster; (f) Failure, by the MSI, to obtain the necessary export permit(s) from the governments of the Country(s) of 	<p>“Force Majeure” shall mean any event beyond the reasonable control of the Client or of the MSI, as the case may be which materially adversely affects the performance of an obligation by the affected Party, which could not have been reasonably foreseen by the affected Party at the time of entering into this Contract and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:</p> <ul style="list-style-type: none"> (a) War, hostilities, or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy, and civil war; (b) Rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion, and terrorist acts; (c) Confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler, or any other act or failure to act of any local state or national government authority; (d) Strike, sabotage, lockout, embargo, import restriction, shipwreck, , epidemics, quarantine, and plague; (e) Earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves,

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		Origin of the Information Technologies or other Goods, or MSI's Equipment provided that the MSI has made all reasonable efforts to obtain the required export permit(s), including the exercise of due diligence in determining the eligibility of the System and all of its components for receipt of the necessary export permits.	or other natural or physical disaster; Failure, by the MSI, to obtain the necessary export permit(s) from the governments of the Country(s) of Origin of the information technologies or other Goods, or MSI's Equipment provided that the MSI has made all necessary efforts to obtain the required export permit(s), including the exercise of due diligence in determining the eligibility of the System and all of its components for receipt of the necessary export permits but the relevant government authority has refused in writing to grant the relevant permits (a copy of which refusal shall be submitted to the Client.)
194.	Section 6, GCC: Force Majeure 65.8; Pg. 823	Notwithstanding GCC Clause 65.5, Force Majeure shall not apply to any obligation of the Client to make payments to the MSI under this Contract.	Deleted
195.	Section 6, GCC: Performance Security 68; Pg. 823	The MSI shall furnish to the Client the Performance Security in the format set out in Appendix A, from a scheduled commercial bank in India, to secure the performance of its obligations under the Contract. The Performance Security shall be for an amount specified in the SCC	In accordance with Clause GCC 39 , the MSI shall furnish to the Client the Performance Security in the format set out in Appendix A, from a scheduled commercial bank in India, to secure the performance of its obligations under the Contract. The Performance Security shall be for an amount specified in the SCC .
196.	Section 6, SCC: 54.2.2; Pg. 837	Thirty (30) days from the date of system acceptance	Thirty (30) days
197.	Section 6, SCC: 68.1; Pg. 839	On completion of the contractual obligations under the Contract by the MSI, the Client shall return the	Deleted

Sl. No	Ref. Section No. (as per RFP document)	Original Clause	Modified Clause
		Performance Security within twenty one (21) days of the last payment made to the MSI under the Contract.	

Annexure A: 5.1 (a) The Bidder must meet the following qualification criteria as on the last date of submission of this bid:

S. No	Type	Eligibility Criterion	Documentary Evidence
1	Company Profile	The Bidder (Partner In charge in case of Consortium) shall be in operations for a period of at least ten (10) years as on published date of RFP. In case of a Consortium, in addition, each member other than Partner In charge shall be in operations for a period of at least five (5) years as on published date of RFP.	<ul style="list-style-type: none"> • Copy of certificate of Incorporation/Registration under Companies Act 1956 (for Indian companies) • Global companies to provide equivalent proof of incorporation/registration • A written undertaking from each of the consortium members, in case of a consortium, duly signed by the authorized signatory, holding a written power of attorney for this bid on a stamp paper, authorizing the lead bidder to incur liabilities and receive instructions for and on behalf of any and all consortium members, and the entire execution of the Contract, including but not limited to the payments.
2	Company Financials & Profile	The Bidder/Consortium shall have an average annual turnover of INR 1,000 Crores over the last three (3) Financial Years. In case of Consortium, at least 50% of the turnover criteria shall be met by the Partner In charge and the remaining can be satisfied by the other Consortium partners. Lead member or Consortium members shall be into one of the following specific business areas. Specific Business Areas <ul style="list-style-type: none"> • ICT Infrastructure • Telecom Infrastructure • System Integration Services 	<ul style="list-style-type: none"> • Audited financial statements for last three Financial Years. • Statutory auditor's certificate clearly specifying the annual turnover for the specified years. • MoA/AoA shall be submitted showing the area of business.
3	Company Financials	The Bidder (Partner In charge in case of consortium) shall have minimum net-worth of INR 100 Crores as per the last audited Financial Year.	The Sole Bidder or the Partner In charge 1. Certificate from the Statutory Auditor on net worth
4	Local Presence	The Bidder (Partner In charge in case of consortium)	<ul style="list-style-type: none"> • List and address of office in Bhubaneswar along

S. No	Type	Eligibility Criterion	Documentary Evidence
		shall have an office in Bhubaneswar or shall furnish an undertaking at the time of bid submission that the Bidder shall establish an office in Bhubaneswar within sixty days of signing the Contract. The office shall be maintained during the entire duration of the Contract.	<p>with VAT registration certificate.</p> <p>OR</p> <ul style="list-style-type: none"> Undertaking from authorized signatory to open office with sales tax registration in Bhubaneswar within 60 days from Contract signing.
5	Certifications	<p>The Bidder (any member of consortium) shall have any one of the following Certifications valid at the time of Bidding:</p> <ul style="list-style-type: none"> ISO 9001:2015 ISO 20000:2011 for IT Service Management or equivalent certification ISO 27001:2013 for Information Security Management System or equivalent certification 	<ul style="list-style-type: none"> Copies of the valid certificate in the name of the Bidder.
6	Company Standing	As on date of submission of the proposal, the Bidder (all members of the consortium as applicable) shall not be blacklisted by any any State / Central Government Department or Central /State PSUs.	<p>The Sole Bidder or the Partner In charge and all other Members of Consortium:</p> <ol style="list-style-type: none"> Legal Attorney certified letter of undertaking to this effect on the letter head, co-signed by bidders' authorized signatory. In case of consortium, this needs to be provided by each of the consortium member.
7	ICOMC	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control centre for a city wide / campus wide deployment having a minimum value of INR 10 crores per project (excluding civil works) during last seven (7) years.	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.

S. No	Type	Eligibility Criterion	Documentary Evidence
			<p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
8	ITMS	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Traffic Management System integrating at least two (2) different components from the below list on a single application having a minimum value of INR 7 crores per project (excluding civil works) during last seven (7) years.</p> <p>Components:</p> <ol style="list-style-type: none"> 1. Red Light Violation Detection Systems 2. Automatic Traffic Counters & Classifiers 3. Dynamic Message Signs 4. Public Address (PA) System 	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the</p>

S. No	Type	Eligibility Criterion	Documentary Evidence
			<p>right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
9	Transit ITS	<p>The Bidder shall have experience on at least two (2) AVL projects for intra-city public transit system with a fleet of at least 50 vehicles (e.g. Buses, LRT, Tram) wherein the bidder shall have provided AVL system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the AVL system with the Passenger Information sub-system to provide route and ETA (expected travel arrival) to passengers. The AVL projects should have been commissioned within the past seven (7) years from the date of submission of the bid and should have been in commercial operations for at least one year after successful system acceptance.</p>	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the</p>

S. No	Type	Eligibility Criterion	Documentary Evidence
10	ICT - OFC	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Outside Plant Fibre Optic Passive Infrastructure of at least 200 km or Active infrastructure with at least 100 nodes per project having a minimum value of INR 10 crores per project during last seven (7) years.	<p>requirement.</p> <p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
11	ICT – Wi-Fi	The Bidder (any member in case of consortium) shall have experience of implementation and operations of at least two (2) City wide / campus wide Wi-Fi Projects consisting of over 75 Access Points per project during last seven (7) years.	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works;

S. No	Type	Eligibility Criterion	Documentary Evidence
			<p>2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
12	ERP	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of ERP system including finance, HR & payroll, and maintenance & asset management modules (with at least 2 of these modules) having a minimum value of INR 10 crores per project during last seven (7) years.	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter</p>

S. No	Type	Eligibility Criterion	Documentary Evidence
			<p>signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
13	E-Governance	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of citizen centric e-Governance applications integrating at least four (4) different citizen services (excluding CCTV system) having a minimum value of INR 5 crores per project during last seven (7) years.</p>	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p>

S. No	Type	Eligibility Criterion	Documentary Evidence
			<p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
14	Parking	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of a parking management platform consisting of at least three Parking Lots* or at least 150 parking bays in a single Parking Lot during last seven (7) years.</p> <p><i>*Parking Lot – Facility comprising of more than 50 Equivalent Car Spaces having</i></p> <ol style="list-style-type: none"> 1) <i>entry/ exit controlled through automated/ semi-automated gates;</i> 2) <i>Parking management system for occupancy tracking and information dissemination.</i> 	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
15	Overall	The sole bidder or the consortium shall meet at least 4 out of 8 project experiences required as part of	

S. No	Type	Eligibility Criterion	Documentary Evidence
		Criteria 7-14 and remaining criteria in Criteria 7-14 can be met by sub- contractor(s).	

Annexure B: Evaluation of Technical Proposal

S.N.	Evaluation Criteria	Max. Score	Documents Required
1	Company Profile		
1.1	<p>The Bidder/Consortium shall have an average annual turnover of INR 1,000 Crores over the last three (3) Financial Years. In case of Consortium, at least 50% of the turnover criteria shall be met by the Partner In charge and the remaining can be satisfied by the other Consortium partners.</p> <p>Lead member or Consortium members shall be into one of the following specific business areas.</p> <p>Specific Business Areas</p> <ul style="list-style-type: none"> • ICT Infrastructure • Telecom Infrastructure • System Integration Services <p>Annual Turnover:</p> <ol style="list-style-type: none"> 1) >1000 and ≤ 1200 Crores : 3 Marks 2) >1200 and ≤ 1500 Crores : 5 Marks 3) >1500 Crores : 7 Marks 	7	<ul style="list-style-type: none"> • Audited financial statements for last three Financial Years. • Statutory auditor's certificate clearly specifying the annual turnover for the specified years. • MoA/AoA shall be submitted showing the area of business.
1.2	<p>The Bidder (any member in case of consortium) shall have CMMi Certification:</p> <p>Level 3 : 2 marks</p> <p>Level 5 : 3 marks</p>	3	<p>Sole Bidder/any Member of Consortium:</p> <ul style="list-style-type: none"> • CMMi certificate copy to be attached
2	Project Experience		
2.1	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control centre for a city wide / campus wide deployment having a minimum value of INR 10 crores per project (excluding civil</p>	10	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding

S.N.	Evaluation Criteria	Max. Score	Documents Required
	<p>works) during last seven (7) years.</p> <p>Number of Projects:</p> <ol style="list-style-type: none"> 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 7 Marks 3) >5 Projects: 10 Marks 		<p>civil/mechanical/HVAC works;</p> <ol style="list-style-type: none"> 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.2	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Traffic Management System integrating at least two (2) different components from the below list on a single application having a minimum value of INR 7 crores per project (excluding civil works) during last seven (7) years.</p> <p>Components:</p>	7.5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works;

S.N.	Evaluation Criteria	Max. Score	Documents Required
	<p>1) Red Light Violation Detection Systems 2) Automatic Traffic Counters & Classifiers 3) Dynamic Message Signs 4) Public Address (PA) System</p> <p>Number of Projects:</p> <p>1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks</p>		<p>2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.3	<p>The Bidder shall have experience on at least two (2) AVL projects for intra- city public transit system with a fleet of at least 50 vehicles (e.g. Buses, LRT, Tram) wherein the bidder shall have provided AVL system software and hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the AVL system with the Passenger Information sub-system to provide route and ETA (expected travel arrival) to passengers. The AVL projects should have been commissioned within the past seven (7) years from the date of submission of the bid and should have been in commercial</p>	7.5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <p>1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works;</p> <p>2. Completion/Commission Certificate</p>

S.N.	Evaluation Criteria	Max. Score	Documents Required
	<p>operations for at least one year after successful system acceptance.</p> <p>Number of Projects:</p> <ol style="list-style-type: none"> 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks 		<p>issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.4	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Outside Plant Fibre Optic Passive Infrastructure of at least 200 km or Active infrastructure with at least 100 nodes per project having a minimum value of INR 10 crores per project during last seven (7) years.</p> <p>Number of Projects:</p> <ol style="list-style-type: none"> 1) 2 Projects : 1 Marks 2) >2 and ≤5 Projects : 3 Marks 3) >5 Projects: 5 Marks 	5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works except such allied works for Fiber Optics laying purposes; 2. Completion/Commission Certificate

S.N.	Evaluation Criteria	Max. Score	Documents Required
			<p>issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works except such allied works for Fiber Optics laying purposes.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.5	<p>The Bidder (any member in case of consortium) shall have experience of implementation and operations of at least two (2) City wide / campus wide Wi-Fi Projects consisting of over 75 Access Points per project during last seven (7) years.</p> <p>Number of Projects:</p> <ol style="list-style-type: none"> 1) 2 Projects : 1 Marks 2) >2 and ≤5 Projects : 3 Marks 3) >5 Projects: 5 Marks 	5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent

S.N.	Evaluation Criteria	Max. Score	Documents Required
			<p>authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.6	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of a parking management platform consisting of at least three Parking Lots* or at least 150 parking bays in a single Parking Lot during last seven (7) years.</p> <p><i>*Parking Lot – Facility comprising of more than 50 Equivalent Car Spaces having</i></p> <ol style="list-style-type: none"> 1) <i>entry/ exit controlled through automated/ semi-automated gates;</i> 2) <i>parking management system for occupancy tracking and information dissemination.</i> 	5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value

S.N.	Evaluation Criteria	Max. Score	Documents Required
	<p>Number of Projects:</p> <p>1) 2 Projects : 1 Marks</p> <p>2) >2 and ≤5 Projects : 3 Marks</p> <p>3) >5 Projects: 5 Marks</p>		<p>excluding civil/mechanical/HVAC works.</p> <p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.7	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of ERP system including finance, HR & payroll, and maintenance & asset management modules (with at least 2 of these modules) having a minimum value of INR 10 crores per project during last seven (7) years.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 1 Marks</p> <p>2) >2 and ≤5 Projects : 2 Marks</p> <p>3) >5 Projects: 2.5 Marks</p>	2.5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works.

