पटना स्मार्ट सिटी लिमिटेड
پٹنہ اسمارٹ سیٹی لمیٹیڈ
PATNA SMART CITY LIMITED

Patna Smart City Limited
CIN : U93000BR2017SGC036222

Letter No./ पत्रांक :3632

Date/ दिनांक :15/05/2021

CORRIGENDUM- 4

(NIT No.- 05/MD/PSCL/2021-22 dated 16.04.2021)

The prospective bidders for **"Selection of Master System Integrator for Implementation of Integrated Smart Solutions at Patna"** may take note of the changes, contained in tables (1-4) and Annexures (1-15) which is the outcome of the pre-bid meeting and the replies thereof contained in 151 pages (uploaded on the eproc).

Other terms and conditions shall remain unchanged.

Note:- वेबसाईट **http://www.eproc.bihar.gov.in** पर **Department Name** मे **Patna Smart City Limited** को **Select** करने पर ही ई–निविदा को देखा जा सकता है।

15/05/2021

Managing Director
Patna Smart City Limited

Table 1 (Technical Marking Matrix)

Activity	S.no	Criteria/Category	As per RFP	Revised As	Max Marks
Activity: - Vol 1 – 3.7 Technical Marking Matrix	**B. Project Experience (Max- 45 marks)**				**45**
	1	ICT components	The marks shall be 1 per project with maximum limit of 12 marks. However, Bidders having less than 3 projects are not eligible to bid.	The marks shall be 2 per project, with maximum limit of 12 marks. However, bidders having less than 3 project experience are not eligible to bid.	12
	2	Experience in development / implementation of Smart Elements	The marks shall be allotted 1 per project with maximum limit of 10 marks. However, Bidders having less than 3 project experience are not eligible to bid.	The marks shall be 2 per project, with maximum limit of 10 marks. However, bidders having less than 3 project experience are not eligible to bid.	10
	4 (A)	Implementation of Smart City Component	The marks shall be 1 per project with maximum limit of 12 marks. However, Bidders having less than 3 projects are not eligible to bid.	The marks shall be 2 per project, with maximum limit of 12 marks. However, bidders having less than 3 project experience are not eligible to bid.	12
	4 (B)	Integration of smart ICCC Platform	The marks shall be allotted 1 per project in Central / State / PSU with maximum limit of 11 marks. However, Bidders having less than 2 project experience are not eligible to bid.	The marks shall be 2 per project (for projects with minimum 2 sub-system integration) in Central / State / PSU, with maximum limit of 10 marks. However, bidders having less than 2 project experience are not eligible to bid. One **additional mark** will, however, be provided for project with minimum 3 sub-systems integration.	11
	E. OEM Selection	1) Command Control Platform	OEM with total deployments 3 deployment = 3 Marks 2 deployment = 2 Marks 1 deployment = 1 Mark 0 deployment = Not Eligible	Marks for OEM deployment shall be as follows: 7 or more deployment = 3 marks 5-6 deployment = 2 marks 3-4 deployment = 1 mark Less than 3 deployment shall not be eligible to bid.	3

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Table 2 (Project Implementation Schedule and Deliverables)

Activity	As per RFP				Revised As		
Activity: - Vol 2 – (9) Proposed Project Implementation Schedule and Deliverables	**T = 14 days from Issue of Letter of Award (LOA) of Contract or signing of contract, whichever is earlier.**				**T = 14 days from Issue of Letter of Award (LOA) of Contract or Signing of Contract, whichever is earlier.**		
	S. No.	**Milestones**	**Deliverables**	**Timelines (in months)**	**Milestones**	**Deliverables**	**Timelines (in months)**
	1	**Project Execution & Implementation Phase**		**T + 15 months**	**Project Execution & Implementation Phase**		**T + 15 months**
	1.1	**Project Inception Report**		T + 1 month	**Project Inception Report**		T + **2 months**
	1.2	**Requirement Study**		T + 2 months	**Requirement Study**		T + **3 months**
	1.3	**Phase I: Go-Live**		T + 5 months	**Phase I: Go-Live**		T + **8 months**
	1.4	**Phase II: Go-Live** Network Connectivity for at least 1000 Cameras, Installation & Commissioning of JB, Poles, Switches, UPS in the Field for Cameras etc.		T+7 Months	**Phase II: Go-Live** Network Connectivity for **at least 500** Cameras, Installation & Commissioning of JB, Poles, Switches, UPS in the Field for Cameras etc.		T+**11 months**
	1.5	**Phase III: Go-Live** Network Connectivity for at least 1000 Cameras, Installation & Commissioning of JB, Poles, Switches, UPS in the Field for Cameras etc.		T + 12 months	**Phase III: Go-Live** Network Connectivity for **remaining** Cameras, Installation & Commissioning of JB, Poles, Switches, UPS in the Field for Cameras etc.		T + **14 months**
	1.6	**Phase IV: Integration & Project Final Go-Live**		**T + 15 months**	**Phase IV: Integration & Project Final Go-Live**		**T + 15 months**

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Table 3 (Payment Schedule)

Activity	As per RFP				Revised as			
		Milestone	Timeline	Payment		Milestone	Timeline	Payment
Activity: - Vol 2 – (9) Project Implementation Schedule – Payment Terms	**Capex**				**Capex**			
	1st	Delivery of Hardware/ Software	T + 2 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 10% of the Services items	1st	**Project Inception**	T + 2 Months	5% of Value of Capex Cost of Complete Project against Submission of Project Inception Report - Detailed Site Survey Report including infrastructure requirement analysis, hardware deployment plan Quality Management Plan, Resource Deployment Plan, Change Management & Exit Management Plan and Submission of Project Plan.
	2nd	Phase I: Go Live	T+ 5 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 20% of the services	2nd	**Phase I: Go Live**	T + 8 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. •20% of the services items. • 10% of the Phase I Go-Live against submission of equivalent amount of Bank

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Activity	As per RFP				Revised as			
				items • 10% of the Phase I Go-Live				Guarantee **OR** Remaining of Capex of Phase 1 against submission of equivalent amount of Bank Guarantee
	3rd	Phase II: Go Live	T+ 7 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 20% of the services items • 10% of the Phase II Go-Live	3rd	**Phase II: Go Live**	T + 11 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 30% of the services items • 10% of the Phase II Go-Live against submission of equivalent amount of Bank Guarantee OR Remaining of Capex of Phase II against submission of equivalent amount of Bank Guarantee
	4th	Phase III: Go Live	T+12 Months	• 50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 20% of the services items	4th	**Phase III: Go Live:**	T + 14 Months	•50% of Value of Capex of supplied items (Hardware & Software) on Pro-rata basis. • 30% of Value of Capex of supplied items after installation of Hardware & Software on Pro-rata basis. • 30% of the services items

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Activity	As per RFP				Revised as			
				• 10% of the Phase III Go-Live				
	5th	Phase IV: Integration & Project Final Go-Live	T1 = T + 15 months	• Value of Capex of supplied items (Hardware & Software) and installation in final Go-Live on pro-rata basis. • Remaining of Capex of all the phases	5th	**Phase IV: Integration & Project Final Go-Live:**	T1 = T + 15 months	• Remaining of Capex of all Phases
	OPEX				**OPEX**			
	1	Project Operations & Maintenance phase for a period of 60 months from the date of Final Go Live	T1 + 60 Months	OPEX will be paid in twenty (20) equal quarterly instalments spread across 5 years Post Final Go-Live. However, recurring cost of Electricity shall be paid on actuals during Implementation and O&M phase		Project Operations & Maintenance phase for a period of 60 months from the date of Final Go Live	T1 + 60 Months	OPEX will be paid in twenty (20) equal quarterly instalments spread across 5 years, post Final Go-Live. However, recurring cost of Electricity shall be paid on actuals during Implementation and O&M phases

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Table 4: MISCELLANEOUS POINTS (also refer to the foot notes to the Table giving details of Addendums & other related Corrigenda attached herein)

S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
1	1	19	2.8 Earnest Money Deposit (EMD)	EMD shall be paid at the time of submission of bid through a Bank Guarantee. No exemption for submitting the EMD will be given to any agency. Bid security in any other form will not be entertained	EMD shall be paid at the time of submission of bid through unconditional Bank Guarantee (format provided as **Annexure-15** to Corrigendum-4), DD of Scheduled Bank; Post Office Term Deposit/ FD/ NSC to be pledged in favour of Managing Director, Patna Smart City Ltd, payable at Patna. The EMD validity period shall be the same as the Bid validity period of 180 days
2	1	20	2.8 Earnest Money Deposit (EMD), Sub-Clause (b)	EMD will be forfeited if a bidder is disqualified in accordance with Clause 2;	EMD will be forfeited if a bidder is disqualified in accordance with Clause 2.25 of RFP.
3	1	31	2.28 (a) Quality Standards and pre-eligibility OEM Criteria:	All quoted OEM should have quality standard certifications like ISO 9001-2008/2015, ISO 14001, ISO 27001, wherever applicable to ensure only quality OEM participation, as on date of RFP release	All quoted OEM should have quality standard certifications like ISO 9001-2008/2015, ISO 14001, ISO 27001 or other standard certifications, wherever applicable to ensure only quality OEM participation, as on date of RFP release.
4	1	31	2.28 Quality Standards and pre-eligibility OEM Criteria:	g) Each of the proposed OEMs should have existing capability and infrastructure to provide 24x7x365 technical support with Indian Toll or Toll-Free call-in numbers.	g) Each of the proposed OEMs should have existing capability and infrastructure to provide 24x7x365 technical support with Indian Toll or Toll-Free call-in numbers. However, the technical support through authorized service providers will also be permitted.

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
5	1	35	3.5 Pre-Qualification Criteria	The Lead Bidder shall have an Average Annual Turnover of INR 200 Crores during three (3) Financial Years (2017-18, 2018-19 & 2019-20). In case of Consortium, at least 60% of the turnover criteria shall be met by the Lead Bidder and the remaining shall be fulfilled by the other Consortium partners, however none of them should have less than 20% contribution.	The Lead Bidder shall have an Average Annual Turnover of INR 200 Crores during three (3) Financial Years (2017-18, 2018-19 & 2019-20). In case of Consortium, at least 60% of the turnover criteria shall be met by the Lead Bidder and the remaining shall be fulfilled by the other Consortium partners, however none of them should have less than 10% contribution.
6	1	38	3.5 Pre-Qualification Criteria	SR No.(v.) OEM should have ISO certifications: ISO 9001; ISO 14000 & OHSAS 18001;2007/ISO 45001	SR No.(v) OEM should have ISO certifications: ISO 9001; ISO 14000 **or** OHSAS 18001;2007/ ISO 45001
7	1	38	3.5 Pre-Qualification Criteria	OEMs of camera VMS, ICCC, AI based Video analytics platform, FRS, ANPR should have presence in India for last 5 years on the bid issuance date.	OEMs of camera VMS, ICCC, AI based Video analytics platform, FRS, ANPR should have presence in India for last 3 years on the bid issuance date.
8	1	38	3.5 Pre-Qualification Criteria	(Additional Criteria)	The OEM should have implemented minimum 3 projects of minimum 200 lanes operating with all applications as required in this project like ANPR, RLVD, SVD, No-Helmet & Triple Riding violations. The OEM should have quality certification ISO 9001:2015, ISO 27001 & CMMI Level 3.
9	1	38	3.5 Pre-Qualification Criteria	OEM should have a minimum cumulative turnover of Rs. 200 Crores in last 02 financial years from the date of opening of tender.	OEM should have a minimum cumulative turnover of Rs. 50 Crores in last 02 financial years 2018-19 and 2019-20.
10	1	39	3.5 Pre-Qualification Criteria	OEM of ICCC should have Installation base of at least 05 Safe City Projects/ Smart Cities in India or globally during the last 05 years	OEM of ICCC should have Installation base of at least 03 Safe City Projects/ Smart Cities in India or globally during the last 05 years.
11	1	39	3.5 Pre-Qualification Criteria	OEM of server should be validated with offered ICCC and VMS software with minimum one year of existence	**This Pre-Qualification Criteria stands deleted**
12		40	3.9. Integrated City Operation Platform	The system shall support Android, IOS and Windows Mobile platform,	This clause **stands deleted**

