

## Request for Proposal

### Video-Based Security Enhancement (VISE – II) PHASE-A

Indian Institute of Science  
Bangalore, 560012

We are proposing to expand the existing project VISE to enhance the security of the IISc campus with the use of video-based technologies. Roughly 35-40 spots have been identified for the installation of cameras. The surveillance includes a few gates across the main campus, several road intersections, infrastructure such as electrical & telecom installations. There is a requirement for mainly outdoor video surveillance security camera systems. .

Via this Request for Proposal (RFP), IISc is inviting prospective vendors to submit proposals for the supply, installation and testing of video surveillance system (including all components such as Internet Protocol (IP) cameras and accessories, parts, labour and erection) within the campus as per the requirements given below. The vendor must complete execution of the project, covering the locations.

Since there is an installed video surveillance system, the proposed video surveillance system should be **fully compliant and compatible** in a manner to work seamlessly alongside existing surveillance system. The proposed equipment should be standard compliant greater or atleast equal to the existing installed systems. As for being compatible, this includes content viewing, recording, storage, retrieval, video management system and video analytics. The proposed solution should be demonstrated and the entire project must be executed in a scalable manner.

A **TWO COVER** system must be followed: each vendor's commercial bid must be available in a separate sealed separate cover, which will be opened after the technical evaluation of the vendor's RFP. The entire project implementation will be considered as **Rate Contract** and the bidder must propose the components such as: (a) video cameras, (b) networked storage, (c) civil works including digging and laying of cables with appropriate termination (d) erection of cameras with required accessories (e) installation and configuration of network equipment (f) installation of power equipment - UPS, Batteries with safety components such as MCBs etc. These should appear as separate items with individual prices per unit to be mentioned in the commercial bid as in the case of any Rate Contract. The OEM support letters for warranty, Operation and Maintenance personnel should be indicated and time to restore a camera location failure should be included.

The technical bid must include all technical details of the implementation that will clearly illustrate the solution superiority. Also, the technical specification of various cameras specific to locations, network video recorder system, configuration options, the estimated performance of camera should be enclosed. The capability of the video management solution and its ability to interwork with existing systems and appropriate technical documents/brochures should be provided. Quote as per BOM given in the RFP. BOM consist of columns for Technical bid and Commercial bids. Fill appropriate columns.

In addition, the technical bid should also consist of a masked price bid; however including price information in the technical bid may lead to the bid being summarily rejected by the technical committee.

The technical committee will evaluate the technical bids of all vendors; after the evaluation, the commercial bids of technically short-listed vendors will be opened.

**Bidder's Eligibility Criteria:** Vendors who respond to this RFP should be well versed with security video camera installation, networking, storage, and operation. The technical bid should clearly demarcate the responsibilities between the bidder and the OEM. Complete details supported by proof of the same have to be submitted with the bid.

- The bidder must have a minimum annual financial turnover of Rs 50 lakhs in the last 3 years.
- The bidder should have installed and commissioned at least one site with 50 or more IP cameras (both indoor and outdoor, including networking, storage, and management), in a large campus with plenty of tree cover similar to IISc.). If the bidder happens to be a system integrator either the bidder or the OEM should meet the above condition. The bid should include the authorization letters from the OEM stating that the bidder has implemented the solution as a total turn-key solution.
- The bidder (along with their OEM) should be in a position to demonstrate their competence and capability, as a team, to deliver all the services expected during the contract period.
- The proposed surveillance equipment should have all the necessary certifications mentioned in the detailed specifications of this document.

The bidder should enclose necessary documental evidence for the above. The vendor must enclose a list of their clients and installation sites in their response.

**EMD and Security Deposit:**

The Earnest Money Deposit (EMD) of Rs 20,000/- refundable without interest should be necessarily accompanied along with technical bid of the agency in the form of Demand Draft drawn in favor of Registrar, IISc, payable at Bangalore. The bids not accompanied by EMD will be summarily rejected. If the selected agency fails to take up the work within 15 days from the date of awarding the work, the EMD shall be forfeited without giving any further notice and the award of work will be terminated.

The agency shall pay a security deposit of 10% of the contract value or a performance guarantee for a similar amount in lieu thereof from one of the scheduled banks before the commencement of work. Institute shall be entitled to adjust or appropriate the said security deposit or the proceeds of the guarantee towards loss or damage caused by the agency or its employees or the amount of value of shortage or breakage or damage in the items/furniture/fixtures etc., entrusted or caused to other assets of the Institute by the agency or its employees or against any other liability of the agency. The security deposit shall not carry any interest and will be refunded on completion of the warranty period.