S.N.	Evaluation Criteria	Max. Score	Documents Required
			<p>OR</p> <p>Self-certificate from the bidder signed by the concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
2.8	<p>The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of citizen centric e-Governance applications integrating at least four (4) different citizen services (excluding CCTV system) having a minimum value of INR 5 crores per project during last seven (7) years.</p> <p>Number of Projects:</p> <ol style="list-style-type: none"> 1) 2 Projects : 1 Marks 2) >2 and ≤5 Projects : 2 Marks 3) >5 Projects: 2.5 Marks 	2.5	<p>Sole Bidder/any Member of Consortium/Sub-Contractor(s):</p> <ol style="list-style-type: none"> 1. Work order/ Contract clearly highlighting the scope of work, Bill of Material and value of the contract/order with value excluding civil/mechanical/HVAC works; 2. Completion/Commission Certificate issued & signed by the competent authority of the client entity on the entity's Letterhead with value excluding civil/mechanical/HVAC works. <p>OR</p> <p>Self-certificate from the bidder signed by the</p>

S.N.	Evaluation Criteria	Max. Score	Documents Required
			<p>concerned project in-charge of the bidder and counter signed by authorised signatory for this bid holding written special power of attorney along with the official contact details of the competent authority of the client entity along with Work Order. The Client reserves the right to contact the aforementioned competent authority.</p> <p>In case of large orders/orders with operations & maintenance phase, the completion/self-certificate may specify successful commissioning and in-operation status of a part of the order meeting the requirement.</p>
3	Approach and Methodology including Technical Presentation		
3.1	Overall Approach, Methodology, Implementation and Deployment Plan	8	
3.2	Proposed Solution and Architecture including compliance to requirements as per RFP	10	
3.3	USP and Innovation of Proposal	5	
3.4	Proposed OEMs for following components: <ul style="list-style-type: none"> • CCTV Cameras; • Command and Control Centre Platform / City Operation Platform; • CAD / AVL; • RLVD & ANPR; • Routers & Switches; • Security Solutions; • Servers and Storage Devices. 	7	
4	Key Expert		
4.1	Project Director – Bachelor of Engineering degree and	3 (1 mark	CV signed by Key Expert and Authorized

S.N.	Evaluation Criteria	Max. Score	Documents Required
	<p>MBA/M.Tech/MS having more than 15 years of experience in implementation and management of similar ICT projects involved in complete project lifecycle. He must have experience in at least five (5) projects which includes any of the below mentioned systems in each project: -</p> <ol style="list-style-type: none"> 1) Transit Management / Tracking / AVL system 2) ICT Infrastructure or City / Campus wide Wi Fi System 3) ERP / E-Governance 4) Command Control Centre <p>Project Director shall be a full time employee of the Bidder and in case of consortium shall be a full time employee of the Partner in Charge. Project Director preferably shall have international experience of at least one project.</p>	reserved if Project Director has international experience)	Representative
4.2	<p>Project Manager – Bachelor of Engineering degree and MBA/M.Tech/MS with PMP having more than 12 years of experience in similar ICT projects and involved in end to end implementation. He must have experience of at least three (3) projects which includes any of the below mentioned systems in each project: -</p> <ol style="list-style-type: none"> 1) Transit Management / Tracking / AVL system 2) ICT Infrastructure or City / Campus wide Wi Fi System 3) ERP / E-Governance 4) Command Control Centre 	3	CV signed by Key Expert and Authorized Representative
4.3	<p>Network Architect – Bachelor of Engineering degree or MCA having more than 8 years of experience in network design and implementation of both active and passive infrastructure supporting outside plant environment. Must have at least three relevant projects (outdoor fibre optic based networks).</p>	2	CV signed by Key Expert and Authorized Representative
4.4	<p>Solution Architect – Bachelor in IT or Engineering having more than 8 years of experience in designing and implementing e-governance applications similar to the project requirements. Must have at least two</p>	2	CV signed by Key Expert and Authorized Representative

S.N.	Evaluation Criteria	Max. Score	Documents Required
	relevant projects		
4.5	ITMS Expert – Bachelor in Electronics or equivalent Engineering having more than 10 years of experience in designing, implementing and integrating various ITMS sub-systems including Traffic Signalling and RLVD/ANPR as minimum. Must have at least two relevant projects responsible for implementation and integration of the system	2	CV signed by Key Expert and Authorized Representative
4.6	Integration Engineer – Bachelor in IT or Engineering having more than 8 years of experience in integrating multiple sensors at the command and control centre at city-wide/campus-wide deployment. Must have at least two relevant projects (Command and Control Centre).	2	CV signed by Key Expert and Authorized Representative
4.7	Security Architect – Bachelor in IT or Engineering having more than 8 years of experience implementing secure networks. Must have industry standard certifications including CISSP. Must have at least two relevant projects (Network Security).	1	CV signed by Key Expert and Authorized Representative

The Key Experts shall be evaluated based on the below criteria:		
A.	General Qualifications (General Education, Training, and Experience)	20%
B.	Adequacy for the Contract (Relevant Education, Training, Experience In The Sector/Similar Assignments)	80%

S.N	Evaluation Criteria	Max. Marks	Documents Required
5	Other Staff Requirement (minimum) Required on-site (not evaluated but shall be approved by Client)		
	Maintenance Support Staff: Manpower requirement of Maintenance support staff is covered in Section 6 – Scope of Work (Technical Requirements)		
5.1	ITMS Support Engineer – Bachelor in Electronics with minimum 8 years' experience of deployment and maintenance of ITMS System	N/A	CV signed by Key Personnel and Authorized Representative

S.N	Evaluation Criteria	Max. Marks	Documents Required
5.2	ERP Support Engineer – Bachelor in IT or MCA with minimum 8 years' experience of deployment and maintenance of ERP Systems	N/A	CV signed by Key Personnel and Authorized Representative
5.3	e-Governance Support Engineer – Bachelor in IT or MCA with minimum 8 years' experience of deployment and maintenance of e-Governance Systems	N/A	CV signed by Key Personnel and Authorized Representative
5.4	Fibre optic Support Engineer – Bachelor in Engineering with minimum 8 years' experience of deployment and maintenance of fibre optic infrastructure	N/A	CV signed by Key Personnel and Authorized Representative
5.5	Integration Support Engineer – Bachelor in Engineering with minimum 8 years' experience of deployment and maintenance of integrated command and control centre	N/A	CV signed by Key Personnel and Authorized Representative
	Helpdesk Support Staff: Manpower requirement of Helpdesk support staff is covered in Section 6 – Scope of Work (Technical Requirements)		
5.6	Helpdesk Operations Support Engineer – Bachelor in Engineering with minimum 7 years' experience in deployment, management and maintenance of Contact centres/helpdesks.	N/A	CV signed by Key Personnel and Authorized Representative
	Facility Management Staff: Manpower requirement of Facility Management staff is covered in Section 6 – Scope of Work (Technical Requirements)		
5.7	Facility Management Supervisor – Graduate with minimum 7 years of experience in supervising, managing and support of facility management.	N/A	

Note –

- A project qualification can be allowed under various Project Experience Criteria (Category). However, a component which is claimed for marking in a Project Experience Criteria, cannot be used in another Project Experience Criteria.

- Each Technical Proposal will be assigned a technical score out of a maximum of 100 marks. Only the bidders who get an Overall Technical score of minimum 70% or more and more than 50% in each section i.e. 1, 2, 3 & 4 of the Technical Evaluation framework will qualify for commercial evaluation stage. Failing to secure minimum marks shall lead to technical rejection of the Bid.
- For every project submitted for evaluation, at least two (2) projects must be completed for qualification. In addition, the other projects considered for marks shall at least be 50% complete (in terms of financial progress wherein 50% contract value payment is done by the client) which will be confirmed on the Client certificate or self-certification (along with Work Order) by Authorized signatory for this bid.

Annexure C: Financial Proposal (Price Schedule)

1.5 Supply and Installation Cost Sub-Table 1

System or Subsystem number: **“Entire System procurement”**

Line item number: **[specify: relevant line item number from the Supply and Installation Cost Summary Table (e.g., 1.1)]**

[as necessary for supply, installation, and achieving Operational Acceptance of the System, specify: the detailed components and quantities in the Sub-Table below for the line item specified above, modifying the sample components and sample table entries as needed. Repeat the Sub-Table as needed to cover each and every line item in the Supply and Installation Cost Summary Table that requires elaboration.]

Unit prices for the same item appearing several times in the table must be identical in amount and currency.

S. No.	Subsystems / Items	Unit of Measurement	Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
Smart Traffic Management System														
A	Traffic Violation Detection System													
1	TVDS Camera System including ANPR - Type 1	Per Set (one traffic lanes)		12										
2	TVDS Camera System including ANPR - Type 2	Per Set (two traffic lanes)		33										

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/ consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
3	TVDS Camera System including ANPR - Type 3	Per Set (three traffic lanes)		40										
4	TVDS Camera System including ANPR - Type 4	Per Set (four traffic lanes)		8										
5	Overview Camera	Nos.		93										
6	TVDS Local Processing Unit	Nos.		25										
7	Red Light Violation Detection (RLVD) Sensor	Nos.		93										
8	TVDS Workstation	Nos.		2										
9	TVDS Server (As per Bidder's Solution)	Set												
10	TVDS Mounting Structure (As per Bidder's Solution)	Set												
11	TVDS Software	Nos.		1										
12	UPS for TVDS (As per Bidder's Solution)	Set												
B	Automatic Traffic Counter and Classifier (ATCC)													

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/ consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
1	ATCC Sensor-Type 1	Per Set (One traffic lanes)		12										
2	ATCC Sensor-Type 2	Per Set (two traffic lanes)		33										
3	ATCC Sensor-Type 3	Per Set (three traffic lanes)		40										
4	ATCC Sensor-Type 4	Per Set (four traffic lanes)		8										
5	ATCC Workstation	Nos.		1										
6	ATCC Server (As per Bidder's Solution)	Set												
7	ATCC Mounting Structure (As per Bidder's Solution)	Set												
8	ATCC Software	Nos.		1										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es	
					INR	INR	INR	INR	INR	INR	INR	INR	
					Price	Price	Price	Price	Price	Price	Price	Price	
9	UPS for ATCC (As per Bidder's Solution)	Set											
C	Public Address System (PAS)												
1	PAS Speakers	Nos.		414									
2	Ambient Noise Sensor (As per Bidder's Solution)	Set											
3	VoIP/Amplifier with Built-in DSP (As per Bidder's Solution)	Set											
4	PAS Operator Console	Nos.		2									
5	PAS Workstation	Nos.		1									
6	PAS Server	Set											
7	PAS Software	Nos.		1									
8	UPS for PAS (As per Bidder's Solution)	Set											
D	Dynamic Message Sign (DMS)												
1	Dynamic Message Sign (DMS) with Controller	Nos.		20									
2	DMS Workstation	Nos.		1									
3	DMS Mounting Structure	Nos.		20									

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes/duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price	Price	
4	UPS for DMS (As per Bidder's Solution)	Set												
E	e-Challan System													
1	e-Challan Application with Server, Database and Other Accessories	Nos.		1										
2	Field Device for e-Challan System	Nos.		30										
F	Traffic Accident Recording System (TARS)													
1	TARS Application with Server, Database and Other Accessories	Nos.		1										
2	Field Device for Recording Accident	Nos.		10										
F	Other Hardware													
1	Cabinets (As per Bidder's Solution)	Set												
2	Any other Hardware or Software required to meet the RFP requirements of Smart Traffic Management System (Bidder to	Set												

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Servic e Tax	Any other taxes /duti es	
					INR	INR	INR	INR	INR	INR	INR	INR	
					Price	Price	Price	Price	Price	Price	Price	Price	Price
	list individual items and provide costing).												
Smart Tracking System													
A	Automatic Vehicle Location (AVL) System												
1	Smart Tracking Application with servers and database as per Bidder's Solution	Nos.		1									
2	Type I Workstation	Nos.		10									
3	Additional Workstation Monitor	Nos.		10									
B	OBITS Hardware												
1	OBU-1 for BPTSL Buses	Nos.		200									
2	OBU-2 for Emergency Vehicles												
2.1	Police Vehicles	Nos.		40									
2.2	PCR Vans	Nos.		33									
2.3	Fire Trucks	Nos.		20									
2.4	Government Ambulances	Nos.		15									
3	OBU-3 for Municipal Vehicles												
3.1	Solid Waste Vehicles	Nos.		150									
3.2	Government Water Tankers	Nos.		20									

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR Price	INR Price	INR Price	INR Price	INR Price	INR Pric e	INR Price	INR Price		INR Price
3.3	Private Water Tankers Under Govt. Contract	Nos.		10										
4	3G/GPRS enabled SIM Cards	Nos.		488										
C	Passenger Information System (PIS)													
1	PIS Application	Nos.		1										
2	19" size of Passenger Information Display at Bus Stations + UPS	Nos.		30										
3	55" size of Passenger Information Display at Terminal/Interchange + UPS	Nos.		5										
4	UPS-PIS (As per Bidder's Solution)	Nos.		35										
D	Electronic Ticketing													
1	ETM Application with Servers and Database	Nos.		1										
2	Handheld ticketing machine compliant with Common Payment System (CPS) requirements and inclusive of all related accessories, software to	Nos.		440										