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
13	2	67	5.1.1. Functional & Technical Requirements for ICCC Platform	The Application shall protect against potential database server failure and continue to run through standard off-the-shelf solutions.	This clause **stands deleted**
14	2	70	5.1.1. Functional & Technical Requirements for ICCC Platform	The IM MODULE shall offer the following native operational tools: a. Incident management b. Document management	*Detailed IIM Specification which covers this is contained in **Annexure-1** attached to this Corrigendum.*
15	2	78	5.1.1. Functional & Technical Requirements for ICCC Platform	The application must have single user unified interface for configurations of all the systems of Video, ANPR and Emergency response.	This clause **stands deleted**
16	2	81	5.1.2. Functional & Technical Requirements for Video Display Wall	Half Gain viewing angle: Horizontal ± 180°, Vertical ± 180°	Full Gain viewing angle: Horizontal ± 180°, Vertical ± 180°
17	2	88	5.1.10. Functional & Technical Requirements for Fixed Box/Bullet Cameras	Three Stream supportable, all stream should be H.265	Three streams with Dual H.265/ Dual H.264/ third stream on H.264/H.265/ MJPEG
18	2	88	5.1.9. Functional & Technical Requirements for CTI/PBX System	The entire solution (IP PBX, its hardware, IP Phones, Voice Gateway, recording, headsets, Citizen automated center, etc.) should preferably be from a single OEM	The entire solution (IP PBX, its hardware, IP Phones, Voice Gateway, recording, headsets, Citizen automated center, etc.) may or may not be from a single OEM.
19	2	89	Functional & Technical Requirements for Fixed Box/Bullet Cameras	Frame Rate and Resolution: - Minimum 3 streams should be configurable at 1920 X 1080 @ 25 fps simultaneously	All streams (Except Primary Stream) shall be user configurable at FHD Resolution, 720p and Lower resolution. The Primary Stream shall be set to Full Native resolution of the camera.

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
20	2	89	5.1.10. Functional & Technical Requirements for Fixed Box/Bullet Cameras	Image Setting: Saturation, Brightness, Contrast, Sharpness, Hue adjustable	Image Setting: Saturation, Brightness, Contrast, Sharpness/Hue adjustable.
21	2	92	5.1.12. Functional & Technical Requirements for ICCC Interiors	Wall Panelling and Ceiling must be seismically tested & Wall Panelling and Ceiling tiles must be Class A fire rated certified for surface burning characteristics.	This clause **stands deleted**
22		92	5.1.12. Functional & Technical Requirements for ICCC Interiors	It must be safe, and the components used should not PROVOKE FIRE. So, ASTM E84 (Standard Test Method for Surface Burning Characteristics of Building Materials) certified materials to be used for wall cladding, flooring, panelling, partitions and ceilings. Safety of User & control room equipment is a high concern area therefore ceiling, panelling, partition and desk must be seismically tested and qualified. The test must be carried out by authorized government agency and certificate to be submitted.	It must be safe, and the components used should not PROVOKE FIRE. So, ASTM E84 (Standard Test Method for Surface Burning Characteristics of Building Materials) certified materials to be used in Control Room.
23	2	93	5.1.10. Functional & Technical Requirements for Fixed Box/Bullet Cameras	UL Certificate/Undertaking on 11064 standards on Load bearing capacity of Panelling - Panelling structure shall have load carrying capacity of 300 Kg to hold any display unit on. UL Certificate/ISO 11064 Norms undertaking need to be enclosed along with the bid.	This clause **stands deleted**
24	2	94	5.1.12. Functional & Technical Requirements for ICCC Interiors	All desired certificates or undertaking to be obtained from UL or Intertek or 11064 standard or any Indian Government owned Research / Testing Institute.	This clause **stands deleted**
25	2	100	5.2.1.1. Functional & Technical	Operating temperature of 0°C to 45°C	Operating Temperature of -10°C to 50°C minimum.

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
			Requirements for Core Router		
26	2	104	5.2.1.4. Functional & Technical Requirements for WAF	Device should be able inspect HTTP and HTTPS traffic on TCP port 80 & 443.	Device should be able inspect HTTP and HTTPS traffic on TCP port 80 & 443.The proposed solution should have capability of BOT detection and Protection beyond signatures and reputation to accurately detect malicious and benign bots using client behavioural analysis, server performance monitoring, and escalating JavaScript and CAPTCHA challenges.
27	2	105	Functional & Technical Requirements for WAF	Should be able to detect when an attacker is attempting to request files with suspicious extensions, prefixes and tokens.	WAF should be able to detect when an attacker is attempting to request files with suspicious extensions, prefixes and tokens and should support inbuilt capability to protect against the mobile/ tablet application-based attacks through Anti-Bot Mobile SDK which whitelist establish trust based on an embedded software package within the application code and corresponding cookie verification to protect application against attacks generated from mobile.
28	2	111	5.2.1.6. Functional & Technical Requirements for DLP	Support centralized administration. Ability to support network, storage and endpoint DLP from single console and the DLP should be from different than Web Security proxy solution.	Support centralized administration. Ability to support network, storage and endpoint DLP from single console.
29	2	111	5.2.1.6. Functional & Technical Requirements for DLP	The solution should be able to uniquely tag each classified document. The solution should be able to track initial classification and reclassification events at both document and central logging level. The solution should trigger classification for document on Save, Save As, print etc. and should be configurable using a management mechanism	The solution should be able to uniquely tag each classified document. The solution should be able to track initial classification and reclassification events at both document and central logging level.

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
30	2	111	5.2.1.3. Functional & Technical Requirements for Data Centre Firewall Clause 5	Support of 30,00,000 or more concurrent connections.	Support of 1,50,00,000 or more concurrent connections with AVC/App-id enabled.
31		111	5.2.1.6. Functional & Technical Requirements for DLP	The firewall should support a minimum of 12x 1G Copper Ethernet interfaces and 6x10G interface and 2x40 G Interface for future	The firewall should support a minimum of 8*1G and 8x 10G SFP+ interfaces from Day 1 and 4x40 G Interface for future.
32	2	112	5.2.1.7. Functional & Technical Requirements for DC Core Switch	It shall support 40 Gb E port in future without any hardware upgrade	Switch shall support 100 GbE port in future without any hardware upgrade.
33	2	112	5.2.1.7. Functional & Technical Requirements for DC Core Switch	Redundant/Load-sharing power supplies with N+N power redundancy	Redundant /Load-sharing power supplies with N+N or 1+1 power redundancy
34	2	113	5.2.1.7. Functional & Technical Requirements for DC Core Switch	The connected servers or switches should be attached using standard LACP for automatic load balancing and high availability.	The connected servers or switches should be attached using standard LACP or equivalent for automatic load balancing and high availability
35	2	138	5.2.1.17. Functional & Technical Requirements for Backup Appliance	Proposed backup software should be in leader's quadrant of 2017 Gartner report for Enterprise Backup software and recovery solutions.	This clause **stands deleted**
36	2	144	Functional & Technical Requirements for PoE Ruggedized Switches	Housing: Metal, IP30 protection	Housing: Metal or IP30 protection.
37	2	145	5.2.1.21. Functional & Technical Requirements for Online UPS - 100 KVA	100 KVA / 100 kW, 3-Phase Input / 3-Phase Output UPS in N+N. Each Cabinet of 60kva UPS shall be expandable up to min 120kva/120kW	UPS with loaded 100KVA/KW in 120 KVA Frame

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
42	2	165	5.2.2.2. Structured Cabling	3. Certification: UL Listed and Verified	Certification: UL/CE/FCC
38	2	192	5.2.3.1. Functional Enterprise Management System		*Corrigendum related to **Functional Specifications of Enterprise Management System** is enclosed as **Annexure-6** to this Corrigendum.*
39	2	204	Functional & Technical Requirements for Centralized AV & Anti-Spam		*Corrigendum related to **Functional Specifications of Centralized AV & Anti-Spam** is enclosed as **Annexure-7** to this Corrigendum.*
40	2	231	Technical Specifications		*Detailed IIM Specification are given in **Annexure-1** attached to this Corrigendum.*
41	2	248	7.11. Functional & Technical Requirements for ANPR System	The controller shall provide a real time clock (RTC) with battery backup that set and update the time, date and day of the week from the GPS. The RTC shall have minimum of 10 years battery backup with maximum time tolerance of +/- 2 sec per day.	The controller shall provide a real time clock (RTC) with battery backup that set and update the time, date and day of the week from the GPS. The RTC shall have minimum of 10 days battery backup with maximum time tolerance of +/- 2 sec per day.
42	2	256	6.1.1.1. Traffic Signal Controller	*Additional Clause*	Proposed solution should meet 100% functional requirement of the project. Video based sensor specifications shall supersede the specifications of radar-based sensor specs (wherever applicable)
43	2	260	Automatic Number Plate Recognition (ANPR) System	ANPR System should function in centralized architecture on GPU based servers in Data Center.	ITMS System should function in LPU / GPU Server based distributed / Centralized architecture to meet the functional requirements as outlined in the RFP without any degradation in system performance ensuring NO false alerts of traffic violations.
44	2	261	Traffic Violations and Enforcement System	The system must have in-built tool to facilitate the user to compose detail evidence by stitching video clips from any IP camera in the junction (including but not limited to the red-light violation detection camera, evidence camera), and any other	This clause **stands deleted**

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
				surveillance cameras in the vicinity of the spot of incidence.	
45	2	281	7.5. Functional & Technical Requirements for Facial Recognition System	Integration with any sensor	This clause **stands deleted**
46	2	293	7.7. Picture Intelligence Unit-Functional Requirement & Technical specification	Three Stream supportable, all stream should be H.265	Three streams with Dual H.265/ Dual H.264/ third stream on H.264/H.265/ MJPEG
47	2	293	7.9. Functional & Technical Requirements for Outdoor Fixed Cameras/Bullet/Dome (HD)	**Lens:** Motorised Lens (5 mm to 50 mm / 12 mm to 40 mm or better) or as per field requirement to achieve the required FoV	**Lens**: External Varifocal Lens for Box Camera (5 mm to 50 mm) / For Dome & Bullet Motorized (2.8 - 12 mm) or as per field requirement to achieve the required FoV
48	2	294	7.10. Functional & Technical Requirements for PAN, Tilt & Zoom (PTZ) Camera	SR No (3) Sensor-1/2.8" Progressive scan CMOS	SR No (3) Sensor-1/2.8 / 1/3 Progressive scan CMOS
49	2	295	7.10. Functional & Technical Requirements for PAN, Tilt & Zoom (PTZ) Camera	Privacy Mask - Min 8 privacy zones	Minimum 4 Privacy masks shall be supported by the Camera
50	2	295	7.10. Functional & Technical	Alarm: 2 Input / 1 Output	Alarm :1 Input / 1 Output

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
			Requirements for PAN, Tilt & Zoom (PTZ) Camera		
51	2	299	7.11. Functional & Technical Requirements for ANPR System	SR No (1) Camera- 5–50mm varifocal lens, IR corrected or as per site requirement to meet the desired functional and technical specifications.	SR No (1) Camera- 12-40 mm /5-50 mm varifocal lens, IR corrected or as per site requirement to meet the desired functional and technical specifications.
52	2	300	7.12. Functional & Technical Requirements RLVD System	OCR accuracy shall be at least 90% during day time and 85% during night time.	OCR accuracy shall be at least 85% during day time and night time for Standard number plates with Straight English Roman Fonts having proper visibility and clean/readable number plate.
53	2	300	7.12. Functional & Technical Requirements RLVD System	Context Image: Multiple stitched images of the same is possible.	This clause **stands deleted**
54	2	301	7.12. Functional & Technical Requirements RLVD System	Third party (authorized company to do so) speed test reports can be submitted to client. On field detailed speed test reports for up to 100 km/hr with various speed limits. Alternatively, the system should be approved and homologated by some traffic or infrastructure department who directly over sees fine generation. OR A certificate/test report from reputed research institutes accredited and recognized by Govt of India is acceptable. Certificate on the accuracy from any IPS officer for ±2 kmph and running satisfactorily in Indian city for at least a year is a must.	Proposed Speed Violation Detection system with RLVD and separately asked Speed Detection System should have an accuracy of 150 kmph +/-5 kmph, tested & certified for speed accuracy from Indian Government agencies under Central Motor Vehicle Rule (CMVR) 126 like ARAI, ICAT, VRDE, GARC, etc