S. No.	Subsystems / Items	Unit Measur ment	of Make & Mode l	Quantity exclusi ve of spares/ consumab les	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es	
					INR	INR	INR	INR	INR	INR	INR	INR	
					Price	Price	Price	Price	Price	Price	Price	Price	
	meet the requirements												
3	3G/GPRS enabled SIM Cards	Nos.		440									
4	Workstation Type-I - ICOMC	Nos.		3									
5	Workstation Type-III - ETM Cashup	Nos.		2									
6	Printer - Cashup	Nos.		2									
E	Transit Management System												
1	Scheduling software inclusive of Servers, Database and Other Accessories	Nos.		1									
2	Mobile App for Alerts and Other Information for Transit Agency Staff (depot manager, dispatcher etc.)	Nos.		1									
F	Other Requirements												
1	Any other Hardware or Software required to meet the RFP requirements of Smart Tracking System (Bidder to list individual items and provide costing).	Set											
Smart Parking Management System													

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
A	Off-street PMS Components													
1	Entry/Exit Boom Barrier Gate	Nos.		18										
2	Entry Ticket Dispenser/Smart Card Reader/QR Code Unit	Nos.		9										
3	Entry/Exit Fixed CCTV Cameras	Nos.		18										
4	Exit Ticket Swallow/Smart Card Reader/QR Code Unit	Nos.		9										
5	Payment Workstation	Nos.		9										
6	Thermal Receipt Printer	Nos.		9										
7	Barcode Reader	Nos.		9										
8	Parking Occupancy Sensors	Nos.		1500										
9	Parking Guidance Signal	Nos.		120										
10	Parking Controller	Nos.		6										
11	Parking Availability Display Board Per Floor - Type A	Nos.		3										
12	Parking Availability Display Board at Entry - Type B	Nos.		24										
13	MLCP Local Server and accessories	Nos.		3										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
14	Server Racks	Nos.		3										
15	UPS-MLCP (As per Bidder's Solution)	Set												
B	On-street PMS Components													
1	Camera Based Sensors	Nos.		500										
2	Handheld Terminal (POS)	Nos.		250										
3	GSM/GPRS connectivity from Handheld to ICOMC	Nos.		250										
4	UPS-PMS (As per Bidder's Solution)	Set												
C	Parking Management System (Central)													
1	PMS Application Software for MLCP and On-Street	Nos.		1										
2	PMS Workstation	Nos.		1										
3	Parking Mobile Application	Nos.		1										
4	Commuter Portal Integration with Bhubaneswar One	Nos.		1										
5	e-Challan and RTO integration	Nos.		1										
6	PMS Server (As per Bidder's	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
	Solution)													
D	Other Requirements													
1	Any other Hardware or Software required to meet the RFP requirements of Smart Parking Management System (Bidder to list individual items and provide costing).	Set												
Smart Response and Incident Management System														
A	Surveillance System													
1	CCTV – Fixed	Nos.		850										
2	CCTV – PTZ	Nos.		150										
3	Network Video Recorder (As Per Bidder Solution)	Set												
4	Video Management System (VMS) including Central Application	Nos.		1										
5	PTZ Keyboard with joystick	Nos.		10										
B	Other Requirements													
1	Any other Hardware or Software	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/ consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
	required to meet the RFP requirements of Smart Response and Incident Management System (Bidder to list individual items and provide costing).													
Smart Governance and Smart Connect														
A	e-Governance													
1	Website	Set												
2	Workstations for Citizen Facilitation Centre (CFC)	Nos.		2										
3	Scanner for CFC	Nos.		2										
4	Standard Printer for CFC	Nos.		2										
5	Thermal Printer for CFC	Nos.		2										
6	Citizen Portal	Set												
7	Birth and Death Certificate	Set												
8	Trade Licensing	Set												
9	Right to Information (RTI)	Set												
10	Legal	Set												

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Servic e Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Pric e	Price	Price		Price
11	Welfare Schemes	Set												
12	Marriage registration	Set												
13	Visitors management system	Set												
14	Secretarial & Meeting schedule	Set												
15	NOC	Set												
16	Building Plan Approval	Set												
17	Property and Holding Tax	Set												
18	Grievance/Complaint Redressal	Set												
19	Housing & Affordable Scheme Management	Set												
20	Enforcement	Set												
21	Land Acquisition, Land Bank of BDA and TDR	Set												
22	Park Management System	Set												
23	Town planning	Set												
24	Property allotment Information system	Set												
25	Mobile Application	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
26	KPIs and Dashboard	Set												
27	Data Migration	Set												
28	Any other Hardware or Software required to meet the RFP requirements of e-Governance Modules (Bidder to list individual items and provide costing).	Set												
B	ERP													
1	Revenue from Property Taxes, Land Leases & Other services	Set												
2	Finance and Management Accounting	Set												
3	Purchasing & Inventory Management	Set												
4	e-Procurement	Set												
5	Contracts Management	Set												
6	Operations, Maintenance and Asset Lifecycle Management	Set												
7	Projects and Works Management	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
8	HR and Payroll System	Set												
9	Foundation Layer (Including Middleware, SOA, BPM, single sign on and integration with LDAP)	Set												
10	Enterprise Content Management (ECM) System/ Document Management System	Set												
11	Integration and Interfaces	Set												
12	Data Migration	Set												
13	Any other Hardware or Software required to meet the RFP requirements of ERP Modules (Bidder to list individual items and provide costing).	Set												
C	Solid Waste Management System													
1	RFID Reader	Nos.		152										
2	RFID Tag	Nos.		350										
3	Bin Volume Sensors	Nos.		350										
4	Sensor Processing Unit	Nos.		350										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
5	Static Weigh Bridge (SWB)	Nos.		2										
6	Barrier Gate	Nos.		2										
7	ANPR Cameras	Nos.		2										
8	CCTV – Fixed	Nos.		2										
9	CCTV – PTZ	Nos.		2										
10	SWM Workstation	Nos.		2										
12	Any other Hardware or Software required to meet the RFP requirements of Solid Waste Management System (Bidder to list individual items and provide costing).	Set												
D	Multi-Services Digital Kiosks													
1	Integrated Multi-Services Digital Kiosks	Nos.		50										
2	Stand-alone Multi-Services Digital Kiosks	Nos.		25										
3	3G/GPRS enabled SIM Cards	Nos.		25										
3	Any other Hardware or Software required to meet the RFP	Set												

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Servic e Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Pric e	Price	Price		Price
	requirements of Multi-Services Digital Kiosks (Bidder to list individual items and provide costing).													
E	Education and Healthcare Management													
1	Smart Classroom Solution including all Hardware and Software	Set												
2	Early Childhood Care Centres (E3C) including all Hardware and Software	Set												
3	e-Primary Healthcare System including all Hardware and Software	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes/duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price	Price	
F	Other Requirements													
1	Any other Hardware or Software required to meet the RFP requirements of Smart Governance and Smart Connect (Bidder to list individual items and provide costing).	Set												
Communications Network														
A	Fibre Optic Infrastructure including Network Electronics													
1	HDPE Duct													
1.1	Set of 2x63mm	Mtrs.		480,000										
1.2	1x25mm	Mtrs.		200,000										
1.3	Outersleeves of suitable diameter	Mtrs.		150,000										
2	Trenching	Mtrs.		680,000										
3	Handhole with Cover (As per Bidder's Solution)	Nos.												
4	Manhole (As per Bidder's Solution)	Nos.												
5	Fibre Optic Cable (FOC)													

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Model	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
5.1	144 Count FOC	Mtrs.		480,000										
5.2	12 Count FOC	Mtrs.		200,000										
6	UTP Cat 6 Armoured Cable (As per Bidder's Solution)	Set												
7	UTP Patch Cord (As per Bidder's Solution)	Set												
8	Fibre Optic Splice Closure (FOSC) (As per Bidder's Solution)	Nos.												
9	Optical Connectors (As per Bidder's Solution)	Set												
10	Fibre Optic Patch Cords (As per Bidder's Solution)	Set												
11	Fibre Distribution Management System (FDMS)	Nos.		7										
12	Fibre Termination Panel (FTP)													
12.1	144 Count FTP	Nos.		7										
12.2	12 Count FTP (As per Bidder's Solution)	Nos.												
13	Intelligent Patch Panel	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes/duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price	Price	
	Management Hardware with Software (As per Bidder's Solution)													
14	Communication Cabinets with Racks	Nos.		25										
15	Junction Boxes (As per Bidder's Solution)	Nos.												
16	Ethernet Switch and Router													
16.1	Layer 2 - Industrial Grade Field Switch (As per Bidder's Solution)	Nos.												
16.2	Layer 3 – Industrial Grade Distribution Switch (As per Bidder's Solution)	Nos.												
16.3	Layer 3 -: Backbone Ethernet Switch/Router (As per Bidder's Solution)	Nos.												
16.4	Layer 3 - Type II: Core Router and Internet Router	Nos.		4										
16.5	Layer 3 - Type III: Server/Workstation Connectivity	Nos.		12										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
	Ethernet Switch													
17	Media Converter (As per Bidder's Solution)	Set												
18	Wireless Gateway	Nos.		5										
19	Fibre Asset Management System	Set												
20	Network Management System (NMS)	Nos.		1										
21	Enterprise Management System (EMS) including Helpdesk	Set												
22	Rodent Repellent System	Set												
23	Any other Hardware or Software required to meet the RFP requirements of Fibre Optic Infrastructure including Network Electronics (Bidder to list individual items and provide costing).	Set												
B	City Wide Wi-Fi System													
1	Wi-Fi Access Point with Controller	Nos.		1800										

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
2	Wi-Fi Management System	Nos.		1										
3	Wi-Fi Server	Set												
4	Any other Hardware or Software required to meet the RFP requirements of City Wi-Fi System (Bidder to list individual items and provide costing).	Set												
C	Environmental Monitoring System													
1	Environmental Sensors-Hardware and Software	Nos.		4										
2	Digital Display Screen (DDS)	Nos.		2										
3	Any other Hardware or Software required to meet the RFP requirements of Environmental Monitoring System (Bidder to list individual items and provide costing).	Set												
D	Smart Poles													
1	Smart Poles	Nos.		20										
2	Any other Hardware or Software required to meet the RFP	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price	Price	
	requirements of Smart Poles (Bidder to list individual items and provide costing).													
E	Other Requirements													
1	Any other Hardware or Software required to meet the RFP requirements of Communication Network (Bidder to list individual items and provide costing).	Set												
ICOMC														
A	Command and Control Centre													
1	16 x 4 Video Wall Cubes with Controller (70" each)	Nos.		1										
2	3 x 2 Video Wall Cubes with Controller (70" each)	Nos.		3										
3	2 X 2 Video Wall Cubes with Controller (70" each)	Nos.		2										
4	Display Content Management System (DCMS) or Video Wall Management System	Nos.		1										
5	70" Monitor Display	Nos.		12										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Servic e Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
6	Collaboration System	Nos.		5										
7	Teleconference Phone with Speakers	Nos.		17										
8	Video Conferencing System	Nos.		5										
9	Ceiling Speakers	Nos.		120										
10	Room Control System including Panel	Nos.		9										
11	Operator Console	Nos.		130										
12	Task Lights	Nos.		138										
13	Multi-Functional Printers including Scanner	Nos.		2										
14	Contact Centre Solution (For Helpdesk)	Set												
15	Network Time Protocol based Digital Clock	Nos.		2										
16	Matrix Switcher	Nos.		5										
17	Wireless Microphone System	Nos.		2										
18	Audio Processor (As per Bidder's Solution)	Set												

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Model	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
19	Audio Distribution Amplifier (As per Bidder's Solution)	Set												
20	Audio Extractor (As per Bidder's Solution)	Set												
21	Distribution Amplifier (As per Bidder's Solution)	Set												
22	AV Auto Switcher	Nos.		5										
23	USB KVM Extender	Nos.		20										
24	Communication Cabinets with Racks (As per Bidder's Solution)	Set												
25	Local On-Site Server (As per Bidder's Solution)	Set												
26	Smart City Platform	Set												
27	ICOMC, temporary command and control centre Civil Works including interiors, electrical, mechanical, structural, communications, fire, etc.	Sq. ft.		40,000										
28	Fire Detection and Suppression System (In ICOMC, temporary command and control centre,	Set												

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Servic e Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
	Operations Rooms & Rack Room)													
29	CCTV System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)	Set												
30	Access Control System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)	Set												
31	Water Leak Detection System (In ICOMC, Operations Rooms & Rack Room)	Set												
32	Rodent Repellent System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)	Set												
33	Diesel Generator Set for ICOMC, temporary command and control centre	Set												
34	Operation Area: Operator Desk, Chair and Storage	Nos.		115										

S. No.	Subsystems / Items	Unit Measurem ent	of Make & Mode l	Quantity exclusive of spares/ consumabl es	Unit Price		Total Price		Taxes and Duties				Total Supply + Installati on Prices (includin g all taxes & duties)	
					Suppl y	Installati on/ services	Suppl y	Installati on/ Services	Custom s/ Excise Duty	VAT	Service Tax	Any other taxes /duti es		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
35	Large Board Room - 20 seater	Nos.		1										
36	Board Room - 12 Seater	Nos.		4										
37	Cabins - 3 Seater	Nos.		18										
38	Any other Hardware or Software required to meet the RFP requirements of Command and Control Centre (Bidder to list individual items and provide costing).	Set												
39	Setting up of temporary Command and Control centre	Set												
40	Dismantling and relocation of temporary Command and Control centre to permanent location	Set												
B	Building Management System (BMS)													
1	Building Management System (BMS)	Set												
2	Any other Hardware or Software required to meet the RFP requirements of BMS (Bidder to	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price	Price	
	list individual items and provide costing).													
C	GIS Platform													
1	Data Services	Set												
2	Application Services	Set												
3	GIS Software with servers and database as per Bidder's Solution	Nos		1										
4	Any other Hardware or Software required to meet the RFP requirements of GIS Platform (Bidder to list individual items and provide costing).	Set												
D	Data Hosting													
1	WAN/Internet Router (As per Bidder's Solution)	Set												
2	Data Centre TOR (Top of the Rack) Switch (As per Bidder's Solution)	Set												
3	Servers (As per Bidder's Solution)	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
4	Blade Chassis (As per Bidder's Solution)	Set												
5	Primary Storage (As per Bidder's Solution)	Set												
6	Secondary Storage (As per Bidder's Solution)	Set												
7	KVM Switch (As per Bidder's Solution)	Set												
8	Server Load Balancer (As per Bidder's Solution)	Set												
9	Tape Library (As per Bidder's Solution)	Set												
10	Fire Proof Enclosure (As per Bidder's Solution)	Set												
11	Any other Hardware or Software required to meet the RFP requirements of Data Hosting (Bidder to list individual items and provide costing).	Set												
E	IT Infrastructure													