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
55	2	301	7.12. Functional & Technical Requirements RLVD System	Strong encryption on data during local storage and data transfer to back office	Strong encryption on data during local storage and data transfer to back office. Test report from CERT-IN empanelled agency for central as well local application should be submitted along the bid.
56	2	367	10.18. Annexure 108: Analytics Use Cases Required with the Type of Locations	Vehicle Related: 150	The related Corrigendum related to Vehicle Related use cases are enclosed as '**Annexure-3: Analytical Use Cases Required with the Type of Cases'** to this Corrigendum.
57	2	161	5.2.1.25. Functional & Technical Requirements for HIPS & NIPS (Specification of HIPS S.No. 18)	Should automatically submit unknown files/suspicious object samples with onPremise sandbox solution as per RFP specifications for simulation and create IOC's on real time basis as per sandboxing analysis and revert back to server security for mitigation	Should automatically submit unknown files/suspicious object samples with onPremise sandbox solution as per RFP specifications for simulation and create IOC's on real time basis as per sandboxing analysis and revert back to server security for mitigation; and sandboxing solution should able to support win 7, win 8, win 2008, win 2012 and 2016 at least and solution should protect from Mac, Linux and mobile malwares.
58	2	162	5.2.1.25. Functional & Technical Requirements for HIPS & NIPS (Specification of NIPS S.No. 3)	The NIPS must support 115,000,000 concurrent sessions and 6,50,000 new connections per second with latency should be < 400 Micro.	The NIPS must support 10,00,00,000 concurrent sessions and 6,00,000 new connections per second with latency should be < 400 Micro.
59	2	102	5.2.1.3. Functional & Technical Requirements for Data Centre Firewall (A. Security Features S. No.3)	Should be quad core or higher processor-based solution for faster processing. The firewall should support at least 10 Security Processing Cores. The processor should not be proprietary ASIC based.	Should be quad core or higher processor-based solution for faster processing. The processor should not be proprietary ASIC based.
60	2	103	5.2.1.3. Functional & Technical	Should have built-in storage of at least 900GB, 1 console Port and 1 USB interface	Should have built-in storage of at least 400GB, 1 console Port and 1 USB interface

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S No	RFP Volume	RFP Page No.	Sub-Section Number	As per RFP	Revised As
			Requirements for Data Centre Firewall (B. Hardware and Interface Requirements S. No.2)		
61	2	102	5.2.1.3. Functional & Technical Requirements for Data Centre Firewall (A. Security Features S. No.13)	Should have ability to prevent potentially malicious files from entering the network. Should have support for files sent to the proposed on-premise sandbox for analysis to be held at the gateway until a verdict is Should have continuously updated database of tens of millions of threat signatures residing in the sandbox servers and referenced to augment the capabilities of the onboard signature database, providing deep packet inspection with extensive coverage of threats. Should support min 20K DPI signatures, 60 million Cloud AV signatures and 3500+ Application Signatures from day 1. determined.	Should have ability to prevent potentially malicious files from entering the network. Should have support for files sent to the proposed on-premise sandbox for analysis to be held at the gateway until a verdict is Should have continuously updated database of tens of millions of threat signatures residing in the sandbox servers and referenced to augment the capabilities of the onboard signature database, providing deep packet inspection with extensive coverage of threats. Should support min 10K DPI signatures, and 3500+ Application Signatures from day 1. determined.
62	1	52	4.3 Performance Bank Guarantee (PBG)	Within fifteen (15) working days of issue of LOI/LOA, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to the PSCL in accordance with Ministry of Finance, Department of Expenditure, (Procurement Policy Division) OM No. F.9/4/2020/PPD Dated on 12.11.2020, wherein the Performance Security has been brought down to 3% of the value of the Contract price. This PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in Section 9 - Annexure 5 (a), payable on demand, for the due performance and fulfilment of the contract	**Performance Security:** Within fifteen (15) working days from the date of issue of LOA/LOI, the successful bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to PSCL. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in the RFP payable on demand, for the due performance and fulfillment of the contract by the Bidder. Performance Bank Guarantee shall be 2% of the awarded value. **Security Deposit:** The contractor whose tender is accepted, will be required to furnish Performance

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				by the bidder. This Performance Bank Guarantee shall be for an amount equivalent to 3% of total contract value. PBG shall be invoked by PSCL, in the event the Bidder: a) fails to meet the overall condition as mentioned in RFP Volume II or any changes mutually agreed between the parties, b) fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of PSCL as per conditions and scope mentioned in the RFP c) Misrepresents facts/information submitted to PSCL	Guarantee of 2 (two percent) including Earnest Money of the tendered amount within specified period. This guarantee shall be in the form of Govt. Securities or Fixed Deposit Receipt of any scheduled bank, guarantee bonds of any scheduled bank or State Bank of India or Bank guarantee from any schedule bank in the State for works of more than one crore. The contractor whose tender is accepted, will also be required to furnish by way of Security Deposit for the fulfilment of his contract, an amount equal to 8 % of the tendered value of the work. The Security Deposit will be collected by deductions from the running bills of the contractor. The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit Government at the time of making any payment to him for work done under the contract to deduct a sum at 8% (eight percent) from the gross amount of each bill till full amount of security deposit 10% (ten percent) of agreement value or value of work (whichever is higher) is reached. If value of work exceeds the agreement value, security deposit (10%) will be recovered for the exceeded work. All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which

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					may be due to or may become due to the contractor by Government on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favor of the Engineer-in-Charge, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above and the earnest money at the time of tenders will be treated a part of the Security Deposit.

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Note: The bidders may take note of the following new Annexures attached to this Corrigendum which are either Addendum or related Corrigendum on topics indicated there-in:

1. Annexure-1: IIM Specifications (provided as Addendum)
2. Annexure-2: Variable Message Sign Boards (provided as Addendum)
3. Annexure 3: Analytics Use Cases required with the Type of Locations (contains related Corrigendum)
4. Annexure 4: Cots Enterprise GIS Platform for Web GIS with Geo Analytics Software Specification (provided as Addendum)
5. Annexure-5: Functional & Technical Requirement for SIEM (contains related Corrigendum)
6. Annexure-6: Functional Requirements for Enterprise Management System (contains related Corrigendum)
7. Annexure-7: Functional & Technical Requirements for Centralized AV & Anti-Spam (contains related Corrigendum)
8. Annexure-8: Anti-Advance Persistent Threat Specifications (provided as Addendum)
9. Annexure-9: Reimbursement to MSI For Various Expenses Incurred During the Period of Project Execution, Go-Live and O&M (provided as Addendum)
10. Annexure-10: Bill Board for Poles (provided as Addendum)
11. Annexure-11: Manufacturers' Authorization Form (provided as Addendum)
12. Annexure-12: Pre-Qualification Bid Checklist (contains related Corrigendum)
13. Annexure-13: Technical Bid Checklist (contains related Corrigendum)
14. Annexure-14: Certificate Regarding Restriction on Procurement from a Bidder which shares Land Border with India (provided as Addendum)
15. Annexure-15: Unconditional Bank Guarantee for Earnest Money Deposit (provided as Addendum)

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ANNEXURE-1

IIM SPECIFICATIONS (As Addendum)

Annexure w. r. t. IIM Specification	
The Intelligent Infrastructure Management/ Data Centre Infrastructure Management solution offered must be ready to meet the following critical requirements (which are minimum technical requirements):	
1	The solution should be capable of tracking device history for networked end devices including the following forensics details:
	· When device was first connected to the network
	· If and when it was removed from the network
	· If and when it was moved from one physical location to another
	· How long it has been active or inactive.
	· Asset, configuration and change management
2	The solution should be fully complying with ANSI/TIA 606-B (including B-1) and ISO/IEC 18598 standards.
3	The solution should be based on a designated IIM Hardware which deliver physical connectivity information to the management software
4	The Physical Layer Management solution should be strictly based on the physical detection of patch cord connectivity.
5	The solution should provide the capability of electronically tagging any network equipment such as network printer, servers, IP Camera, desktop, switches, modems, etc.
6	The system should be robust and should report the patching connectivity information as complete **ONLY** when the two ends of the same patch cords are connected and should not get confused by any subsequent insertion of any other patch cord.
7	Patch cord removal from Panel / Switch side should be monitored and alerts like email/SMS should be sent even if one end of the patch cords removed.
8	No need for manual acknowledges at the patch panel port if a cord has been inserted on the switch side. (Manual acknowledge means: push button adjacent to a specific port).
9	The solution should provide the technician an easy method of patching with- out imposing any specific sequence rules/order for the patching, thus allowing the technician to carry patching work orders as in the case of a non-intelligent solution including physical location.
10	The solution should provide the capability to automatically monitor 24/7 of remote sites network links and verify network availability all the time. In case of a link brake, the solution should send a real time event & alarm.
11	The solution should provide the capability to automatically connecting to a remote DB sites as well as to a local DB
12	The solution should provide the capability to automatically monitor 24/7 of a major network link verifying network availability all the time. In case of secure link brake, the solution should send a real time event & alarm.
13	The solution shall be able to maintain a record of the rack capacity and utilization including:
	· Total rack space and occupied rack space
	· Total number of available IIM panel ports
	· Total number of non-IIM panel ports
	· Total number of switch ports and “switch utilization”

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	· Total number of PDU power outlets (if applicable)
	· Total number of env. Sensors (if applicable)
14	The solution should be able to monitor on-line of patch cord removal from either side:
	· Between intelligent panels
	· Between intelligent panel to active device like Switch.
15	The solution should have the following visual indications:
	· LED above each port - indicating patching rough, parching work order pending and correcting bilking mode in case of patching mistake.
	· LED per each patching frame – indicating panel status.
	· Sound – in case of patching or removal of a cord between either intelligent panels or between intelligent panels to a switch.
	· Rack indicator – the solution should support rack indicator (beacon) in order to guide the work order executer to the specific work order cabinets/racks.
16	All Changes of the telecommunications infrastructure facilities and networked devices should be maintained within the IIM systems to keep track of current activities and completed activities including:
	· Real time tracking of authorized and unauthorized patching activities
	· Generation of move, add, change work orders
	· Providing means for retrieval of work orders at racks with IIM equipment using port LEDs, tablet
	· Automated tracking of work order completion
	· Scheduled work order and work order history
	· Monitoring and alerting on connected information
17	The solution should provide the capability of monitoring port availability status on network equipment including switches, patch panels and telecommunication outlets should be monitored in real time for the purpose of detecting unexpected or unauthorized activities.
18	The solution should be able to communicate and exchange data with other system using of standard protocols and database formats (e.g., SNMP, SQL).
19	The solution should provide the capability of monitoring any Physical link port type including copper and fibre
20	The solution should be ready to integrate to IP power strips to get information of the power being consumed in the racks in real time and use this information for provisioning of servers inside any communication room.
21	The solution should be ready to connect to devices which control various parameters in the Data centre / Hub room environment (temperature sensors, humidity sensors, door access sensors, etc.) and provide this information to the software in real time.
22	The solution should provide the capability to automatically check the possible movement of any device to a new location by verifying the network availability with any proposed setting, providing the patching information with options and creating a work order for the same. All this is to be achieved by a mere drag and drop operation.
23	Based on the information of network provisioning, space available in the racks and the real time power being consumed, the solution should be able to automatically provision any new device in a data center and provide the required work order. All this is to be achieved by a mere drag and drop operation.