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)	
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties		
					INR	INR	INR	INR	INR	INR	INR	INR		INR
					Price	Price	Price	Price	Price	Price	Price	Price		Price
1	Antivirus	Set												
2	Firewall, Web Application, UTM, Advanced Persistent Threat Solution	Set												
3	DDOS Solution	Set												
4	Databases	Set												
5	Link Load Balancer	Set												
6	Server Load Balancer	Set												
7	UPS for any other Component (As per Bidder's Solution)	Set												
8	Any other Hardware or Software required to meet the RFP requirements of IT Infrastructure (Bidder to list individual items and provide costing).	Set												
F	Other Requirements													
1	Any other Hardware or Software required to meet the RFP requirements of ICOMC (Bidder to list individual items and	Set												

S. No.	Subsystems / Items	Unit Measurement	of Make & Model	Quantity exclusive of spares/ consumables	Unit Price		Total Price		Taxes and Duties				Total Supply + Installation Prices (including all taxes & duties)
					Supply	Installation/ services	Supply	Installation/ Services	Customs/ Excise Duty	VAT	Service Tax	Any other taxes /duties	
					INR	INR	INR	INR	INR	INR	INR	INR	
					Price	Price	Price	Price	Price	Price	Price	Price	Price
	provide costing).												
TOTAL CAPEX													

Notes:

1. No variation shall be provided for items which are identified as LS, Set, As per Bidder's Solution.
2. The Bidder shall optimize the servers, storage, UPS, Cabinets and Poles required for various sub-systems as per their Solution without affecting the performance and service levels.
3. Any item/ material either hardware or software required to meet the functionality specified in the tender document whose related component is missing in the above table has to be accounted by the Bidder and the cost of the same is assumed to be reflected and taken care in the cost specified to the Client by the Bidder in the financial bid. The Client is liable only to pay the Contract costs as per the payment terms mentioned to the Bidder to meet all the requirements as specified in the bidding documents.
4. The Bidder has to modify the above indicative table and make a comprehensive list of System inventory table by including the components which the Bidder might think are relevant based on the Bidders design to meet all the bid requirements indicating the costs of the same in the financial bid.
5. The Bidder shall assess the quantity of spares/ consumables to meet the SLA clause mentioned in the bidding documents and shall quote the cost and quantity of spares/consumables. The evaluation will take the total cost incurred for the Client inclusive of spares/ consumables while evaluating the bids. Any item not quoted by the Bidder, shall be provided free of cost if it is found necessary to fulfil the bidding requirements during the currency of the contract.
6. The evaluation will take the total cost incurred for the Client inclusive of spares/ consumables while evaluating the bids which is to be included by the Bidder in the Contract cost itself.
7. The Contract Cost shall be inclusive of all the installation, commissioning, testing and any other costs that might be incurred by the Bidder during the duration of the contract.
8. The Client has the right to increase decrease the quantities and the Supply & Installation costs will be adjusted as per the unit costs indicated above.

Name of Bidder:	
Authorized Signature of Bidder:	

1.6 Recurrent Cost Sub-Table 2

Lot number: **“Single lot procurement”**

Line item number: **[specify: relevant line item number from the Recurrent Cost Summary Table (e.g., z.1)]**

Currency: **[specify: the currency of the Recurrent Costs in which the costs expressed in this Sub-Table are expressed]**

[as necessary for operation of the System, specify: the detailed components and quantities in the Sub-Table below for the line item specified above, modifying the sample components and sample table entries as needed. Repeat the Sub-Table as needed to cover each and every line item in the Recurrent Cost Summary Table that requires elaboration.]

Unit prices for the same item appearing several times in the table must be identical in amount and currency.

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
Smart Traffic Management System									
A	Traffic Violation Detection System								
1	TVDS Camera System including ANPR - Type 1								
2	TVDS Camera System including ANPR - Type 2								
3	TVDS Camera System including ANPR - Type 3								
4	TVDS Camera System including ANPR - Type 4								
5	Overview Camera								
6	TVDS Local Processing Unit								
7	Red Light Violation Detection (RLVD) Sensor								
8	TVDS Workstation								
9	TVDS Server (As per Bidder's Solution)								
10	TVDS Mounting Structure (As per Bidder's Solution)								
11	TVDS Software								
12	UPS for TVDS (As per Bidder's Solution)								
B	Automatic Traffic Counter and Classifier (ATCC)								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
1	ATCC Sensor-Type 1								
2	ATCC Sensor-Type 2								
3	ATCC Sensor-Type 3								
4	ATCC Sensor-Type 4								
5	ATCC Workstation								
6	ATCC Server (As per Bidder's Solution)								
7	ATCC Mounting Structure (As per Bidder's Solution)								
8	ATCC Software								
9	UPS for ATCC (As per Bidder's Solution)								
C	Public Address System (PAS)								
1	PAS Speakers								
2	Ambient Noise Sensor (As per Bidder's Solution)								
3	VoIP/Amplifier with Built-in DSP (As per Bidder's Solution)								
4	PAS Operator Console								
5	PAS Workstation								
6	PAS Server								
7	PAS Software								
8	UPS for PAS (As per Bidder's Solution)								
D	Dynamic Message Sign (DMS)								
1	Dynamic Message Sign (DMS) with Controller								
2	DMS Workstation								
3	DMS Mounting Structure								
4	UPS for DMS (As per Bidder's Solution)								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
E	e-Challan System								
1	e-Challan Application with Server, Database and Other Accessories								
2	Field Device for e-Challan System								
F	Traffic Accident Recording System (TARS)								
1	TARS Application with Server, Database and Other Accessories								
2	Field Device for Recording Accident								
F	Other Hardware								
1	Cabinets (As per Bidder's Solution)								
2	Any other Hardware or Software required to meet the RFP requirements of Smart Traffic Management System (Bidder to list individual items and provide costing).								
Smart Tracking System									
A	Automatic Vehicle Location (AVL) System								
1	Smart Tracking Application with servers and database as per Bidder's Solution								
2	Type I Workstation								
3	Additional Workstation Monitor								
B	OBITS Hardware								
1	OBU-1 for BPTSL Buses								
2	OBU-2 for Emergency Vehicles								
2.1	Police Vehicles								
2.2	PCR Vans								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
2.3	Fire Trucks								
2.4	Government Ambulances								
3	OBU-3 for Municipal Vehicles								
3.1	Solid Waste Vehicles								
3.2	Government Water Tankers								
3.3	Private Water Tankers Under Govt. Contract								
4	3G/GPRS enabled SIM Cards								
C	Passenger Information System (PIS)								
1	PIS Application								
2	19" size of Passenger Information Display at Bus Stations + UPS								
3	55" size of Passenger Information Display at Terminal/Interchange + UPS								
4	UPS-PIS (As per Bidder's Solution)								
D	Electronic Ticketing								
1	ETM Application with Servers and Database								
2	Handheld ticketing machine compliant with Common Payment System (CPS) requirements and inclusive of all related accessories, software to meet the requirements								
3	3G/GPRS enabled SIM Cards								
4	Workstation Type-I - ICOMC								
5	Workstation Type-III - ETM Cashup								
6	Printer - Cashup								
E	Transit Management System								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
1	Scheduling software inclusive of Servers, Database and Other Accessories								
2	Mobile App for Alerts and Other Information for Transit Agency Staff (depot manager, dispatcher etc.)								
F	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of Smart Tracking System (Bidder to list individual items and provide costing).								
Smart Parking Management System									
A	Off-street PMS Components								
1	Entry/Exit Boom Barrier Gate								
2	Entry Ticket Dispenser/Smart Card Reader/QR Code Unit								
3	Entry/Exit Fixed CCTV Cameras								
4	Exit Ticket Swallow/Smart Card Reader/QR Code Unit								
5	Payment Workstation								
6	Thermal Receipt Printer								
7	Barcode Reader								
8	Parking Occupancy Sensors								
9	Parking Guidance Signal								
10	Parking Controller								
11	Parking Availability Display Board Per Floor - Type A								
12	Parking Availability Display Board at Entry - Type B								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
13	MLCP Local Server and accessories								
14	Server Racks								
15	UPS-MLCP (As per Bidder's Solution)								
B	On-street PMS Components								
1	Camera Based Sensors								
2	Handheld Terminal (POS)								
3	GSM/GPRS connectivity from Handheld to ICOMC								
4	UPS-PMS (As per Bidder's Solution)								
C	Parking Management System (Central)								
1	PMS Application Software for MLCP and On-Street								
2	PMS Workstation								
3	Parking Mobile Application								
4	Commuter Portal Integration with Bhubaneswar One								
5	e-Challan and RTO integration								
6	PMS Server (As per Bidder's Solution)								
D	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of Smart Parking Management System (Bidder to list individual items and provide costing).								
Smart Response and Incident Management System									
A	Surveillance System								
1	CCTV - Fixed								
2	CCTV - PTZ								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
3	Network Video Recorder (As Per Bidder Solution)								
4	Video Management System (VMS) including Central Application								
5	PTZ Keyboard with joystick								
B	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of Smart Response and Incident Management System (Bidder to list individual items and provide costing).								
Smart Governance and Smart Connect									
A	e-Governance								
1	Website								
2	Workstations for Citizen Facilitation Centre (CFC)								
3	Scanner for CFC								
4	Standard Printer for CFC								
5	Thermal Printer for CFC								
6	Citizen Portal								
7	Birth and Death Certificate								
8	Trade Licensing								
9	Right to Information (RTI)								
10	Legal								
11	Welfare Schemes								
12	Marriage registration								
13	Visitors management system								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
14	Secretarial & Meeting schedule								
15	NOC								
16	Building Plan Approval								
17	Property and Holding Tax								
18	Grievance/Complaint Redressal								
19	Housing & Affordable Scheme Management								
20	Enforcement								
21	Land Acquisition, Land Bank of BDA and TDR								
22	Park Management System								
23	Town planning								
24	Property allotment Information system								
25	Mobile Application								
26	KPIs and Dashboard								
27	Data Migration								
28	Any other Hardware or Software required to meet the RFP requirements of e-Governance Modules (Bidder to list individual items and provide costing).								
B	ERP								
1	Revenue from Property Taxes, Land Leases & Other services								
2	Finance and Management Accounting								
3	Purchasing & Inventory Management								
4	e-Procurement								
5	Contracts Management								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
6	Operations, Maintenance and Asset Lifecycle Management								
7	Projects and Works Management								
8	HR and Payroll System								
9	Water Utility Management and Billing								
10	Electrical Utility Management and Billing								
11	Foundation Layer (Including Middleware, SOA,BPM, single sign on and integration with LDAP)								
12	Enterprise Content Management (ECM) System/ Document Management System								
13	Integration and Interfaces								
14	Data Migration								
15	Any other Hardware or Software required to meet the RFP requirements of ERP Modules (Bidder to list individual items and provide costing).								
C	Solid Waste Management System								
1	RFID Reader								
2	RFID Tag								
3	Bin Volume Sensors								
4	Sensor Processing Unit								
5	Static Weigh Bridge (SWB)								
6	Barrier Gate								
7	ANPR Cameras								
8	CCTV - Fixed								
9	CCTV - PTZ								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
10	SWM Workstation								
12	Any other Hardware or Software required to meet the RFP requirements of Solid Waste Management System (Bidder to list individual items and provide costing).								
D	Multi-Services Digital Kiosks								
1	Integrated Multi-Services Digital Kiosks								
2	Stand-alone Multi-Services Digital Kiosks								
3	3G/GPRS enabled SIM Cards								
3	Any other Hardware or Software required to meet the RFP requirements of Multi-Services Digital Kiosks (Bidder to list individual items and provide costing).								
E	Education and Healthcare Management								
1	Smart Classroom Solution including all Hardware and Software								
2	Early Childhood Care Centres (E3C) including all Hardware and Software								
3	e-Primary Healthcare System including all Hardware and Software								
F	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of Smart Governance and Smart Connect (Bidder to list individual items and provide costing).								
Communications Network									
A	Fibre Optic Infrastructure including Network Electronics								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
1	HDPE Duct								
1.1	Set of 2x63mm								
1.2	1x25mm								
1.3	Outersleeves of suitable diameter								
2	Trenching								
3	Handhole with Cover								
4	Manhole								
5	Fibre Optic Cable (FOC)								
5.1	144 Count FOC								
5.2	12 Count FOC								
6	UTP Cat 6 Armoured Cable								
7	UTP Patch Cord								
8	Fibre Optic Splice Closure (FOSC)								
9	Optical Connectors								
10	Fibre Optic Patch Cords								
11	Fibre Distribution Management System (FDMS)								
12	Fibre Termination Panel (FTP)								
12.1	144 Count FTP								
12.2	12 Count FTP								
13	Intelligent Patch Panel Management Hardware with Software (As per Bidder's Solution)								
14	Communication Cabinets with Racks								
15	Junction Boxes								
16	Ethernet Switch and Router								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
16.1	Layer 2 - Industrial Grade Field Switch								
16.2	Layer 3 – Industrial Grade Distribution Switch								
16.3	Layer 3 - Backbone Ethernet Switch/Router								
16.4	Layer 3 - Type II: Core Router and Internet Router								
16.5	Layer 3 - Type III: Server/Workstation Connectivity Ethernet Switch								
17	Media Converter (As per Bidder's Solution)								
18	Wireless Gateway								
19	Fibre Asset Management System								
20	Network Management System (NMS)								
21	Enterprise Management System (EMS) including Helpdesk								
22	Rodent Repellent System								
23	Any other Hardware or Software required to meet the RFP requirements of Fibre Optic Infrastructure including Network Electronics (Bidder to list individual items and provide costing).								
B	City Wide Wi-Fi System								
1	Wi-Fi Access Point with Controller								
2	Wi-Fi Management System								
3	Wi-Fi Server								
4	Any other Hardware or Software required to meet the RFP requirements of City Wi-Fi System (Bidder to list individual items and provide costing).								
C	Environmental Monitoring System								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
1	Environmental Sensors-Hardware and Software								
2	Digital Display Screen (DDS)								
3	Any other Hardware or Software required to meet the RFP requirements of Environmental Monitoring System (Bidder to list individual items and provide costing).								
D	Smart Poles								
1	Smart Poles								
2	Any other Hardware or Software required to meet the RFP requirements of Smart Poles (Bidder to list individual items and provide costing).								
E	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of Communication Network (Bidder to list individual items and provide costing).								
ICOMC									
A	Command and Control Centre								
1	16 x 4 Video Wall Cubes with Controller (70" each)								
2	3 x 2 Video Wall Cubes with Controller (70" each)								
3	2 x 2 Video Wall Cubes with Controller (70" each)								
4	Display Content Management System (DCMS) or Video Wall Management System								
5	70" Monitor Display								
6	Collaboration System								
7	Teleconference Phone with Speakers								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
8	Video Conferencing System								
9	Ceiling Speakers								
10	Room Control System including Panel								
11	Operator Console								
12	Task Lights								
13	Multi-Functional Printers including Scanner								
14	Contact Centre Solution (For Helpdesk)								
15	Network Time Protocol based Digital Clock								
16	Matrix Switcher								
17	Wireless Microphone System								
18	Audio Processor (As per Bidder's Solution)								
19	Audio Distribution Amplifier (As per Bidder's Solution)								
20	Audio Extractor (As per Bidder's Solution)								
21	Distribution Amplifier (As per Bidder's Solution)								
22	AV Auto Switcher								
23	USB KVM Extender								
24	Communication Cabinets with Racks (As per Bidder's Solution)								
25	Local On-Site Server (As per Bidder's Solution)								
26	Smart City Platform								
27	ICOMC, temporary command and control centre Civil Works including interiors, electrical, mechanical, structural, communications, fire, etc.								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
28	Fire Detection and Suppression System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)								
29	CCTV System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)								
30	Access Control System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)								
31	Water Leak Detection System (In ICOMC, Operations Rooms & Rack Room)								
32	Rodent Repellent System (In ICOMC, temporary command and control centre, Operations Rooms & Rack Room)								
33	Diesel Generator Set for ICOMC, temporary command and control centre.								
34	Operation Area: Operator Desk, Chair and Storage								
35	Large Board Room - 20 seater								
36	Board Room - 12 Seater								
37	Cabins - 3 Seater								
38	Any other Hardware or Software required to meet the RFP requirements of Command and Control Centre (Bidder to list individual items and provide costing).								
39	Setting up of temporary Command and Control centre								
40	Dismantling and relocation of temporary Command and Control centre to permanent location								
B	Building Management System (BMS)								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
1	Building Management System (BMS)								
2	Any other Hardware or Software required to meet the RFP requirements of BMS (Bidder to list individual items and provide costing).								
C	GIS Platform								
1	Data Services								
2	Application Services								
3	GIS Software with servers and database as per Bidder's Solution								
4	Any other Hardware or Software required to meet the RFP requirements of GIS Platform (Bidder to list individual items and provide costing).								
D	Data Hosting								
1	WAN/Internet Router (As per Bidder's Solution)								
2	Data Centre TOR (Top of the Rack) Switch (As per Bidder's Solution)								
3	Servers (As per Bidder's Solution)								
4	Blade Chassis (As per Bidder's Solution)								
5	Primary Storage (As per Bidder's Solution)								
6	Secondary Storage (As per Bidder's Solution)								
7	KVM Switch (As per Bidder's Solution)								
8	Server Load Balancer (As per Bidder's Solution)								
9	Tape Library (As per Bidder's Solution)								
10	Fire Proof Enclosure (As per Bidder's Solution)								
11	Any other Hardware or Software required to meet the								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
	RFP requirements of Data Hosting (Bidder to list individual items and provide costing).								
E	IT Infrastructure								
1	Antivirus								
2	Firewall, Web Application, UTM, Advanced Persistent Threat Solution								
3	DDOS Solution								
4	Databases								
5	Link Load Balancer								
6	Server Load Balancer								
7	UPS for any other Component (As per Bidder's Solution)								
8	Any other Hardware or Software required to meet the RFP requirements of IT Infrastructure (Bidder to list individual items and provide costing).								
F	Other Requirements								
1	Any other Hardware or Software required to meet the RFP requirements of ICOMC (Bidder to list individual items and provide costing).								
Connectivity cost from various Sub-Systems									
A	Bandwidth Requirements								
1	Wi-Fi Bandwidth Requirement								
2	Bandwidth Requirement at ICOMC (Minimum 100 Mbps leased line connection from two separate ISPs)								
3	Other Bandwidth Requirements (Including MPLS links from to separate ISPs for connectivity between								

S. No.	Subsystems / Items	Year 1 (INR)	Year 2 (INR)	Year 3 (INR)	Year 4 (INR)	Year 5 (INR)	Year 6 (INR)	Year 7 (INR)	Sub-Total (INR)
	Project Site, DC and DRC)								
B	GSM/GPRS connectivity								
1	GSM/GPRS connectivity for various systems								
Other									
1	Manpower Requirement								
2	Any Other Items								
Total (A) INR									
Service Tax (B)									
Grand Total (A+B) (INR)									

Annexure- C1

APPENDIX 5: FINANCIAL QUALIFICATION OF THE BIDDER

(Bidders, including each partner of a Joint Venture/Consortium, shall provide financial information to demonstrate that they meet the requirements stated in the BDS for ITB Clause 5.1 (a). Each Bidder or partner of a Joint Venture/Consortium shall complete this form. If necessary, separate sheets shall be used to provide complete banker information. A copy of the audited balance sheets shall be attached. Autonomous subdivisions of parent conglomerate businesses shall submit financial information related only to the particular activities of the subdivision.)

Name of Bidder or partner of a Joint Venture (if allowed):

S. No.	Financial Year (FY)	Annual Turnover (Rs. Crore)	Net Profit (Rs. Crore)	Net Worth (Rs. Crore)
1	Financial Year 2011-12 (or FY 2011)			
2	Financial Year 2012-13 (or FY 2012)			
3	Financial Year 2013-14 (or FY 2013)			
4	Financial Year 2014-15 (or FY 2014)			
5	Financial Year 2015-16 (or FY 2015)			

Note:

- *The Bidder shall attach copies of the balance sheets, financial statements and audited annual reports for each of the Financial Years mentioned above. The financial statements shall:*
 - (a) *reflect the turnover of the Bidder;*
 - (b) *be audited by a statutory auditor;*
 - (c) *be complete, including all notes to the financial statements.*
- *The Bidder shall provide a statutory auditor's certificate specifying the annual Turnover of the Bidder in the form set out at Appendix-5.*
- *In case the financial year in the Bidder's country is the calendar year, the Bidder shall submit above financial information for years 2011, 2012, 2013, 2014 and 2015*
- *In case Bidder is claiming International Turnover, the amount shall be converted to USD and then to INR based on the RBI rates as per 31st January, 2017.*

Date:

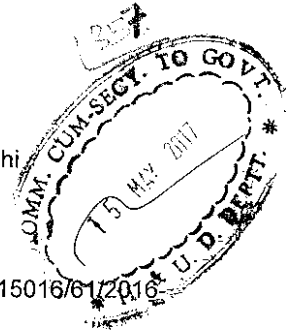
ANNEXURE – C2

5

National Security Council Secretariat
3rd Floor, Sardar Patel Bhawan, Sansad Marg New Delhi

20/5/16
18/5/16

Subject: Cyber Security Model Framework for Smart Cities.



45/8/16

Ref: Ministry of Urban Development, Government of India OM No.K-15016/61/2016
SC-I dated 20th May 2016 on the subject cited above.

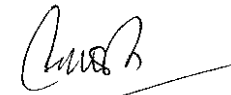
Ministry of Urban Development, Government of India had forwarded a Cyber Security Model Framework prepared by National Security Council Secretariat (NSCS), in consultation with the Industry (NASSCOM, DSCI). The Cyber Security Model Framework consist Cyber security requirements which may be necessary to be incorporated while inviting proposals/offers from the companies implementing Information Technology and applications as part of project on Smart Cities.

18/5/16
Projects

2. It is reiterated that the cyber security model framework prepared by the National Security Council Secretariat should be adhered to while planning and creating 'Smart' infrastructure. Architecture of Information Technology systems deployed in Smart cities need to be open, interoperable and scalable and it should be ensured that there is no compromise on the principle of interoperability and data sharing across applications. A copy of the Cyber Security Model Framework for Smart Cities is enclosed.

19/5/16
AD (Genl)

3. The above issues with the approval of National Cyber Security Coordinator (NCSC).


(Abhimanyu Ghosh)
Joint Secretary/OSD
Ph.2374 7926

Principal Secretaries/Administrators of all States/UTs
Odisha

U.O.No. 46/53/2015-NSCS(CS)/Pol.

Dated 9th May, 2017

356

NATIONAL SECURITY COUNCIL SECRETARIAT
NEW DELHI

Cyber Security Requirement for Smart City – Model Framework

1. The Generic architecture of smart city generally consists of four layers – a sensing layer, a communication layer, a data layer and an application layer, and these four layers are overseen by the smart city security system. Architecture of Information Technology systems deployed in Smart city need to be open, interoperable and scalable.

The reference architecture of Information Technology (IT) infrastructure in Smart city suggested by National Institute of Standards and Technology (NIST) serves as a common starting point for system planning while promoting interoperable functional building blocks, which are required in a smart city.

2. The message exchange between various applications in the smart city should be fully encrypted and authenticated. Any application outside the Data Centre (DC) should talk to the applications hosted in the datacenter through only predefined APIs.

3. While it is necessary to converge multiple infrastructures into one Central platform for ease of management, it is mandatory that such applications hosted in the central data center support multi-tenancy with adequate authentication and Role based access control mechanism for each tenant pertaining to their respective infrastructure.

4. In multi-tenant architecture, there should be provisions for flow of normalized data only to respective tenant partition(s) in a predefined manner with adequate authentication and encryption mechanism.

5. The smart city architecture should be capable of managing heterogeneous data, which would be continuously communicated through numerous devices following different protocols. In order to ensure that the flow of data between devices does not run into latency issues, appropriate protocols need to be deployed so as to minimize latency. The following communication protocols could be used for the different layers for data flow:

Between applications and back end systems: HTTP, SQL, FTP, SNMP, SOAP, XML, SSH, SMTP

Between back end systems and field devices: Message Queue Telemetry Transport (MQTT), XMPP, RESTful HTTP, Constrained Application Protocol (CoAP), SNMP, IPv4/6, BACnet, LONworks, Low Power Wide Area Network (LoRa), Fixed, 4G/5G, Wi-Fi, WiMax, 2G/3G
From field devices: ZigBee oIP, ETSI LTN, IPv4/6, 6LowPAN, ModBus, Wi-Fi, 802.15.4, enOcean, LoRA, RFID, NFC, Bluetooth, Dash7, Fixed, ISM & short-range bands.

6. Data Layer (termed as City Digital platform/ fabric) should be capable of communicating with various types of sensors/ devices and their management platforms/applications for single/multiple services irrespective of software and application they support. Data exchange between various sensors and their management applications must strictly happen through this layer, thus making it one true source of data abstraction, normalization, correlation and enable further analysis on the same. Adequate security checks and mechanisms as described in later points to be deployed to protect data layer from data confidentiality breach and unauthorized access.

7. The entire Information Technology (IT) infrastructure deployed as part of Smart city should follow standards like – ISO 27001, ISO 22301, ISO 37120, ISO 3712, ISO 27017, ISO 27018, BSI PAS 180, BSI PAS 181, BSI PAS 182, for Wi-Fi access – PEAP (Protected Extensible Authentication Protocol), 3rd Generation Partnership Project (3GPP), etc. as appropriate.

8. Application Program Interfaces (APIs) should be published and the IT systems be running on standard protocols like JSON / XML or REST etc.

LEA -

9. From a network security perspective all information that flows on the network should be encrypted to ensure safety and privacy of confidential data. The devices at each endpoint of the network should be authenticated (using mechanisms based on attributes one of which could use passwords). The authentication system so used on these endpoint devices should ensure that only authorized users are sending data over the network, and there is no rogue data that is sent to the control systems to generate false alarms or sabotage the systems.
10. Wireless broadband plan and architecture for the specific City may be prepared detailing the existing Fiber System and other supporting infrastructure so as appropriately interfacing another or citywide wireless network.
11. All sensors deployed as part of IT and IT based systems in the Smart cities should talk only to the authorized wireless network, and do not hook on to the rogue networks. The guidelines to secure wi-fi networks as published by Department of Telecom must be followed.
12. Wireless layer of the Smart City Network should be segmented for public and utility networks by using Virtual Private Networks (VPNs) or separate networks in the wired core, so that any traffic from the Internet users is not routed into the sensor networks and vice-versa.
13. All traffic from the sensors in the Smart city to the application servers should be encrypted Secure Socket Layer (SSL) and authenticated prior to sending any information. The data at rest and in transit must be encrypted.
14. Authentication of sensors in the Smart city should happen at the time of provisioning the sensors, and adding them into the system, and should be based on physical characteristics of the sensors like MAC ID, Device ID etc.
15. Sensors deployed in solutions to set up Smart city should be hardened devices with the ability to be upgraded remotely for firmware through encrypted image files.
16. As various sensors use multiple protocols to communicate with the underlying network with varied security capability, the system should allow provisioning necessary

authentication and encryption at the gateway or the nearest data aggregation level if the sensor is not able to do the same.