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24	The solution should be capable to handle multiple provisioning operations to reduce the time of such operations drastically.
25	The solution should offer as a built-in feature the possibility to report any unauthorized MAC outside the white list of MACs allowed on the site.
26	The solution should be capable to block switch ports automatically on intrusion detection. This capability however should be selectable by the user depending on the critical nature of the location.
27	The solution should provide visual representation of the datacentre environment specially to view the power consumption status in the racks at one go.
28	The solution should be capable to detect IP Phones connected along with Computers.
29	The software should provide a location-based security to manage authorized /un authorized connectivity. The security should be per port /desk/room/floor basis.
30	The solution should have inbuilt dashboard which should show switch/panel port utilization.
31	The solution should be capable to detect and report about device connection and identify the associated location. This information can be used to establish whether this is an authorized connection in order to respond appropriately.
32	The solution should provide a comprehensive open-ended solution e.g., an SDK (software development Kit) and not just the capability to send SNMP traps to integrate the solution with any 3rd party software or in-house software.
33	Integration can be done via: SNMP traps, XML, database sharing and web services.
34	The solution should be provided with an unlimited user/viewer license. This is important to enable use by multiple users/viewers.
35	The IIM solution should include out of the box support on environment sensors like temperature, humidity and others.
36	The info of these sensors must be shown in the client application screen and saved in the system database.
37	The scanning devices should automatically detect the panel type; the scanning devices are connected to, and should also automatically detect the connectivity between the scanning devices. This is necessary for automatic & error free real time detection & installation of hardware components in the software.
38	The solution should offer flexibility to extend the panel scanning capability to distances more than 7 feet (one rack) in order to cover more than a single rack.
39	The solution connectivity, between the different scanning appliances, should be based on RJ-45 cords.
40	Since all the upper & centre units of the rack (critical real estate space in rack) will be required to mount panels or switches to provide a hassle-free environment for their control and installation, the scanning devices would be mounted either at the top or bottom of the rack. Hence it is important that the scanning devices should carry a design such that they require minimum interaction during any work order execution and do not force any change in the rack design to enable their functioning.
41	The solution should be efficient and should not require use of multiple media for providing or verifying of the same information or carrying out a work order. Any work order execution should be achieved by means of lights without requiring any other interface. This is essential to ensure easy usage of the system.
42	It should have the ability to connect and provide data centre environment reports like power consumption in racks in real time, temperatures within racks, rack door closures, water level sensing etc.

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43	All Components Passive and active Components should be RoHS (Restriction of Certain Hazardous Substances) complied.
44	Declaration –RoHS Compliant should clearly be mentioned on datasheets of each Passive Components (Copper &Fibber).
45	There should be 20-year cabling performance warranty and Application Assurance
46	The solution must offer RJ-45, LC and MPO/MTP intelligent panels and cords
47	fibre cable should be Zero Water peak
48	SM fibre cable should compatible to banded insensitive compliant according to the ITU-T G.657 A Standard
49	MM Fibre cable should compatible to banded insensitive compliant according to the ANSI/TIA 568C.3 Standard
50	The solution should support tablet/smart phone in order to present the work orders.
51	**Intelligent Modular Copper Frames**
51.1	The Copper Frame should be a high-performance, cost-effective panel.
51.2	The Copper Frame should support RJ-45 modular jacks for simple and modular architecture.
51.3	The Copper Frame should support mixed cross-connect and interconnect network topologies.
51.4	The Copper Frame should be a managed frame that supports up to 24 RJ-45 modular jacks.
51.5	The Copper Frame should have a single LED above each port
51.6	The Copper Frame should include a multi-mode LED and push button to assist technicians in monitoring, configuring, and troubleshooting
51.7	By incorporating a unique ID device within the frame and working together with autosense topology, the location of each frame within the network as well as its position within a rack should be available at all times, even after a frame has been relocated.
51.8	The Copper Frame back panel should support a socket for the Scanning Card that commands the port LEDs and patch cords, and also enables reading of the intelligent ID devices.
52	**Copper Patch Cord**
52.1	Should be High performance CAT6A copper Patch Cords support Intelligent cross-connect and interconnect topologies.
52.2	Based high-end CAT6A STP cord, the cord supports two additional stranded wires to produce an eight-wire cord. The cord is terminated with patented RJ-45 plugs that include two conductive, external contacts.
52.3	The cross-connect topology should include two intelligent ID devices, one on each end of the patch cord, while the interconnect topology includes one intelligent ID device at the switch side
52.4	The plugs on the interconnect patch cord are fitted with a dummy latched cover that enables easy plug insertion and removal from the frame or switch.
52.5	Cords must be under testing verification program by 3rd party lab certification like: ETL/SEMKO/ Delta or 3P.
53	**Copper Interconnect Patch Cord**
53.1	Should Comprise of 8 data-wires Category6A S/FTP flexible patch cable + 2 control wires, terminated with two fully shielded RJ-45 plugs at each end with two external ID contacts
53.2	Should be Non-moulded flexible boot for enhanced life and reliability
53.3	Should Conform to ANSI/TIA-568-C.2, ISO/IEC 11801 2.1 edition and CENELEC EN50173 (2007) standards for Category 6A/CLASS EA

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53.4	Should be Backward compatible with Category 5e and 6 – UTP and STP
53.5	Should be 100% tested at the factory
53.6	Cords must be under testing verification program by 3rd party lab certification like: ETL/SEMKO/ Delta or 3P.
54	**Copper Cross Connect Patch Cord**
54.1	Should Comprise of 8-wires Category6A S/FTP flexible patch cable, terminated with two fully shielded RJ-45 plugs at each end with two external ID contacts
54.2	Should be Non-moulded flexible boot for enhanced life and reliability
54.3	Should Conform to ANSI/TIA/EIA-568-C.2, ISO/IEC 11801 2.1 edition and CENELEC EN50173 (2007) standards for Category 6A/CLASS EA
54.4	Should be 100% tested at the factory
54.5	Cords must be under testing verification program by 3rd party lab certification like: ETL/SEMKO/ Delta or 3P.
55	**Copper keystones:**
55.1	Should have 8 internal contacts only.
55.2	The solution will support C5e, C6 and C6A shielded and un-shielded keystones types.
56	**Intelligent fibre Trays (Intelligent Tray without Cassette)**
56.1	The fibre Tray supports mixed cross-connect and interconnect network topologies.
56.2	The fibre Tray should support three types of fibre patching options: LC-LC, LC-MPO, and MPO-MPO.
56.3	The fibre Tray should support both Single-Mode (SM) and Multi-Mode (MM) OM4 fibre types.
56.4	By incorporating a unique ID within the tray and two external contacts in each port in the tray, it should be possible to achieve system-wide ID polling and message routing. This allows unique monitoring, control, and maintenance of the system.
56.5	The fibre Tray should be a high-end fibre optics-managed tray that supports up to 96 LC-LC fibre strands (LC-LC and LC-MPO) along with a full management system.
56.6	To assist in monitoring, configuring, and troubleshooting, the fibre Tray should include a bi-Color LED on the tray and a single LED above each port in the cassette.
56.7	The fibre Tray should contain a push button that enables you to initiate manual port scanning for viewing system connectivity.
56.8	The Intelligent LC-LC fibre Tray supports two Scanning cards and two RJ-45 ports with keystones for connections to the Scanning Device /Analyzer ports.
56.9	Supports a simple, modular architecture with up to four cassettes; each cassette with 24 ports
56.1	Should support 96 fibres (48 duplex LC ports) in 1U format for LC, MPO, splitter/pigtail cassette installation and in mixed interconnect and cross-connect topologies
56.1	Should provide an individual LED on each port, which assists in visual monitoring and maintenance
56.1	Should provide a unique Intelligent ID to each of the four cassettes and internal PCB for system- wide identification and determination of cassette position within the chassis
56.1	The tray can support 1, 2, 3 or 4 cassettes in different location.
56.1	At any case, the fibre adapters (either LC or MPO) should not include any internal metal connectivity contacts (as part of the patching sensing). Any patching contacts must be external to these fibre adapters.
57	**Intelligent fibre LC Cassettes**
57.1	Front connection (patch cord side) should have 12 x LC duplex adapters

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57.2	Back connection (cabling side) should have 12 x LC duplex adapters
57.3	Should have one pair of LEDs for each port on the front panel (that is, one LED for each fibre).
57.4	LEDs should show the status of ports.
57.5	Should comply to EN 55022, Class B (Europe) compliant & FCC Part 15, subpart J, Class A (USA) compliant
58	**Intelligent fibre LC MPO Cassettes**
58.1	Front connection (patch cord side) should have 12 x LC duplex adapters (MM or SM)
58.2	Back connection (cabling side) should have 2 x MPO adapters
58.3	Should have One pair of LEDs for each port on the front panel (that is, one LED for each fibre).
58.4	LEDs should show the status of ports.
58.5	The port LEDs can be activated by command from the network management station.
58.6	Attenuation should not greater than 0.5 dB
58.7	Should comply to EN 55022, Class B (Europe) compliant & FCC Part 15, subpart J, Class A (USA) compliant
59	**Fibre Cords**
59.1	All Intelligent Patch Cords should support both interconnect and cross-connect topologies.
59.2	Patch cords are designed for Single-Mode and Multi-Mode applications at 10G/40G/100Gbps.
59.3	Cross-connect topology should include two Intelligent ID devices, one on each end of the patch cord. The cord should include fibre plug interface with unique ID on both ends.
59.4	Interconnect topology should include one intelligent ID device at the switch side. The cord includes fibre plug interface with two external pins on both ends
60	**Fibre Cords LC Interconnect Intelligent Patch chord**
60.1	Should be Designed for Intelligent application and as stand-alone cord
60.2	Should be Available with two fibre types – Single-Mode and Multi-Mode 50/125 OM4
60.3	Should Comply to IEC 60332-3C IEC 61034 IEC 60754
60.4	The Jumper should meet the requirements of ANSI/TIA/EIA-568-C.3
61	**Fibre Cords LC Cross Connect Intelligent Patch chord**
61.1	Should be Designed for Intelligent application and as stand-alone cord
61.2	Should be Available with two fibre types – Single-Mode and Multi-Mode 50/125 OM4
61.3	Should Comply to IEC 60332-3C IEC 61034 IEC 60754
61.4	The Jumper should meet the requirements of ANSI/TIA/EIA-568-C.3
62	**Fibre Cords MPO -MPO Cross Connect Intelligent Patch chords**
62.1	Should be Designed for Intelligent applications
62.2	Connectors should be compliant with FOCIS-5D standard
62.3	Should be Fully compatible with 40G and 100G* IEEE 802.3 applications
62.4	Should be Available in several lengths
62.5	Should comply to IEC 60332, IEC 61034, IEC 60754
62.6	The Jumper should meet the ANSI/TIA-568-C.3 requirements.
63	**Intelligent Scanning Card**
63.1	The Card should be a pluggable device that supports physical network identification on interconnect and cross-connect topologies.