17. The Sensors or edge device deployed in Smart city should not have any physical interface for administration. Monitoring of systems and networks should be undertaken remotely.

18. The sensors deployed in Smart city should be of low power consumption and should work on self-sufficient power sources.

19. All devices and systems deployed in Smart city should be hardened and have the ability to be upgraded remotely for firmware through encrypted image files with authentication mechanism to complete the operation.

20. All the sensors in the Smart city should connect to a completely separate network.

21. The data center should be segmented into multiple zones with each zone having a dedicated functionality e.g. all sensors for one operational domain can connect to the data center in one zone, and the Internet facing side of the data center should be in another zone.

22. The Internet facing part of the data center should have a Demilitarized zone where all the customer application servers would be located that are customer facing. Only these servers can access the data from the actual utility application servers on predefined ports.

23. The customer application servers should be accessed only by the web server that is hosted in a different zone of the data center.

24. The following should be implemented in the data centre - firewalls, Intrusion detection & Intrusion prevention systems, Web Application Firewalls, Behavioral analysis systems for anomaly detection, Correlation engine, Denial of Service prevention device, Advanced Persistent Threat notification mechanism, Federated Identity and access management system, etc.

25. Security Information and Event Management (SIEM) monitoring on all Smart City networks, devices and sensors to identify malicious traffic.

26. All "applications" and "apps" will undergo static and dynamic security testing before deployment and be tested with respect to security on regular basis at least once in a year.
27. All applications and "Apps" deployed as part of Smart city be hosted in India.
28. The said architecture provide:
- (a) Automatic and secure updates of software and firmware etc.
 - (b) All systems and devices should provide auditing and logging capabilities.
 - (c) Ensure vendor compliance to remove any backdoors, undocumented and hard cored accounts.
 - (d) End-to End solution should be provided with annual end-to-end service availability of 99.999 percent. The end to end service agreement should be in place for minimum period of five years form the date of operations of the systems.
29. Appropriate teams may be set up to monitor cyber incidents and mitigation of same.
30. All the information on incidents be shared regularly with Indian Computer Emergency Response Team (CERT-In) and NCIIPC (National Critical Information Infrastructure Protection Centre) and take help to mitigate and recover from the incidents.

ANNEXURE – C3

SOFTWARE TECHNOLOGY PARKS OF INDIA

BHUBANESWAR

Name of the Customer: Bhubaneswar Smart City Limited, Bhubaneswar

1.1 Commercial Proposal:

A. For DC Facility (One Time Charges)

Particulars	Charges in INR
Registration Charges	5000.00

B. For DC Facility (Recurring Charges)

Particulars	Charges in INR
42U Rack with 6.5 KW Power	13,50,000.00

C. Workstation Facility (Recurring Charges)

Particulars	Charges in INR
1 Workstation	1,50,000.00

D. DR Facility (Recurring Charges) at STPI, Mohali

Particulars	Charges in INR
42U Rack with 7 KW Power	13,50,000.00

E. Additional Electricity Consumption Charges

Particulars	Charges in INR
Per KVA	1,50,000.00

Note: The above commercials are indicative. The actual price may vary as the Data Centre tariff is being finalized.



Sd/-

Chief Executive Officer

BSCCL

Request for Proposal for Selection of Master System Integrator for Implementation of Smart Solutions in Bhubaneswar City

REF:-RFP NO. BSCL/243/16/620 DATED 04/03/2017

Addendum – 2

No. 1454

Date: 24-05-17

In accordance with the queries raised by the bidders, the following additions to the RFP No: BSCL/243/16/620 issued dated 04/03/2017 is being made in the form of Addendum – 2 as provided below. The other terms and conditions of the RFP dated 04/03/2017, Corrigendum 1 dated 25/04/17, Addendum 1 dated 25/04/17 and Corrigendum-2 dated 17/05/2017 remain unchanged.

Sl. No.	Ref. Section No. to RFP Document	Additional Clause
1.	Section 1. Instructions to Bidders, A-Definitions, (hh), Page 9	“Consortium” or “Joint Venture” or “JV” means a combination of companies, firms or limited liability partnerships, not exceeding 4, which have formed a consortium or unincorporated joint venture for the purposes of submitting a Proposal.
2.	Section 1. Instructions to Bidders, A-Definitions, (ii), Page 9	“Eligible Assignment” means an assignment/project which meets the criteria set out in Clause 29 of the Bid Data Sheet.
3.	Section 1. Instructions to Bidders, A-Definitions, (jj), Page 9	“Goods” means the material and equipment to be supplied by the MSI pursuant to the Contract, as described in greater detail in this RFP document.
4.	Section 1. Instructions to Bidders, A-Definitions, (kk), Page 9	“Smart City Proposals” means the stage 1 and stage 2 proposals submitted by GoO to MoUD for the selection of Bhubaneswar as a smart city under the first phase of the Smart Cities Mission launched by the MoUD.
5.	Section 1. Instructions to	A Bidder may be disqualified if the Bidder: (i) Controls or is Controlled by any other Bidder or is under the common Control of the same Person who also Controls another Bidder; or (ii) receives or

Sl. No.	Ref. Section No. to RFP Document	Additional Clause
	Bidders, 2, c. Conflicting Assignment, Page 13	has received any direct or indirect subsidy, grant, loan, subordinated debt or other funded or non-funded financial assistance from any other Bidder; or (iii) is also a shareholder of any other Bidder; or (iv) has hired or appointed directly or through an Affiliate, the same legal, financial or technical advisor as those hired by any other Bidder for the purpose of bidding for the Contract; or (v) has a relationship with another Bidder directly or through common third party(s), that puts either or both of them in a position to have access to the others' information about, or to influence the Proposal of the other; or (vi) submits more than one Proposal for the Contract either individually or through an Affiliate (this will result in the disqualification of all such Proposals submitted by the Bidder and/or its Affiliates).
6.	Section 1. Instructions to Bidders, 17 (b) (xiv), Page 23	If the Bidder does not have an office in Bhubaneswar, an undertaking that if awarded the Contract, such Bidder shall set up an office in Bhubaneswar within 60 days of execution of the Contract.
7.	Section 1. Instructions to Bidders, 17 (d), Page 25	The bidders are required to furnish a self-evaluation checklist for the qualification and technical evaluation criteria in accordance with the RFP as per the format in Appendix 23 and 24, provided at Annexure A3; respectively
8.	Section 5, General 3.2; Pg. 179	All of the systems (hardware, software, sensors & any other items) and applications as part of proposal and solution of MSI have to be compliant as per the specifications and guidelines of 1. Cert-IN, 2. Ministry of Electronics & Information Technology 3. Framework of cyber security confirming to Gol, MoUD guidelines. Also MSI has to ensure the systems are updated at periodic intervals based on any latest guidelines / communication issued by above organisations in order to be compliant with all future guidelines.
9.	Section 5, ICOMC 3.9.1-A; Pg. 214	The tentative floor plan for temporary command centre at 5 th Floor, BMC Bhawani Mall and for two floors (lower and upper floor) of Intelligent City Operations and Management Centre (ICOMC) is provided as Annexure A1 & Annexure A2; respectively.
10.	Section 5, TR 5.190	Please refer to the CCTV System Specifications as mentioned under Section City Surveillance System. For specifications on cameras required for Smart Classrooms i.e. remote collaborative learning, Please refer to the following specifications.
	TR 5.190A	All cameras shall capture high definition video, compress the video using H.264 or better technique

Sl. No.	Ref. Section No. to RFP Document	Additional Clause	
		TR 5.190B	The cameras shall have one HDMI / DVI (Digital Video Interface) input to connect PC / Laptop directly to the Video conferencing system and display resolutions from WXGA (1280 x 768) to 1080p (1920 x 1080).
		TR 5.190C	The cameras shall support 1080p resolution.
		TR 5.190D	The cameras shall have at least 2 HDMI inputs to connect multiple HD cameras.
		TR 5.190E	The cameras shall have at least 2 nos. of HD (High Definition) output to connect Full High Definition display devices. Further,
		TR 5.190F	The cameras shall support minimum 4 microphone inputs with 4 microphones.
		TR 5.190G	The cameras shall capture video using 1/3” progressive scan CMOS or better.
		TR 5.190H	The cameras shall support minimum of 10x optical zoom.
		TR 5.190I	The cameras shall have at least 70 degrees field of view (horizontal)
11.	Section 5, 5.6.2. City Wide Wi-Fi	UPS	
		TR 6.443A	Please refer to UPS Specification as mentioned under IT and other common Infrastructure Section 5.7.4.5
12.	Section 5, 5.6.4. Smart Pole	UPS	
		TR 6.595A	Please refer to UPS Specification as mentioned under IT and other common Infrastructure Section 5.7.4.5 Section 5.7.4.5
13.	Section 5, 5.7.4.7 Data Security	FR 7.318A	DDOS Solution must be purpose built with 100 Gbps of throughput, it must support protection from network based as well as application based DDOS attacks.
14.	Section 5, Technical Requirements, System Acceptance Test; Pg. 232	E2E Testing <ul style="list-style-type: none"> • Certify the business process in it's entirety : <ol style="list-style-type: none"> 1. End to end testing will cover all business flows and connectivity with all the interfacing systems. 	

Sl. No.	Ref. Section No. to RFP Document	Additional Clause						
		<p>2. No mock setup will be used for Integrations during End to end testing phase, since all the interfaces are expected to be available for validations.</p> <p>The end to end test scenario matrix needs be prepared that provide details of the following:</p> <ul style="list-style-type: none"> Detailed description of the scenario with the associated business process across Upstream Applications & Downstream Applications All Applications, interfaces listed in scope of the program – a checklist to indicate whether the scenario will traverse through the identified system(s) <table border="1" data-bbox="690 542 1839 1062"> <thead> <tr> <th data-bbox="690 542 1173 589">Entry Criteria</th> <th data-bbox="1173 542 1570 589">Exit Criteria</th> <th data-bbox="1570 542 1839 589">Deliverables</th> </tr> </thead> <tbody> <tr> <td data-bbox="690 589 1173 1062"> <ul style="list-style-type: none"> System Integration testing complete for all interfacing applications End to end test scenarios / cases are reviewed and signed off by SMEs (Subject Matter Expert) No blocker / critical defects in open status from ST/SIT phases Known defects (open status) are documented clearly from ST/SIT phases </td> <td data-bbox="1173 589 1570 1062"> <ul style="list-style-type: none"> 100% of planned test cases are executed and test results are documented > 100% pass rate on executed test cases No blocker / critical defects in open status Known defects (open status) are documented clearly sign off on the test results </td> <td data-bbox="1570 589 1839 1062"> <ul style="list-style-type: none"> End to end test scenarios and test cases End to end defects report End to end test execution evidence End to end test summary report </td> </tr> </tbody> </table> <ul style="list-style-type: none"> Resilience & Recoverability testing : <ol style="list-style-type: none"> Resilience testing confirms that the system can recover from expected or unexpected events without loss of data or functionality. Recovery testing confirms that the affected system can be restarted successfully after an outage. 	Entry Criteria	Exit Criteria	Deliverables	<ul style="list-style-type: none"> System Integration testing complete for all interfacing applications End to end test scenarios / cases are reviewed and signed off by SMEs (Subject Matter Expert) No blocker / critical defects in open status from ST/SIT phases Known defects (open status) are documented clearly from ST/SIT phases 	<ul style="list-style-type: none"> 100% of planned test cases are executed and test results are documented > 100% pass rate on executed test cases No blocker / critical defects in open status Known defects (open status) are documented clearly sign off on the test results 	<ul style="list-style-type: none"> End to end test scenarios and test cases End to end defects report End to end test execution evidence End to end test summary report
Entry Criteria	Exit Criteria	Deliverables						
<ul style="list-style-type: none"> System Integration testing complete for all interfacing applications End to end test scenarios / cases are reviewed and signed off by SMEs (Subject Matter Expert) No blocker / critical defects in open status from ST/SIT phases Known defects (open status) are documented clearly from ST/SIT phases 	<ul style="list-style-type: none"> 100% of planned test cases are executed and test results are documented > 100% pass rate on executed test cases No blocker / critical defects in open status Known defects (open status) are documented clearly sign off on the test results 	<ul style="list-style-type: none"> End to end test scenarios and test cases End to end defects report End to end test execution evidence End to end test summary report 						
15.	Section 5, Technical Requirements, 3.9.2. ICOMC; Pg. 216	<p>Big Data : Once systems are integrated, it will generate huge volumes of both structured and unstructured data from the connected systems. There is a need to mine the data and derive actionable insights Develop best practice standards adhering to common platform such as Data integration, Policies, Procedures, formats & security of data.</p>						

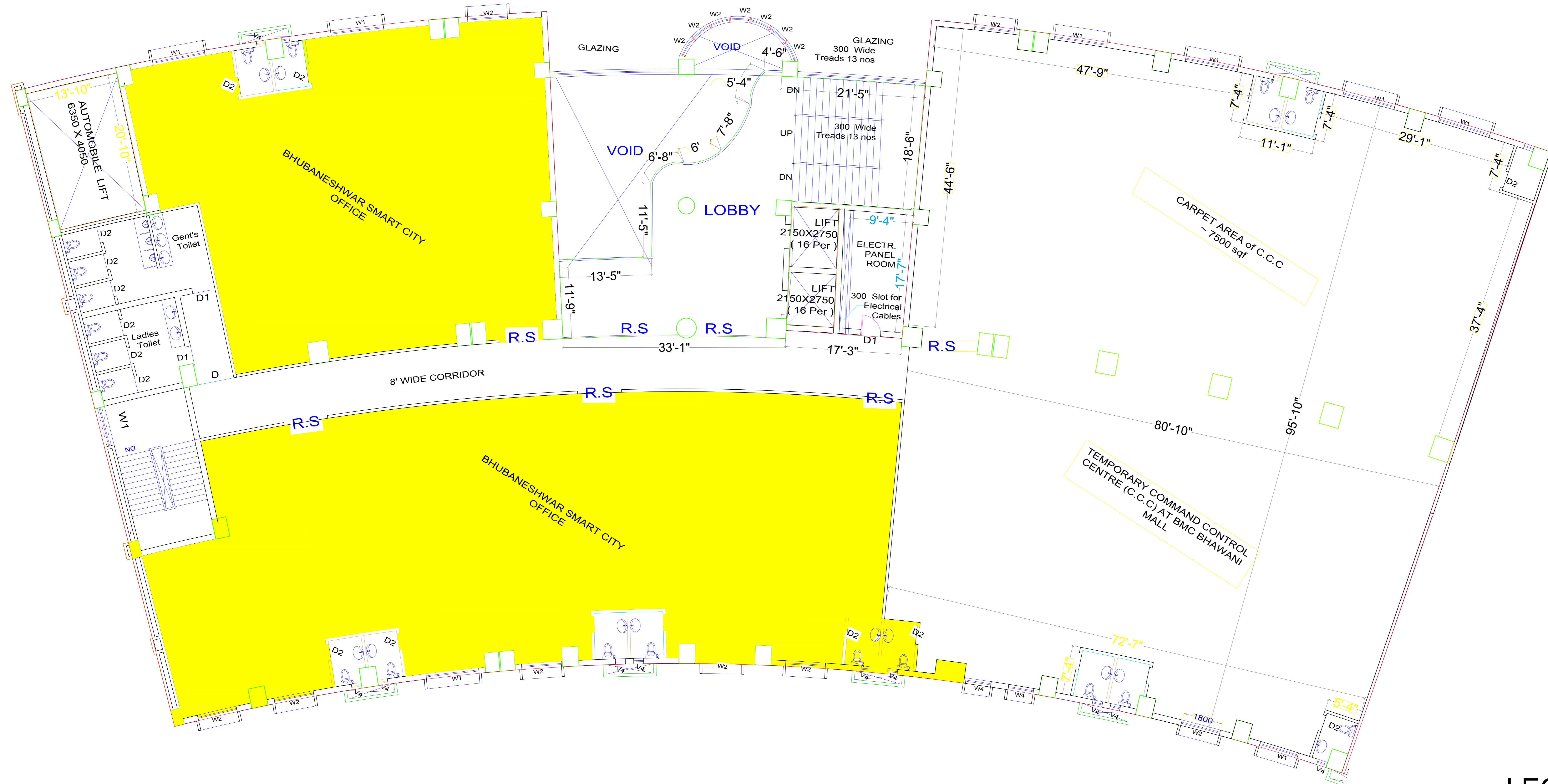
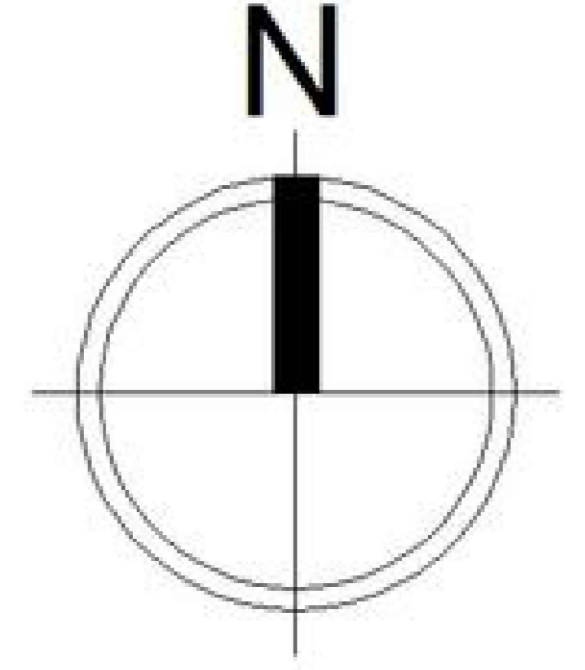
Sl. No.	Ref. Section No. to RFP Document	Additional Clause
16.	Section 5, Technical Requirements, Training & Change Management; Pg. 234	<p>MSI has to ensure that training sessions are effective and the attendees shall be able to carry on with their work efficiently. For this purpose, it is necessary that effectiveness of the training session is measured through a comprehensive online feedback mechanism.</p> <p>MSI has to ensure the below :</p> <p>Induction Kit, Knowledge Management portal (Centralized Knowledge Portal, Repository of process, templates, Videos, Checklist, Re-usable artefacts, Training Manuals).</p> <p>Once training is done, there should be a process to measure Reverse Knowledge Transfer. The Knowledge Transfer, handover should be done in phase manner as per below.</p> <p>Knowledge Transfer Phases : Knowledge Acquire -> Reverse Knowledge Transfer -> Shadow Support -> Independent mode</p>
17.	Section 6, GCC 1. Definitions (a-a); Pg. 752	“Agreed and Finalized Project Plan” has the meaning ascribed to it under the SCC for GCC Clause 46.2.
18.	Section 6, GCC 1. Definitions (y-a); Pg. 753	“Goods” means the material and equipment to be supplied by the MSI pursuant to the Contract, as described in greater detail in this RFP
19.	Section 6, GCC 1. Definitions (bb-a); Pg. 754	“Implementation Schedule” means the schedule showing the sequence, and timing of execution of the Services, supply of the Goods and related activities and the Deliverable Due Dates, set out in the Technical Requirements, as may be modified by the Finalized Project Plan approved by the Client.
20.	Section 6, GCC 1. Definitions (cc-a); Pg. 754	“Indemnifying Party” has the meaning ascribed to it in GCC Clause 19.
21.	Section 6, GCC 1. Definitions (kk-a); Pg. 755	“MSI's Equipment” means all materials, supplies, installation equipment, tools, utilities, and support services and other items whatsoever that are required by MSI for the providing the Solution
22.	Section 6, GCC 1. Definitions (kk-b); Pg. 755	“Operational Acceptance” means the acceptance of the operable condition of the System or Subsystem (as the case may be) by the Client, as certified by the issuance of an Operational Acceptance Certificate.
23.	Section 6, GCC 1. Definitions (rr-a);	“Time for Achieving of Operational Acceptance” shall mean the period within which MSI has to achieve Operational Acceptance of the System, as specified in the SCC for GCC Clause 27.2.

Sl. No.	Ref. Section No. to RFP Document	Additional Clause
	Pg. 756	
24.	Section 6, GCC 1. Definitions (tt-a); Pg. 756	“Recurrent Cost” means the annual recurrent cost payable to MSI during the Warranty Period and Post Warranty Service Period in connection with operation of the Smart Solutions Project, in accordance with the rates quoted by MSI in its Proposal in the Recurrent Cost Table at Section 3 of the RFP.
25.	Section 6, GCC 1. Definitions (xx-a); Pg. 756	“Service Level Agreement” or “SLA” means the service levels agreements as set out in Clause 8 of Section 5
26.	Section 6, GCC 1. Definitions (xx-b); Pg. 756	“Smart Solutions Project” or “Project” means the pan-city smart solutions, which involve the use of technology, information and data to improve infrastructure and services within the city of Bhubaneswar, to be implemented by the MSI pursuant to the RFP and this Contract.
27.	Section 6, GCC 1. Definitions (yy-b); Pg. 756	“Supply and Installation Cost” means supply and installation cost payable to MSI in accordance with the rates quoted by MSI in its Proposal in the Supply and Installation Cost Table at Section 3 of the RFP
28.	Section 6, GCC 1. Definitions (yy-c); Pg. 756	“System” has the meaning ascribed to it in recital c.
29.	Section 6, GCC 1. Definitions (zz-a); Pg. 756	“Technical Requirements” means the technical requirements set out at Section 5 of the RFP
30.	Section 6, GCC 1. Definitions	Capitalised terms used but not defined in this Clause 1 of the GCC shall have the meanings assigned to them in Section 1. A of the RFP (Instruction to Bidders)
31.	Section 6, GCC: Subcontracting 47.6; Pg. 798	The MSI shall be solely liable for the execution of the Services and provision of the Solution and the appointment of a Subcontractor (either pre-approved or subsequently approved by the Client) shall not excuse the MSI from the performance of any of its obligations under the Contract and the MSI shall be responsible for all acts and omissions of its Subcontractors.
32.	Section 6, GCC: Intellectual Property Rights Indemnity 60.4-A; Pg. 816	If the use of any Intellectual Property Rights in the Solution, including any information technology provided by the MSI is adjudged by a court of law as constituting an infringement of any third party's Intellectual Property Rights and the Client is consequently prevented from using the System or any Subsystem, then the MSI shall at its own expense and at its option:

SI. No.	Ref. Section No. to RFP Document	Additional Clause
		(i) procure for the Client the right to continue using the System, or any Subsystem, as the case may be; (ii) replace the infringing part of the System or Subsystem with a non-infringing part that complies with the Technical Requirements; or (iii) modify the relevant part so that it becomes non-infringing.
33.	Section 6, GCC: Force Majeure 65.1-A; Pg. 822	It is clarified that the following events shall not be treated as Force Majeure events, except to the extent resulting from a Force Majeure event: (a) unavailability, late delivery or changes in cost of any materials, equipment, information technology required for providing the Solution; (b) delay in the performance of any Subcontractor; or (c) non-performance caused by the non-performing Party's failure to comply with any Applicable Laws or permits.
34.	Section 6, GCC: Under Contract Completion 31 (f); Pg. 784	Subject to sub-clause (e) and compliance of obligations of MSI as per sub-clause (a) to (d) above, the Client shall issue to MSI a Completion Certificate for the overall system (the "Completion Certificate").

ANNEXURE: A1

TOTAL BUILTUP AREA - 18715.00 SFT.



LEGEND

BSCL OFFICE

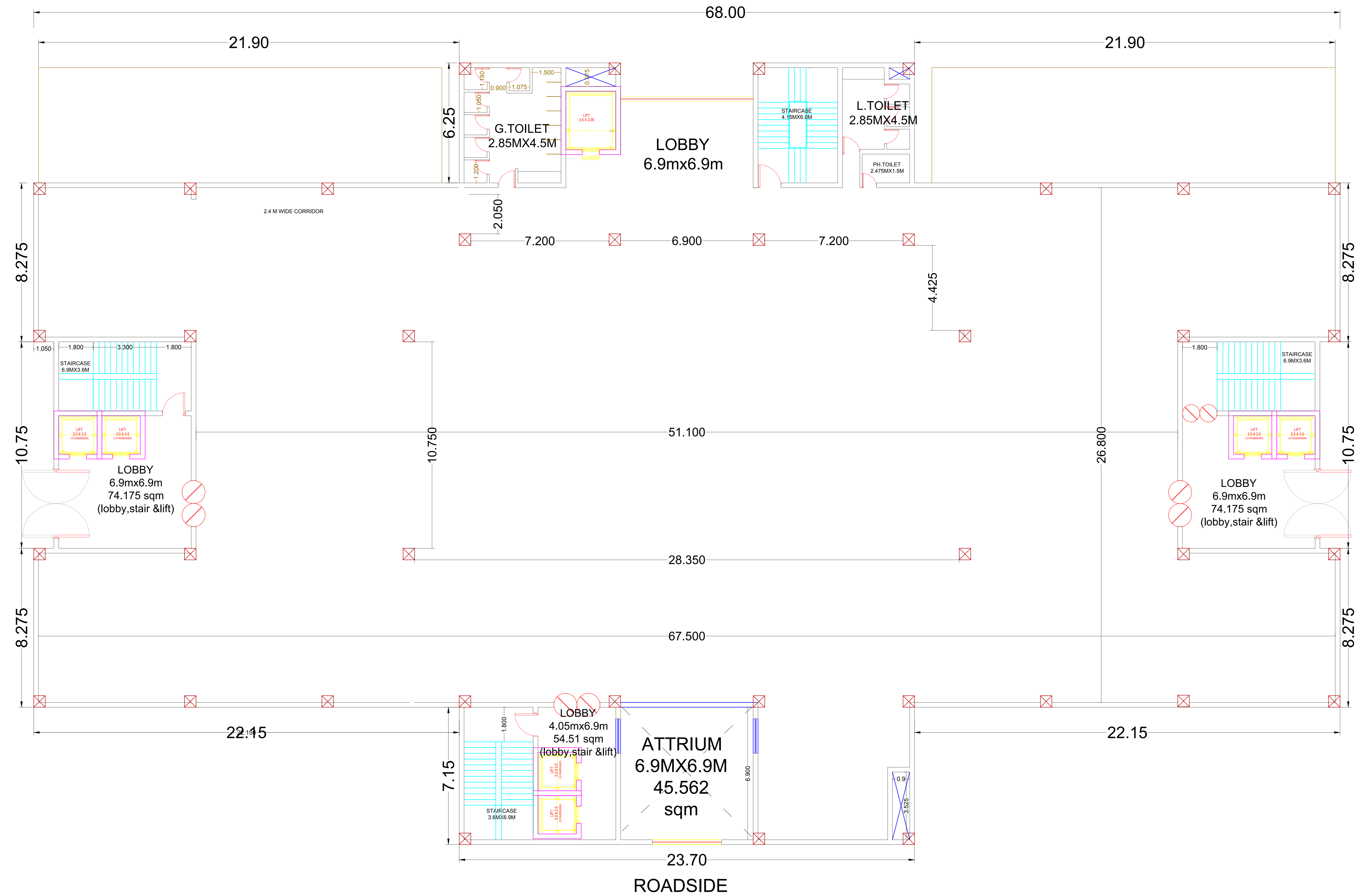
5TH FLOOR PLAN - BMC BHAWANI MALL

ALL THE UNITS ARE IN FEETS AND INCHES

BHUBANESHWAR SMART CITY LIMITED

FLOOR PLAN - TEMPORARY COMMAND AND CONTROL CENTRE

ANNEXURE: A2 (a)