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63.2	The Card should automatically detect and reads up to 24 Intelligent ID devices present on each Copper Frame or fibre Tray and on patch cords.
63.3	The Card should route commands to the port LEDs located above each panel port.
63.4	Every Card should contain unique ID information, enabling proper identification and communication on the Intelligent Infrastructure Management (IIM) network.
63.5	The Card should be connected via a socket on the back of the frame using dual mounting latches, locking it securely in place for enhanced reliability.
63.6	The Card should communicate with higher-level system components through a standard RJ-45 connector.
63.7	The Card can be added in later stages of the installation.
68	**Scanning Hardware /Scanner / Analyzer**
68.1	Should support mixed cross-connect and interconnect network topologies
68.2	Should allow ease of expansion, control, and management of an unlimited number of ports in real time.
68.3	Should support copper and fibre solutions, both individually and in a mixed configuration in the same system, with 10 Gbps and 40/100 Gbps.
68.4	Solution does not interfere with the actual network data. Therefore, its communication over the network does not cause any load on the network.
68.5	Should give LED signalling of make/break status
68.6	Should support Tablet application for work orders
68.7	Should Support Environmental Controller
68.8	Should support SDK for easy interfacing to other application
68.9	Each scanning hardware should support up to 24 Cards, with each Card capable of supporting 24 ports, resulting in a single device capable of supporting up to 576 ports.
68.1	The scanning hardware should support up to four TCP/IP ports through an internal L2 switch, saving on ports in the main switch and enabling cascading of scanning hardware to provide unlimited network expansion.
68.1	Should also support connectivity to other network IP devices such as PDUs.
68.1	The Scanning hardware should support installation in zero-U configuration for rack space optimization. in case it needed the device can be installed also in 1U configuration.
68.1	The Scanning hardware should support connections to external devices such as a tablet PC (via mini-AB USB connector) and any USB device such as a flash drive (via a host type A USB socket).
68.1	The Scanning hardware should be powered through the mains supply via a power socket on the rear, and supplies power to the Cards over the RJ-45 connector.
68.2	Scanning hardware Power Input Voltage: 100–240 VAC, 47–63 Hz and Input Current: 1–2 A
68.2	Scanning hardware Power average Consumption: 11 W
68.2	Should not include any fan.
69	**Tablet**
69.1	The tablet supports performing work orders (MACs) in an easy and user-friendly manner.
69.2	The tablet should support multi-tasking MAC at the same time and have the ability to monitor whole infrastructure network.
70	**ID Key Reader**
70.1	Should be used for Learning Mode only

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70.2	Builds the ID database of the Switch modules & ports
70.3	Should support LC duplex or RJ-45 male connectors
70.4	Should have Mini USB for tablet connection
71	**Intelligent Copper ID Key**
71.1	Intelligent ID Key that stores useful link information such as switch, rack, cable type, and revision level
71.2	Standard should be IEC 60603-7 compliant
72	**Intelligent fibre ID Key**
72.1	The Return Loss should be ≥ 55 dB (UPC)
72.2	Attenuation Tolerance should be: 0.2 dB ± 0.05
72.3	Should Comply with ANSI/TIA-568-C.3
72.4	Should comply with Flammability – UL94V0

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ANNEXURE-2
VARIABLE MESSAGE SIGN BOARDS (As Addendum)

PRE-QUALIFICATION CRITERIA

1. OEM of Outdoor LED Display shall have presence and operations in India for at least 5 years. Certificate of incorporation shall be provided.
2. OEM shall be ISO 9001:2008, ISO 14001, OHSAS 18001 & ISO 27001:1 certified – Certificates to be submitted.
3. OEM should not have been blacklisted by any State / Central Government Department or Central /State PSUs as on bid submission date. OEM Declaration to be submit along with technical bid.
4. OEM should have installed at least 150 Outdoor LED display based on SMD Technology only (DIP technology is not acceptable) with at least 11 sqm area or higher connected in single network and content displayed from central location in India for any PSU/ government. these displays should be working fine for at least 3 years – letter of performance from customer authorities to be submit along with bid
5. OEM should have its own service centre managed by their own engineer.3rd party authorized service centre are not acceptable - Proof of OEM service centre with GST details to be submit along with technical bid
6. OEM Trade name and brand name on the OEM certifications should be the same. certificate form Indian Govt agency to be submit in case of change in trade and brand name. BIS must be on OEM owned manufacturing unit address.
7. Quoted/ offered product model should be available on OEMs web site. Link of offered model – OEM website to submit along with technical bid.
8. Active LED/ LED display Brands owned by Chinese companies are not allowed to be quoted and any bid with these brands shall be rejected.
9. Offered solution should be based on Cloud solution, which should be from the same OEM as the Outdoor LED Display. Third party cloud offerings shall not be accepted. Cloud subscription for minimum three years shall be part of the offered solution. Cloud Solution from Chinese brands are not acceptable.

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Item 1: Outdoor LED Display – Pixel Pitch 10mm

Parameter	Specifications
Display Size (W x H)	2.88MX 1.92M
Pixel Pitch	10 mm or better (Lower pitch is regarded as better)
LED Configuration	RGB 3 in 1 SMD
Pixel Density	Minimum 10,000 pixels per sqm or higher
Half Gain Horizontal / Vertical Viewing Angle	H 140 dig / V 90 deg or better
Refresh Rate	>1920 Hz or better
Temp Range	-20 to +50 Degrees C or better
Grey Scale Processing	12 Bit or better
Brightness	5000 cd/m² or better
Maximum Power Consumption	850 w/sqm or lower
Dimming Capability	255 levels
Power Input	100 ~ 240 VAC
Contrast Ratio	3000:1 or better
Access for Maintenance	Rear
IP Level	Front IP65 / Rear IP54
International Safety Certifications (Mandatory to submit along with the bid)	BIS Registration (Bureau of Indian Standards) As per Standard: IS 13252(PART 1) :2010. Offered model BIS certificate should be on OEM brand and their own manufacturing unit in India.
Quality/Health & Safety/Environmental Certifications of OEM/OEM subsidiary in India (Copy to be submitted along with the bid	Quality Management System 9001:2015,
	Occupation health & Safety Management System - OHSAS 18001:2007,
	Environmental Management System 14001: 2015
OEM Criteria	1. OEM should have installed at least 150 LED display based on SMD Technology only (DIP technology is not acceptable) with 10 sqm area or bigger connected in single network and content displayed from central location in India for any PSU/ government. these displays should be working fine for at least 3 years – letter of performance from customer authorities to be submit along with bid. 2. OEM/OEM Subsidiary should be present in India for at least last 5 years with their own registered & service center managed by their own engineers. Details to be provided along with customer confirmation.
	3. OEM should have BIS certification of offered product on their own manufacturing unit details in India.
	4. OEM Indian subsidiary/Indian OEM should have also had its own service centre with at least 5 service engineers on their rolls.
Approved Brand	Barco/ Delta / Mitsubishi /Daktronics/ NEC

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Item 2: Rack Frame Power Distribution Unit

Parameter	Specifications
Front Door	2 Hinges with Rack & Aircon bolted
Wall Mount Clamp	Welded on Rack frame rear side
19" pillar front & 19" pillar rear	Bolted on rack side wall
Locking Arrangement	To be provided with a locking system
Limit Switch	The rack door to be provided with a limit switch
Earthing	Earthing studs should be provided in the rack for Earthing purposes
Cable points	Cable entry and exit points should be provided in the rack
Mounting	Should be possible to mount the rack either on a pole or on a wall with options of different mounting types
Material	GI 120 gsm thickness 1.5 mm
IP rating	IP54
AC input	380V/220V
AC Power Load Max	As per Design
Surge protection	Class C
Over temperature protection	Selectable from 30 deg to 60 deg C
Refrigerant	R134a for harsh conditions
Anti-Theft	Should be mounted in an ant-theft design
Surface treatment	Outdoor type power coating
Cooling Capacity	500W@L35/L35
Power Consumption	210W@L35/L35
Power Supply	230±15% AV 50/60 Hz
Internal Airflow	120 m^3/h
Maximum Noise Level	60dB(A)
Display Panel	Should be provided with a display panel to show parameters like cabinet temperature, indications for - cooling, running of external fans, flashing on alarm

Item 3: LED Control System

Parameter	Specifications
Control Port	RS232/ LAN
Signal Interface	1x HDMI in, 1x HDMI Out 1x Audio In, 1x Audio Output 2x USB; RJ45-POE support
Connectivity to Display	RJ45
Maximum Load Capacity	2.3 Million Pixels
Network Connectivity	Wi-Fi: 802.11 AC (2.4 GHz & 5 GHz) Ethernet: 1 Gbps
Input Voltage	100~240 VAC
Operating Temperature	5~40 Deg C
LED Control system Approved Brand	Barco/ Delta / Mitsubishi /Daktronics
Complete solution (Outdoor LED display, LED control System, management software for cloud publishing should be from same OEM/Brand for smooth integration to avoid issues at implementation stage .)	

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Item 4: Management Software with Cloud Publishing

Parameter	Specifications
Signage & Content Manager (Software & Hardware)	To be able to create playlists and send them over the network to media players or more for playout based on schedule and sequencing. This software to be loaded on suitable hardware to be supplied by the vendor.
Playlist Automation	Flexible scheduling based on day, date and time; Playlist Scheduling;
Content Distribution	Should be done using OEM cloud setup. Cloud licence should be provided for three years minimum
Content Management	Synchronize media content automatically from remote storage -Dropbox, FTP, etc.
Approved Make	Barco/ Delta / Mitsubishi /Daktronics

Item 5: Mechanical Structure for Mounting of LED Walls

Parameter	Specifications
Mounting Structure	LED wall should be mounted on Unipolar /Bipolar /customized structure. Structure should be earthed properly and provided.
Material	Should be made from mild steel and painted black along with antirust coating.

Item 6: PC

Parameter	Specifications
Operating System	WIN10
HDD	500GB
RAM	4GB
Processor	i5
Monitor (With DVI/HDMI I/P)	17"
Display Output	DVI/HDMI
Display Memory	1GB Min

Item 7: Interface Device

Parameter	Specifications
Ethernet Interface	
Number of Ports	One 8 pin RJ45
Speed	10/100 Mbps, auto MDI/MDIX
Serial Interface	
Number of Ports	One
Serial Standards	RS-232 on DB 9 connector
Serial Communication Parameters	

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Parameter	Specifications
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF
Baud rate	110 bps to 230.4 kbps
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
Software	
Network Protocols	ICMP, IPv4, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, ARP, HTTP, SMTP
Configuration Options	Web Console, Serial Console, Telnet Console, Windows Utility
Physical Characteristics	
Housing	Metal
Weight	340 g or less
Dimensions	With ears: 75.2 x 80 x 22 mm
Environmental	
Operating Temperature	0 to 55°C
Ambient Relative Humidity	5 to 95% (non-condensing)
Power Requirements	
Input Voltage	12 to 48 VDC
Input Current	128.7 mA @ 12 VDC

Item 8: Network Switch

Parameter	Specifications
Switching Capacity	1 Gbps
No. of ports	5
Power Supply	DC 5 V / 0.55 A
Casing	Plastic
Maximum Packet Forwarding Rate	148.8 kpps
802.3x flow control	Yes
Auto MDI/MDIX	Yes

Item 9: Auto Brightness Sensor

Rated voltage	5V
Operating temperature	-30℃~70℃
Operating humidity	0~99%
Brightness range	0~65535 lux
Cable	5m
Features	· Monitor the ambient brightness to achieve automatic brightness adjustment of LED display
	· Asynchronous
	· Outdoor use proofing
	· No external power supply required

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Item 10: GSM Router

Parameter	Specifications
Uplink	1*LTE module (dual SIM), 1*RJ45 FE (configurable)
LAN-RJ45	3(4) *RJ45 FE
LAN-Wi-Fi	11n 2T2R
Mgmt. Port	1*RJ12 RS232 (Console)
Log Storage	1*USB 2.0
Cellular Band[2]	LTE: 800/900/1800/2100/2300/2600 MHz, UMTS: 850/900/1900/2100 MHz, GPRS/EDGE: 850/900/1800/1900 MHz
Antenna	2*5dBi detachable ant. (Wi-Fi), 2*3dBi detachable ant. (3G/4G)
Power Source	Dual DC 9V ~ 48V
WAN Functions	
WAN	Multiple WANs, Failover / Load Balance,
	Configurable Ethernet/4G
Cellular	2G/3G/LTE, IP Pass-through
Ethernet	Dynamic IP, Static IP, PPPoE, PPTP, L2TP
IPv6	Dual Stack, 6-in-4, 6-to-4
Basic Functions	
Ethernet	LAN IP, Subnet Mask
Wi-Fi System	802.11n 2T2R MIMO 300Mbps (2.4GHz)
Wi-Fi Operation	AP Router, WDS, WDS Hybrid Modes
Wi-Fi Security	WEP, WPA, WPA2, WPA-PSK, WPA2-PSK, 802.1x
VLAN	Port-based, Tag-based
NAT	Virtual Server/Computer, DMZ Host, PPTP/L2TP/IPsec Pass-Through
Routing	Static, Dynamic: RIP1/RIP2, OSPF, BGP
QoS	Policy-based Bandwidth Control and Packet Flow Prioritization
Redundancy	VRRP
Object Definition	
Scheduling	Time Schedule List
Grouping	Host Grouping List
External Server	Email, Syslog, RADIUS, SCEP, FTP
Certificate	My Certificate, Trusted Certificate, Issue Certificate
Security	
VPN Tunnelling	IPsec, OpenVPN, PPTP, L2TP, GRE;
	Tunnelling with Full Tunnel, Tunnel Failover
VPN Scenario	Site to Site, Site to Host, Host to Site, Host to Host, Hub and Spoke, Dynamic VPN
VPN Capability	IPsec: up to 16 tunnels
Firewall	SPI Firewall with Stealth Mode, IPS
Access Control	Packet Filter, URL Blocking, MAC Filter
Authentication	Captive Portal
Service	
Cellular Toolkit	SMS, Data Usage, SIM PIN, USSD, Network Scan

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Parameter	Specifications
Event Handling	Managing / Notifying Events;
	SMS, Syslog, SNMP Trap, Email Alert, Reboot
Administration	
Configure & Management	Web, Telnet CLI, Command Script, TR-069, SNMPv3 standard & AMIT MIB
System Operation	MMI, System Information, System Time, System Log, Backup & Restore,
	Reboot & Reset
FTP	FTP Server, User Account
Diagnostic	Packet Analyser, Diagnostic Tools
Dimension	
Device (L x W x H)	187x110x31mm (w/o mounting kit)
	225x110x39mm (with mounting kit)
Environment	
Operation Temp.	-20℃ ~ 60 ℃
Storage Temp.	-40℃ ~ 85 ℃
Humidity	10% ~ 95% (non-condensing)

Item-11: Scope for Installation

Complete Supply, Installation, Configuration, Testing and Commissioning of all the delivered equipment with necessary cables and accessories.