TOTAL BUILTUP AREA:-2139 sqm (23000 sft)

TENTATIVE LOWER FLOOR PLAN FOR
ICOMC BUILDING

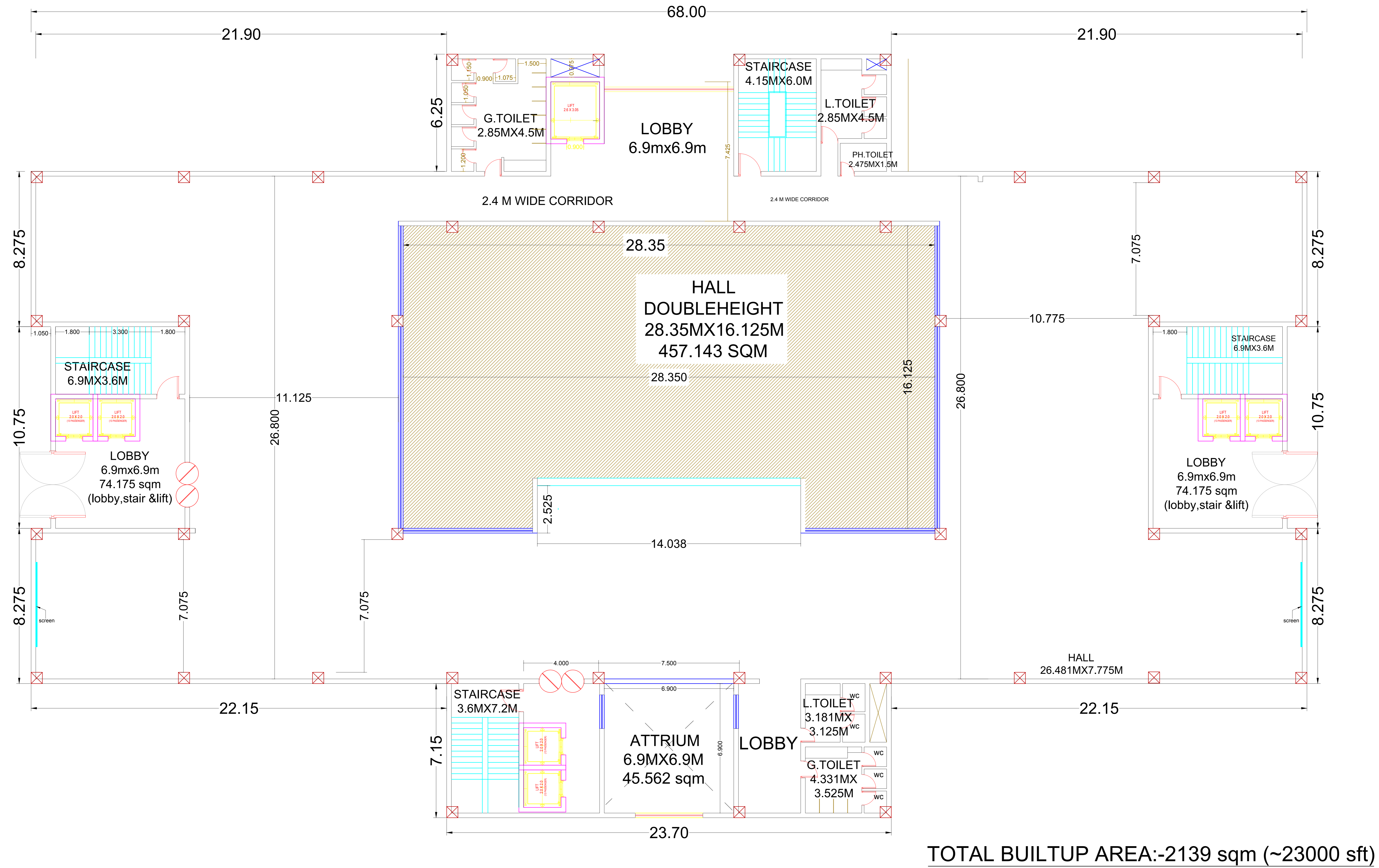
FLOOR PLAN - COMMAND AND CONTROL CENTRE

LOWER FLOOR PLAN-ICOMC BUILDING

ALL THE UNITS ARE IN
METRES

BHUBANESHWAR
SMART CITY LIMITED

ANNEXURE: A2 (b)



TENTATIVE UPPER FLOOR PLAN
FOR ICOMC BUILDING

FLOOR PLAN - COMMAND AND CONTROL CENTRE

UPPER FLOOR PLAN-ICOMC BUILDING

ALL THE UNITS ARE IN
METRES

BHUBANESHWAR
SMART CITY LIMITED

ANNEXURE – A3

Appendix 23

Bidder’s Qualification : Self-Evaluation Checklist

A. Evaluation of Bidder’s Qualification

S. No.	Parameters	Credential of applicant	Remarks (Qualified / Not Qualified)
1	Company Profile	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (Partner In charge in case of Consortium) shall be in operations for a period of at least ten (10) years as on published date of RFP. In case of a Consortium, in addition, each member other than Partner In charge shall be in operations for a period of at least five(5) years as on Published date of RFP.		
2	Company Financials & Profile	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder/Consortium shall have an average annual turnover of INR 1,000 Crores over the last three (3) Financial Years. In case of Consortium, at least 50% of the turnover criteria shall be met by the Partner In charge and the remaining can be satisfied by the other Consortium partners. Lead member or Consortium members shall be into one of the following specific business areas. Specific Business Areas <ul style="list-style-type: none"> • ICT Infrastructure • Telecom Infrastructure • IT System Integration Services 		

S. No.	Parameters	Credential of applicant	Remarks (Qualified / Not Qualified)
3	Company Financials	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (Partner In charge in case of consortium) shall have minimum net-worth of INR 100 Crores as per the last audited Financial Year.		
4	Local Presence	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (Partner In charge in case of consortium) shall have an office in Bhubaneswar or shall furnish an undertaking at the time of bid submission that the Bidder shall establish an office in Bhubaneswar within sixty days of signing the Contract. The office shall be maintained during the entire duration of the Contract.		
5	Certifications	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member of consortium) shall have any one of the following Certifications valid at the time of Bidding: <ul style="list-style-type: none"> • ISO 9001:2015 • ISO 20000:2011 for IT Service Management or equivalent certification • ISO 27001:2013 for Information Security Management System or equivalent certification 		
6	Company Standing	(provide details in brief and reference page number from the proposal for evidences)	
	As on date of submission of the proposal, the Bidder (all members of the consortium as applicable) shall not be blacklisted by any any State / Central Government Department or Central /State PSUs.		

S. No.	Parameters	Credential of applicant	Remarks (Qualified / Not Qualified)
7	ICOMC	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Operations Centre/Command and Control Centre integrating at least three (3) different city/campus-wide applications/sensors at the command and control centre for a city wide / campus wide deployment having a minimum value of INR 10 crores per project (excluding civil works) during last seven (7) years.		
8	ITMS	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Integrated Traffic Management System integrating at least two (2) different components from the below list on a single application having a minimum value of INR 7 crores per project (excluding civil works) during last seven (7) years. Components: 1. Red Light Violation Detection Systems 2. Automatic Traffic Counters & Classifiers 3. Dynamic Message Signs 4. Public Address (PA) System		
9	Transit ITS	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder shall have experience on at least two (2) AVL projects for intra-city public transit system with a fleet of at least 50 vehicles (e.g. Buses, LRT, Tram) wherein the bidder shall have provided AVL system software and		

S. No.	Parameters	Credential of applicant	Remarks (Qualified / Not Qualified)
	hardware to monitor, manage and control transit operations. In addition, the bidder should have integrated the AVL system with the Passenger Information sub-system to provide route and ETA (expected travel arrival) to passengers. The AVL projects should have been commissioned within the past seven (7) years from the date of submission of the bid and should have been in commercial operations for at least one year after successful system acceptance.		
10	ICT - OFC	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of Outside Plant Fibre Optic Passive Infrastructure of at least 200 km or Active infrastructure with at least 100 nodes per project having a minimum value of INR 10 crores per project during last seven (7) years.		
11	ICT – Wi-Fi	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have experience of implementation and operations of at least two (2) City wide / campus wide Wi-Fi Projects consisting of over 75 Access Points per project during last seven (7) years.		
12	ERP	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of ERP system including finance, HR & payroll, and maintenance		

S. No.	Parameters	Credential of applicant	Remarks (Qualified / Not Qualified)
	& asset management modules (with at least 2 of these modules) having a minimum value of INR 10 crores per project during last seven (7) years.		
13	E-Governance	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation/integration and support of citizen centric e-Governance applications integrating at least four (4) different citizen services (excluding CCTV system) having a minimum value of INR 5 crores per project during last seven (7) years.		
14	Parking	(provide details in brief and reference page number from the proposal for evidences)	
	The Bidder (any member in case of consortium) shall have successfully executed at least two (2) projects related to implementation of a parking management platform consisting of at least three Parking Lots* or at least 150 parking bays in a single Parking Lot during last seven (7) years. <i>*Parking Lot – Facility comprising of more than 50 Equivalent Car Spaces having</i> 1) <i>entry/ exit controlled through automated/ semi-automated gates;</i> 2) <i>Parking management system for occupancy tracking and information dissemination.</i>		

Appendix 24

Bidder's Technical Proposal : Self-Evaluation Checklist

S. No.	Parameters	Credential of applicant	Maximum Allotted Score	Score (Marks)
1	Company Profile		10	
1.1	Financial Capability - Bidder/Consortium's average annual turnover over the last three (3) Financial Years Specific Business Areas <ul style="list-style-type: none"> • ICT Infrastructure • Telecom Infrastructure • System Integration Services Annual Turnover: <ol style="list-style-type: none"> 1) >1000 and ≤ 1200 Crores : 3 Marks 2) >1200 and ≤ 1500 Crores : 5 Marks 3) >1500 Crores : 7 Marks 		7	
1.2	CMMi Certification <ol style="list-style-type: none"> 1) Level 3 : 2 marks 2) Level 5 : 3 marks 		3	
2	Project Experience		45	
2.1	Integrated Operations Centre/Command and Control Centre projects during last seven (7) years. Number of Projects: <ol style="list-style-type: none"> 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 7 Marks 3) >5 Projects: 10 Marks 		10	
2.2	Implementation of Integrated Traffic Management System projects during last seven (7) years.		7.5	

S. No.	Parameters	Credential of applicant	Maximum Allotted Score	Score (Marks)
	Components: 1) Red Light Violation Detection Systems 2) Automatic Traffic Counters & Classifiers 3) Dynamic Message Signs 4) Public Address (PA) System Number of Projects: 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks			
2.3	AVL projects for intra- city public transit system with a fleet of at least 50 vehicles within the past seven (7) years. Number of Projects: 1) 2 Projects : 3 Marks 2) >2 and ≤5 Projects : 5 Marks 3) >5 Projects: 7.5 Marks		7.5	
2.4	Implementation of Outside Plant Fibre Optic Passive Infrastructure of at least 200 km during last seven (7) years. Number of Projects: 1) 2 Projects : 1 Marks 2) >2 and ≤5 Projects : 3 Marks 3) >5 Projects: 5 Marks		5	
2.5	Implementation and operations of at least two (2) City wide / campus wide Wi-Fi Projects during last seven (7) years. Number of Projects: 1) 2 Projects : 1 Marks 2) >2 and ≤5 Projects : 3 Marks		5	

S. No.	Parameters	Credential of applicant	Maximum Allotted Score	Score (Marks)
	3) >5 Projects: 5 Marks			
2.6	<p>Implementation of a parking management platform consisting of at least three Parking Lots* or at least 150 parking bays in a single Parking Lot during last seven (7) years.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 1 Marks</p> <p>2) >2 and ≤5 Projects : 3 Marks</p> <p>3) >5 Projects: 5 Marks</p>		5	
2.7	<p>Implementation/ integration and support of ERP system including finance, HR & payroll, and maintenance & asset management modules during last seven (7) years.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 1 Marks</p> <p>2) >2 and ≤5 Projects : 2 Marks</p> <p>3) >5 Projects: 2.5 Marks</p>		2.5	
2.8	<p>Implementation/integration and support of citizen centric e-Governance applications integrating at least four (4) different citizen services during last seven (7) years.</p> <p>Number of Projects:</p> <p>1) 2 Projects : 1 Marks</p> <p>2) >2 and ≤5 Projects : 2 Marks</p> <p>3) >5 Projects: 2.5 Marks</p>		2.5	
3	Approach and Methodology including Technical Presentation		30	
3.1	Approach, Methodology, Implementation and Deployment Plan		To be evaluated by the Authority	

S. No.	Parameters	Credential of applicant	Maximum Allotted Score	Score (Marks)
3.2	Solution and Architecture		To be evaluated by the Authority	
3.3	USP and Innovation of Proposal		To be evaluated by the Authority	
4	Key Experts		15	
	Details of Key professional	Years of Experience		
4.1	Project Director		3	
4.2	Project Manager		3	
4.3	Network Architect		2	
4.4	Solution Architect		2	
4.5	ITMS Expert		2	
4.6	Integration Engineer		2	
4.7	Security Architect		1	

NOTE: - The applicants are required to self-declare the above assessment check list against which the Authority will assess the technical proposal and verify the credentials.

Sd/-
Chief Executive Officer,
BSCL