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ANNEXURE 3: ANALYTICS USE CASES REQUIRED WITH THE TYPE OF LOCATIONS (Related Corrigendum)

Sl. No.	Type of Analytics and Location	As per RFP	Revised As	Video Analytics Use case
1	Vehicle Related	150	250	Vehicle Classification/ Vehicle Detection and Video Capture Module
				Vehicle Detection by Color
				Hot Listing and Alert Generation
				Use of Mobile phones by Driver while driving /Red Light Violation Detection
				Wrong side driving detection/ Vehicle Behaviour Activity: •Vehicle Collision (such as Car, Bus, Truck, Motorcycle etc.) •Vehicle Park on sidewalks or at no-parking areas. (Illegal Parking)
				No helmet violation detection
				Triple ride Violation Detection
				Speed Violation Detection /Vehicle Wrong Direction Violation Detection/ Vehicle Left Side Violation Detection
2	Video Analytics Use Cases	100	200	Violence & Violent Behaviour Activity: •The human fighting. •The human firing a weapon. •The human throwing the stone. •Person Tracking.
			200	Women Safety Behaviour Activity: •The women / person in distress raising his/her hand(s) for HELP. •Chain / Mobile / Purse snatching •The human lies or falls on the ground •The human abandons an object.
			100	Grouping Behaviour Activity: •The Human or Humans group running. •Humans Gathering in a group. •Violation of Section 144 as per IPC
3	Surveillance Related at Property of interest/Other Analytics (Bus Stop, Important Buildings, Monuments, Parks, Stadium, Tourist Locations, Education Institutes, etc.)	200	250	Overcrowding Detection/conflicts in crowd
				Abandoned Object Detection
				Vandalism Detection
				Intrusion Detection/ Camera Health Monitoring
				Person Collapsing
				Loitering
				People Counting
				People Tracking across cameras

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ANNEXURE 4 (As Addendum)

COTS ENTERPRISE GIS PLATFORM FOR WEB GIS WITH GEO ANALYTICS SOFTWARE SPECIFICATION

The proposed GIS software should be Industry standard COTS GIS platform with 16 core licenses for GIS server and 2 licenses for Desktop. The proposed software should have functions of GIS and Image Processing along with advance modules such as network analysis, terrain analysis, 3D analysis, change analysis, etc. The software should have minimum technical functionalities as under:

1. The GIS server should support 64 bit and should be based on a Services Oriented Architecture (SOA).It should be OGC certified for web services like WMS, WFS, WCS, CSW, INSPIRE, etc.
2. It should have capability to import / export data in various formats like .dwg, ,dxf, .dgn, .shp (shape files), coverage file, .mif (MapInfo), .gml, .kml, .gpx. , Geo PDF GeoJSON, interlis, GeoRSS, SqlLite, H4,H5 formats,MBtiles etc. Should support ODBC compliance interface with industry standard RDBMS like PostGRE SQL, Oracle, SQL server, Access etc.
3. Software should have capability to create layer and tables as per the defined data model.
4. The software should provide a complete set of drawing & editing tools in order to enable the user to draw & modify any or parts of various geographical objects (point, line and polygon) on the map.
5. The software should provide facility to click on any feature of the map and return a select set of attributes for feature i.e., Identify tool along with pop-up
6. Capability of maintaining data history, version management and conflict detection / resolution.
7. It should have capabilities like geo-processing and analysis, spatial and statistics analysis and Image processing functions. It should support sever end Geo processing and Image Processing by sending the request using the web client and display the processed data on web using WMS.
8. It should have tool to publish GIS data on web and enable OGC services like WMS, WFS etc.
9. Software should have the facility for customizable reports, customized map layout, online printing in different formats with desired map scale and customized templates.
10. Should have capability to create SLD as per the applied legend, integrate third party SLD and publishing of SLD.
11. Software should have capability to set the scale range to declutter the layers of the project and to configure the clustering of location or point data.
12. Software should have capability to create WMS group to bundle multiple layers.
13. Software should have web builder to create a basic level of web application without Coding.
14. Software should have rich geo-processing functions such buffer generation, clip, erase, intersection, dissolve, union, polyline to polygon, etc. Further it should have WFS-T for online editing like create, move, erase, save etc. Bulk editing should be done using COTS GIS desktop.

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15. It should offer topology creation tool and symbology tools to help visualize the spatial data as per the user defined colour scheme.
16. The software should allow user to create layers or shortcuts to geographic data that store symbology for displaying features.
17. The software should have module for geo-referencing of vector and raster data
18. The software should have module of Dynamic Labeling and Rule based Labeling.
19. Query builder tool should be available to perform simple and complex queries.
20. It should allow users to export results to various file formats like EMF, BMP, TIFF, JPEG, etc.
21. Application Server must support Time aware data for Trends / Time Series Analysis.
22. It should network analysis module to perform Routing analysis, Service Area Analysis, etc.
23. The software should have catalogue tool for raster and vector data management.
24. The software should allow visualization of data in 2D/3D in web as well as in desktop application.
25. It should have algorithm for surface generation such as heat maps, Linear, IDW and Krigging.
26. The proposed software should support HRSI (High Resolution Satellite Imagery) and low resolution satellite images (panchromatic & multispectral) such as IKONOS, Quick bird, Geoeye, Worldview, CARTOSAT, EROS, LISS-IV, LISS-III, AWIFS, RISAT-1, KALPANA-1, INSAT3A, INSAT3D, PROVA-V, CEOS, ECW, JP2000, Sentinel, Radarsat, RISAT etc.
27. The software should support image format such .tif, geotiff, .img, .pix, .hdr, .h4, .h5, DTED, DEM, CEOS, .bmp, .jpeg, etc.
28. Geometric Correction and atmospheric correct module should be available to remove the geometric distortion in the image and atmospheric anomalies such as haze.
29. The software should have image enhancement module to enhance the imageries. It should have enhancement algorithm such as Linear, Logarithmic, Histogram Equalize, Histogram Matching, Density Slice, Gaussian, Squire root, Tone Balancing etc.
30. The software should have image transformation module such Vegetation Index, Principal Component Analysis (PCA), Inverse PCA, Pan sharpening, Wavelet fusion, etc.
31. It should have image classification modules such as supervised and unsupervised classification along with image segmentation.
32. The software should be capable of processing the temporal or time series image data. To identify encroachment and monitor urban sprawl, software should provide change detection capabilities such as Basic Change Detection, Advance Change Detection, Auto Change Detection and Site Monitoring. The advance change detection capability should allow to ingest multiple input images to find the change. It should also handle the multi resolution satellite image along with mis-registration. It should have capability of Object Library Creation for Object Identification and Automatic Feature Extraction (AFE).

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33. Web GIS Software should support both Windows and Linux platform. Software should have rich display and navigation tools like zoom in, zoom out, fixed zoom in, fixed zoom out, pan, real time pan, bookmark, Geo link multiple views, swipe, flicker, search by location, cross hair, cursor location value, etc.
34. It should provide a map centric web portal for managing geospatial content of organization. It should serve as GIS platform to Create, Access, Analyse, and Manage and disseminate geo-spatial content with capability of user management and role-based access control.
35. To leverage the Enterprise GIS platform and base map, Web GIS application modules for departments of PSCL/PMC should be provided/developed to enable better decision making and monitoring using Geo-processing and Geo-analysis. Data model finalized with PSCL should be followed.
36. Web GIS application modules should be built on common framework where all standard GIS functionality would be available across all department. All these modules should have map viewers for department specific layers, geo-processing-based functionalities, spatial and attribute-based query modules (for decision support for respective department users), intuitive charts, graphs and pre-defined reports.
37. Details of functionalities would be finalized during FRS/SRS stage in consultation with department users. Following application modules for department of PSCL/PMC should be considered.
    a. GIS Module for Property Tax
    b. GIS Module for Estate Management
    c. GIS Module for Road Management
    d. GIS Module for Utilities
    e. GIS Module for Parks and Gardens
    f. GIS Module for Education
    g. GIS Module for Health and Sanitation Services
    h. GIS Module for Advertisement and Hoardings
    i. GIS Module for Disaster, Fire & Emergency Services Management
    j. GIS Module for Advance Change Detection
    k. GIS Module for Capital Project Monitoring and Control
    l. GIS Portal for Citizen

38. It should be capable of processing reports and pie charts maps.
39. Software should have ability of reverse searching when it comes to end user.
40. It should have the ability to manage spatial and non-spatial database.
41. Software should have ability to process closet and shortest route analysis.

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42. Software should be capable of handling and processing large scale data and it should be capable of fast processing of GIS data.
43. MSI has to create base map for Patna City area using HRSI (High Resolution Satellite Image) 0.3m for better resolution. Note: Base map will include (Roads, Rail, Building footprints, Rivers, Landmarks, POI like imp places Monuments, Government Building, etc., Locality & Sub locality).
44. Licensed Satellite should be procured for base map creation and authorization will be provided by PSCL.
45. For better geo referencing of Satellite imagery MSI will perform DGPS survey for better collection of GCP points.
46. MSI has to procure topographic map for PMC area scale 1:50,000 from Survey of India office located at Dehradun.
47. Two COTS GIS and Image Processing Desktop software (ERDAS), License should be provided to perform the activities which are listed above and Updation of software as per the new version released.

GIS layers will also include Traffic signals points, CCTV installation, Public utilities etc and time to time Updation will also be performed on spatially and Non spatially data as well.

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ANNEXURE-5: FUNCTIONAL & TECHNICAL REQUIREMENT FOR SIEM
(Related Corrigendum)

Sl. No.	As per RFP	Revised as
1	Intelligent next generation SIEM must be able to detect any anomalies, report in real time and take action as programmed having SIEM AND SOAR capabilities.	Intelligent next generation SIEM must be able to detect any anomalies, report in real time and take action as programmed.
2	It must provide platform for orchestration and automation of response integrated for complete usage and for all devices and admins	Deleted
3	Solution must be Sized for 20000 Sustained, 40000 Peak EPS with burst support for up to 50000 EPS without queuing or dropping any logs in three tiered physically segregated architecture consisting of Collection layer, log management layer and Corelation layer. SOAR Solution must support all devices as SIEM and no restriction on Admins.	Solution must be Sized for 20000 Sustained, 40000 Peak EPS with burst support for up to 50000 EPS without queuing or dropping any logs in three tiered physically segregated architecture consisting of Collection layer, log management layer and Corelation layer.
4	The proposed solution must provide inline options to reduce event data at the source by filtering out unnecessary event data. Filtering must be simple string- based or regular expressions and must delete the event data before it is processed. Log Filtering needs to be available across all tier to filter out logs as wherever required.	Deleted
5	Solution should have security orchestration and automated response engine bi-directionally integrated to reduce security incident MTTR (Mean Time to Respond) and automate L1/L2 security activities.	Deleted
6	Proposed solution should have unified security data lake natively available to provide AI/ML based threat hunting and analytics capabilities	Deleted
7	For future expansion the proposed solution must provide ability to archive as when required logs up to 24 PB. It must support auto-archiving to attached remote storage (i.e., NAS/DAS/ NLSAS).	For future expansion the proposed solution must provide ability to archive as when required. It must support auto-archiving to attached remote storage (i.e., NAS/DAS/ NLSAS/SAN).
8	Platform must be on VM's or physical servers supporting complete HA at DC and DR. All licenses must be included.	Platform must be on VM's or physical servers supporting complete DC and DR to run active active mode. All licenses must be included.
9	Platform must support MITR for threat intelligence	Platform must support MITRE ATTACK for threat intelligence
9	Solution must integrate with NIPS and other Network devices to capture packet data	SIEM Solution must integrate with 250 Mbps of packet capture data to be provided along with it. Also, for faster detection of attacks, packet data and the SIEM should be from the same OEM. Solution should integrate with NIPS and other Network devices.
10	Quoted Solution must have its presence in India for more than 7 years and must have at least 3 deployments for more than 50000 EPS in Government of India organization. At least 3 sign-off must be attached for more than 50K EPS from Government of India organization.	Deleted

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ANNEXURE-6: FUNCTIONAL REQUIREMENTS FOR ENTERPRISE MANAGEMENT SYSTEM
(Related Corrigendum)

Sl. No.	As per RFP	Revised As
1	The solution shall provide future scalability of the whole system without major architectural changes.	The solution shall provide future scalability of the whole system without major architectural changes. The proposed solution should have the ability to provide a list of probable causes for a generated event with a percentage probability
2	The Solution shall be distributed, scalable, and multi-platform and open to third party integration such as Cloud, Virtualization, Database, Web Server Application Server platforms etc.	The Solution shall be distributed, scalable, and multi-platform and open to third party integration such as Cloud, Virtualization, Database, Web Server Application Server platforms etc. The proposed solution should leverage the capability of continual data streaming from the monitoring agent to the server without the need for polling. In the event of a network failure, the agent should have the ability to cache the data and resume streaming once the network is available
3	All the required modules should be from same OEM and should be tightly integrated for single pane of glass view of enterprise monitoring	OEM should provide single MAF for all the modules proposed in this RFP. The solution should be able to monitor the availability and performance of the hardware, servers, databases, storage, middleware using one single solution
4	The solution must provide single integrated dashboard to provide line of business views and drill down capabilities to navigate technical operator right from services to last infrastructure components	The solution must provide single integrated dashboard to provide line of business views and drill down capabilities to navigate technical operator right from services to last infrastructure components. The proposed solution should have an OOTB log and event analytics solution with Machine learning algorithms for analysing log patterns to identify rare and anomalous occurrences in the log pattern around the time of event generation
5	The proposed solution must provide SDK/Rest API for North bound a South Bound Integrations E.g., Forwarding specific metric data to third part database, Notifications to third party systems such as Jira, AutoDesk, Slack	**This clause stands deleted**
6	Proposed NMS solution must have deployment reference of monitoring managing 2500+ network nodes in at least 3 deployments across Gov/PSU/Large Enterprise.	Proposed NMS solution must have deployment reference of monitoring managing 10,000+ network nodes in at least 3 deployments in India across Gov/PSU/Large Enterprise.
7	The Solution should provide all the modules as a single monitoring engine to correlate events in real-time from Networks, Servers and Applications	**This clause stands deleted**

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Sl. No.	As per RFP	Revised As
8	The solution should be virtual appliance and deployable on Linux operating systems to reduce the overall TCO	**This clause stands deleted**
9	The solution should run without any propriety database license for datastore - Datastore must be bundled within EMS (E.g., popular time-series no-sql, hbase based monitoring systems) to reduce the TCO	**This clause stands deleted**
10	Detailed system care statistics will be available through a web-based dashboard providing health metrics of ANPR Platform including Uptime and mean-time-between-failures.	Detailed system care statistics will be available through a web-based dashboard providing health metrics including Uptime and mean-time-between-failures. The proposed solution should have the ability to leverage machine learning capability on top of user defined alerting thresholds and dynamically baseline the acceptable resource utilization thresholds in order to reduce unwanted event noise
	TECHNICAL SPECIFICATIONS	**TECHNICAL SPECIFICATIONS**
	Consolidated Dashboard	**Consolidated Dashboard**
	Element & Network Performance Management (EMS/ NMS/ NTA)	**Element & Network Performance Management (EMS/ NMS/ NTA)**
11	The proposed solution must provide the complete view of the Topology and network elements. The NMS shall have the ability to include the network elements and the links in the visual/graphical map of the department. Th visual maps shall display the elements in different colour depending up-to the status of the element. It is preferable that green Color for healthy an amber/yellow Color for degraded condition and ed for unhealthy condition is used.	The proposed solution must provide the complete view of the Topology and network elements. The NMS shall have the ability to include the network elements and the links in the visual/graphical map of the department. Th visual maps shall display the elements in different colour depending up-to the status of the element. It is preferable that green Color for healthy an amber/yellow Color for degraded condition and ed for unhealthy condition is used. - Must provide a native FTP / SFTP to be able to pass files between the servers regardless of what the platform is. The proposed solution - Must provide centralized administration tool to configure the FTP or SFTP server settings. - Able to have a dashboard showcasing the real-time status of all the file transfers across the platforms. - Must offer a centralized search facility to search for a specific file and know its status in real-time. - Allows pre or post command option to rename / move / delete the files at source or destination as per the requirement. - Raises alert for transfer failures.

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Sl. No.	As per RFP	Revised As
12	The proposed solution must provide the visual presentation of the Network Element's status and the alarms. It shall also present the complete map of the network domain with suitable icons and in suitable Color like green for healthy, red for non-operational, yellow for degraded mode of operation etc.	The proposed solution must provide the visual presentation of the Network Element's status and the alarms. It shall also present the complete map on the network domain with suitable icons and in suitable colour like green for healthy, red for non-operational, yellow for degraded mode of operation etc. The proposed solution should have the ability to integrate & automate the Big-Data jobs end to end by integrating them with non-Hadoop jobs (e.g.: RDBMS, ETL jobs, EDW appliance). The proposed solution should be able to monitor the secure/non-secure file transfers between our and partner hosts or cloud resources like S3, AFS, GCS, etc
	Fault Management	**Fault Management**
	Log Management	**Log Management**
13	The proposed solution should provide a minimum log compression of 8:1 for ensuring log compression to reduce overall log index storage space for the raw log format	**This clause stands deleted**
14	The system shall be capable of operating at a sustained 5000 EPS per collection instance. The system shall provide the ability to scale to highest event rates by adding multiple collection instance	**This clause stands deleted**
	Service Desk - Incident Management	**Service Desk - Incident Management**
15	The proposed helpdesk system shall provide flexibility of logging, viewing updating and closing incident manually via web interface	The proposed helpdesk system shall provide flexibility of logging, viewing updating and closing incident manually via web interface. This should provide single CMDB.
	Asset Inventory Management	**Asset Inventory Management**
16	A configuration management database shall be established which store unique information about each type Configuration Item CI or group of CIs.	A configuration management database shall be established which store unique information about each type Configuration Item CI or group of CIs. Solution should provide agentless auto discovery and dependency mapping starting discovery from any point. The solution should be able to do a complete agentless discovery of IT environment across distributed (i.e., physical, virtual, network, application, middleware, storage, databases) and heterogeneous environment and provide a clear and visual mapping of IT infrastructure to business services.
17	The proposed solution allows scheduling periodic report to check current software and hardware inventory	The proposed solution allows scheduling periodic report to check current software and hardware inventory. The solution should automatically build visualizations that shows

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Sl. No.	As per RFP	Revised As
		dependency between switches, routers, physical/virtual host, storages, cluster software, business applications and other entities. The discovery solution should perform Application dependency mapping. The solution should include out-of-box extensions for Oracle, J2EE, Exchange, databases, oracle applications like e-business, OBIEE, Peoplesoft etc.
18	The proposed solution should provide end to end Asset Life Cycle Management: Makes it easier to handle the complete life cycle of an asset that is, all stages/modules from procurement to disposal	The Proposed solution should provide end to end Asset Life Cycle Management: Makes it easier to handle the complete life cycle of an asset that is, all stages/modules from procurement to disposal. The solution should be able to automatically detect software's that are end of support, end of extended support and end of life.
19	The Proposed solution should support maintaining AMC/Warrant Information with Alerting when about to expire also provide Asset Deletion capabilities enabled with workflow engine	The solution should have one single CMDB and CMDB Common Data Model should conform to industry standards and should be based on the Common Information Model (CIM) from the Distributed Management Task Force (DMTF).

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ANNEXURE-7: FUNCTIONAL & TECHNICAL REQUIREMENTS FOR CENTRALIZED AV & ANTI-SPAM

(Related Corrigendum)

Sl. No.	As per RFP	Revised as
1.	Spam Filtering	**Stands deleted**
a.	The proposed solution should Stop spam, denial-of-service attacks, and other inbound email threats using industry-leading technologies and response capabilities, leverage adaptive reputation management techniques that combine global and local sender reputation analysis to reduce email infrastructure costs by dropping up to 90% of spam at the connection level, Filter email to remove unwanted content, demonstrate regulatory compliance, and protect against intellectual property and data loss over email, Secure and protect other protocols, such as public IM communications, using the same management console as email, Obtain visibility into messaging trends and events with minimal administrative burden.	**Stands deleted**
b.	The proposed solution should automatically back up all configuration and quarantine databases on the appliance at specified intervals. Administrators should be given an option to store data on the local machine or a remote server.	**Stands deleted**
c.	should be able to detect spam mails in SMTP, POP3 as well as IMAP protocols	**Stands deleted**
d.	The proposed solution should have inspection facility on the header and body of the mail to check for spam URI content and identify whether the mail is a spam mail or not.	**Stands deleted**
e.	The proposed solution should support real time statistics of scan performance, message processed and security violations and proposed solution should support message tracking for quarantined, archived and postpone messages in message tracking logs	**Stands deleted**
f.	should have options to configure white list as well black list based on IP address and validate against the same to detect whether a mail is spam mail or not	**Stands deleted**
g.	Should have configurable parameter to enable HELO DNS lookup to check whether a mail is a spam or not.	**Stands deleted**
h.	Should have configurable parameter to enable return email DNS lookup to check whether a mail is a spam or not.	**Stands deleted**
i.	Should have provision to define banned key words and check against that key words to identify spam mails.	**Stands deleted**
j.	Should have options to define mime headers and check against the same to identify spam mail.	**Stands deleted**
k.	The solution should have Global sender reputation and local sender reputation analysis to reduce email infrastructure costs by restricting unwanted connections.	**Stands deleted**
l.	Solution must be scalable to incorporate the following with no installation of component on clients should need be in future:	**Stands deleted**
m.	Email Security solution should ably submit files to customize sandboxing for zero-day protection	**Stands deleted**
n.	Should have integrated data loss prevention technologies to check loss of data through mails at gateway	**Stands deleted**
o.	The proposed solution should have an option to restore a solution to its original image configuration.	**Stands deleted**
p.	Should have configurable spam actions for detected spam mails (e.g., tag the mail, delete the spam mail etc.).	**Stands deleted**

Chief General Manager
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ANNEXURE-8: ANTI-ADVANCE PERSISTENT THREAT SPECIFICATIONS

(As Addendum)

Sl. No	Minimum Specifications: Anti-Advance Persistent Threat
1	Solution must be a custom built on premise Anti-APT solution and must not network perimeter security component part devices like UTM and NGFW and should not be a CPU and chip-based function.
2	The proposed solution should support to monitor traffic from multiple segments.
3	The proposed solution should have capabilities to configure files, IP, URLs and Domains to Black list or white list.
4	The Proposed solution should provide correlated threat data such as: IP addresses, DNS domain names, URLs, Filenames, Process names, Windows Registry entries, File hashes, Malware detections and Malware families through a dashboard
5	The proposed solution must be able to provide intelligence feed for malware information, threat profile and containment remediation recommendations where applicable.
6	The proposed solution should be able to support XFF (X-Forwarded-For) to identify the IP Address of a host in a proxy/NAT environment.
7	The proposed solution should be able to detect lateral movement (East-West) of the attack without installing agents on endpoint/server machines with least 100+ protocols for inspection.
8	The solution should integrate with NIPS, HIPS & AV to cover all channels.
9	The proposed solution should have a built-in document vulnerabilities detection engine to assure analysis precision and analysis efficiency.
10	The Proposed solution should monitor Inter-VLAN traffic on a Port Mirror Session.
11	The proposed solution should have an endpoint security component with following functionalities (Antivirus, Vulnerability Protection, Data loss, Application control with ability to automatically block/Quarantine zero-day malwares by sharing Indicators of Compromise.
12	Proposed solution should have 2 TB in RAID 1 of on box storage from day one with a scalability of 8 TB
13	The proposed solution should be able to run at least 20 parallel sandboxes images scalable up to 60 for analysis of payload
14	Customized sandbox solution should support following operating systems- Windows 7, Win8/8.1, Win 10, Windows Server 2008, 2012 & 2016 and solution should protect from Mac, Linux and Mobile malwares.

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ANNEXURE-9: REIMBURSEMENT TO MSI FOR VARIOUS EXPENSES INCURRED DURING THE PERIOD OF PROJECT EXECUTION, GO-LIVE AND O&M

(As Addendum)

The expenses incurred by the MSI during the course of Project execution, Go-Live and O&M phase for the following categories shall be reimbursed by PSCL after the MSI submits the invoices / bills to PSCL on actual consumption basis:

- Electricity Charges
- Electricity Meter
- ROW / RI Charges
- Diesel for GenSet ICCC/DC

The Invoices / bills will be validated by PSCL and after validation, the reimbursement process will start in the next billing cycle. Please Note that the department is not liable to pay any expenses incurred by the MSI in the event of:

- Invalid Invoice / Bills / No Invoice or Bills submitted to PSCL.
- Expenses incurred on account of verbal or mutual consent between MSI and any 3rd party / PSCL for certain obligations / favour etc.
- ROW: Not applicable, MSI is responsible to take a NOC to concern department for ROW with the help of PSCL.
- RI: MSI is responsible for it,
- No Payment shall be made by PSCL for any penalty / loss incurred by MSI due to any reason / circumstances (e.g., delay in restoring the civil work, damages made on any public / Government Property or violation of any Civil laws and etc…)
- All additional expenses other than mentioned above.

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ANNEXURE-10: BILL BOARD FOR POLES

(As Addendum)

This is to bring to the Notice of the MSI/Bidder that currently there is no policy for Revenue Generation by Advertisement using Bill-Boards by Patna Municipal Corporation, hence the bidder may quote the commercial for price discovery purpose only.

The procurement will take place only after a prior approval by the department / PSCL and not applicable from Day-1.

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ANNEXURE-11: MANUFACTURERS' AUTHORIZATION FORM

(As Addendum)

(This form has to be provided by the OEMs of the Cameras, Servers, Storage, Networking & Security components, Junction Box, VMS, ICCC, FRS, VA, ANPR, GIS, Video Summarization, EMS, NAC, Help Desk Management, DG set, UPS, HVAC system and other components. This letter to PSCL should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer.)

Date:

To:
The MD,
PSCL,
Patna

Subject: Manufacturer's Authorization Form

Ref: RFP No_____

Dear Sir,

We_____(Name of the OEM) who are established and reputable manufacturers of__(List of Goods) having factories or product development centers at the locations_____or as per list attached, do hereby authorize M/s_____(Name and address of the Bidder) to bid, negotiate and conclude the contract with you against RFP No _____
_____
_____for the above goods manufactured or developed by us.

We hereby extend, our warranty for the hardware goods supplied by the Bidder and/ or maintenance or support services for software products against this invitation for bid by _____(Name of the Bidder) as per requirements and for the duration of contract as specified in this RFP.

We also confirm that our offered product will not be end of life for minimum of 24 months from the date of commissioning and the support for such offered product/s will be available for minimum of 5 years from the date of award of contract.

For OEM of Camera: The well documented API / SDK shall provide an extensive list of programming functions to view and/or configure core entities such as: users and user groups, alarms, custom events, and schedules, and more.

1. We have a structured support program in place to support 3rd party developers using API / SDK. The program details are shared along with the technical bid
2. We will provide well defined support by the means of online portal, Chat and Toll-free no to support the API / SDK developers on timely basis
   i. APIs / SDK shall be made available within 2 weeks of release of the new version

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Country of Origin of OEM: _____Country of Manufacture of Item:

For OEM of ICCC:

1. We have India / Global development program for 3rd party developers using our API/ SDK.
2. We will provide well documented SDK for further developments and integration with 3rd party systems along with online support portal outlining all the 3rd party integrations and 24/7 support on API / SDK package
3. We confirm that ICCC has native frameworks for public safety technologies like FRS, Analytics, VMS, PA, Traffic congestion, ANPR, Big Data Co Relation and Community surveillance

Country of Origin of OEM: _____ Country of Manufacture of Item:

The undersigned is authorized to sign this undertaking.

Thanking you,

Yours faithfully,
(Signature)
For and on behalf of:_____(Name of the OEM)

Authorized
Signatory Name:
Designation:
Place:
Date:

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ANNEXURE-12: PRE-QUALIFICATION BID CHECKLIST

(Related Corrigendum)

Sl. No.	As per RFP	Revised as	Compliance (Yes/No)	Page No. and Section No. in the Bid
1	RFP Document fees	RFP Document Fee Receipt		
2		Bid Security/Earnest Money Deposit (EMD)		
3	Pre-Qualification Covering letter	Pre-Qualification Criteria Document Index List		
4	Consortium Agreement, if applicable as per Annexure 7	Consortium Agreement, if applicable as per Annexure 7		
5	• Copy of Certification of Incorporation/Registration Certificate • PAN card • GST registration	• Certificate of Incorporation / Registration under applicable Indian Laws. In case of Consortium, the certificates of all members are required. • Copy of PAN • GST registration certificate/s • List and address of bidder's office in Patna or, undertaking from authorized signatory of bidder to open office with GST registration in Patna within 60 days from Contract signing.		
6	Audited financial statements for the last three financial years AND Certificate from the Statutory Auditor/ CA	• Copies of audited balance sheets for the financial years 2017-18, 2018-19 and 2019-20 pertaining to sole bidder/ members of Consortium (In case of Consortium). • Certificate from the Statutory Auditor/CA on net worth and Profitability for financial years 2017-18, 2018-19 and 2019-20 pertaining to sole bidder / each member of Consortium (In case of Consortium) • Registration certificate or a declaration in compliance with the provisions stipulated in office memorandum F/No/6/18/2019-PPD dated 23 July 2020 issued by public procurement Division, Dept. of Expenditure, Ministry of Finance, GoI (Certificate regarding restriction on procurement from a bidder which shares land border with		

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Sl. No.	As per RFP	Revised as	Compliance (Yes/No)	Page No. and Section No. in the Bid
		India) • Certificate from the Statutory Auditor/CA certifying the annual turnover of sole bidder/lead partner (In case of Consortium) in the areas of Supply, Implementation and Integration of City Surveillance System and/or, Data Centre infrastructure in years 2019-20, 2018-19 and 2017-18. •Certificate from the Statutory Auditor/CA on net worth and Profitability for financial years 2017-18, 2018-19 and 2019-20 pertaining to OEM of cameras, ICCC and VMS. • Certificate from the Statutory Auditor/CA certifying the annual turnover of OEM of cameras, ICCC and VMS for the FY 2017-18, 2018-19 and 2019-20.		
7	Declaration of non-blacklisting	• Non-blacklisting certificate for Bidder (In case of Consortium, this needs to be provided by each of the Consortium • The non-blacklisting certificate pertaining to OEMs of Cameras, Servers, VMS, ICCC, storage and networking components • Certificate from OEM of Cameras that OEM is not banned or suspended by ONVIF		
8	Power of attorney for Lead Bidder of Consortium	• 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 JV / CONSORTIUM 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		

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Sl. No.	As per RFP	Revised as	Compliance (Yes/No)	Page No. and Section No. in the Bid
		limited to the payments. • MoA among the Consortium Partners showing the area of business (If applicable) and their internal arrangement per se.		
9	Project Citations and Self-certifications, as Applicable	The copies of supply orders, contracts, and agreements on completion / installation certificates in the name/s of respective OEMs of components/subsystems, issued by end user.		
10	No Deviation Certificate	No Deviation Certificate		
11	Total Responsibility Certificate	Total responsibility undertaking		
12	Valid ISO certification	Copies of the valid ISO /CMMi certificates in the name of the sole bidder/Consortium members member).		

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ANNEXURE-13: TECHNICAL BID CHECKLIST

(Related Corrigendum)

Sl. No.	Checklist As per RFP	Revised as	Compliance (Yes/No)	Page No. and Section No. in the Bid
1	Technical Bid Letter	Technical Bid Covering Letter		
2	Credential summary			
3	Project Citations and Self-certifications, as applicable	The copies of supply orders, contracts, and agreements on completion / installation certificates in the name/s of respective OEMs of components/subsystems, issued by end user.		
4	Detailed proposed solution	Detailed proposed solution		
5	Project plan and manpower plan	Project plan and manpower plan		
6	Proposed CVs	Manpower deployment details as per RFP		
7	Compliance to Requirement (Technical / Functional Specifications)	Detailed technical compliance sheet		
8	Proposed Bill of Material	Proposed Bill of quantities		
9	Manufacturers'/Producers' Authorization Form Anti-Collusion certificate	Manufacturers Authorization Form		
		Anti-Collusion Certificate		
10	Non-disclosure agreement	Non-disclosure agreement		
11		Non-Malicious Code undertaking from OEMs of Camera and Video Analytic software		

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ANNEXURE-14): CERTIFICATE REGARDING RESTRICTION ON PROCUREMENT FROM A BIDDER WHICH SHARES LAND BORDER WITH INDIA (As Addendum)
(On Letterhead of the Employer)

(Date)

To,
The Managing Director
Patna SmartCityLimited
Patna

Dear Sir,

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; as mentioned in Public Procurement Division, Department of Expenditure, Ministry of Finance, and Office Memorandum No. F.No.6/18/2019-PPD dated 23 July, 2020 and certify that this bidder is not from such a country and is eligible to be considered.

or

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; as mentioned in Public Procurement Division, Department of Expenditure, Ministry of Finance, and Office Memorandum No. F.No.6/18/2019-PPD dated 23 July 2020 and certify that I am from such a country, however, I have been registered with the competent authority. I further certify that this bidder fulfils all requirements contained in the aforesaid OM and is eligible to be considered.

Yours faithfully

(Signature, name and title of signatory
authorized to Sign on behalf of Emp

Chief General Manager
PATNA SMART CITY LIMITED

ANNEXURE-15 (As Addendum)

UNCONDITIONAL BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

To,

<Name.

<Designation.

<Address.

<Phone Nos...

<Fax Nos...

<Email id.

Whereas <<Name of the bidder… (Hereinafter called 'the Agency') has submitted the bid for Submission of RFP <<RFP Number….. Dated <<Date…. for <<Name of the assignment…. (Hereinafter called "the Bid") to <<PSCL…..

Know all Men by these present that we <<….. Having our office at <<Address…. (Hereinafter called "the Bank") are bound unto the <<Patna Smart City Limited (Hereinafter called "the PSCL") in the sum of Rs. <<Amount in figures.. (Rupees <<Amount in words. only) for which payment well and truly to be made to the said PSCL, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this <<Date...

The conditions of this obligation are:

(i) If the Bidder having its bid withdrawn during the period of bid validity specified by the Bidder on the Bid Form; or

(ii) If the Bidder, having been notified of the acceptance of its bid by the PSCL during the period of validity of bid: -

a. Withdraws his participation from the bid during the period of validity of bid document; or
b. Fails or refuses to participate in the subsequent Tender process after having been short listed;

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

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PATNA SMART CITY LIMITED

This guarantee will remain in force up to <<insert date…. and including <<extra time over and above mandated in the RFP…. from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.

NOTHWITHSTANDING ANYTHING CONTAINED HEREIN:

(i) Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures. (Rupees<<Amount in words only)

(ii) This Bank Guarantee shall be valid up to <<insert date)

(iii) It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:

Chief General Manager
PATNA SMART CITY LIMITED