## **EVALUATION METHODOLOGY**

1. The bids received from the bidders will be evaluated by the Technical Committee constituted by the Institute.
2. The evaluation process to identify the successful bidder based on a technical evaluation details of which are mentioned subsequently in this document.

### **3. Evaluation of technical bids.**

- 3.1. In the first stage only the technical bids are evaluated. For demonstrating solution superiority, IISc will make available an enter/exit Gate with moderately heavy vehicular and people movement. The prospective vendor should present to the committee one day light ( 12 Noon till about 2 PM) video clip of about 30 seconds as well as one late evening video clip ( 20-00 Hrs - 22-30 Hrs) of about 30 seconds. All other mandatory conditions stipulated elsewhere in the document must be adhered to and failure of the same will result in disqualification of the bid. The IISccommittee's decision in the evaluation of solution superiority is final.
- 3.2. The technical criteria set out for evaluation of the technical offer is given below.
- 3.3. It is to be noted that bidders who score the minimum marks shown in the Table 1 in each category, and **a total of 75 marks**, will be considered as technically meeting the requirements and will be considered for further evaluation. A bidder must score the minimum score indicated against each category in Table 1, in order to be qualified. Additional marks will be

given based on the superiority of the proposed solution as evaluated by the technical committee. The decision of the technical committee is final and binding on all the bidders.

**Table I: Bidder's Evaluation Criteria**

Sl. No.	Description	Max. Score	Min. Score
1	Bidder's Eligibility Criteria (of Bidder or OEM)	10	10
2	Solution superiority & Compliance	50	25
3	Technical Presentation	25	15
4	Implementation methodology towards integration with existing surveillance system	15	10
	Total	100	60

## GENERAL INSTRUCTIONS

1. The quotes can be in Rupees or in a foreign currency; any taxes, insurance, and freight must be clearly indicated separately.
2. The validity of the technical and commercial offers must be at least 3 months from the final date of response to the RFP.
3. The vendor can specify and quote for any optional items that vendor believes might be useful for our purposes.
4. For site visits, vendors are requested to contact the Senior Security Officer, IISc
5. All offered items should be from reputed manufacturers well proven and established in the CCTV surveillance industry (ISO 9000 certified) and should not be an EOL (End of Line) product.
6. **Warranty:** A minimum of 3 years. (5 years is desirable) The bidder should also specify AMC/CMC costs for the next 2 years (as a percentage of the total cost of the project).
7. **Performance Guarantee:** Successful vendor will be expected to provide performance guarantee of 10% of contract value. The letter to IISc should contain details on the steps the firm will undertake to guarantee a near zero down time of **all** equipment.
8. For any clarifications, vendors are requested to contact the office of **the DIGITS**, Indian Institute of Science, Bangalore 566012

**Phone : 91 80 2293 3006 Contact person : Miss SeethaSundar or Miss Narayani.**

9. The successful bidder would be determined based on L1 for the quantity indicated in the commercial. In all cases, the billing will be done as per actual. IISc reserves the right to change the required quantity. As a Rate Contract, the bidder is required to keep the price valid for 12 months from the date of finalization of this tender.
10. The purchase order on the successful bidder will specify the release of payments. There will be 4 releases; in a phased manner. The first instalment (30% of the PO value) will be made soon after the delivery of all material. The second instalment (50%) may be released 4 weeks after commissioning of camera and storage equipment at the specified locations. The third (15%) instalment will be released by IISc only after 8 months of successful completion and monitoring of all video streams at all camera locations. Finally, the fourth (5%) instalment will be released after the warranty period.
11. During the warranty period, the successful bidder should provide an undertaking to maintain all camera and storage equipment in the event of their malfunctioning. This includes dismounting of cameras from the site, replacement of cameras at the site, replacing storage disks and hardware, interfacing with OEMs, service and delivery handling.
12. All letters, correspondences & quotes should be addressed to **CHAIRMAN, DIGITS**

## **CHRONOLOGY OF EVENTS**

Site Visit 10.00 AM to 1.00 PM Report to Main Security Office (ATM Gate) February 25, Monday, 2019

Prebid Meeting 11.00 AM to 1.00 PM, March 5<sup>th</sup>, Tuesday, 2019 Venue: CDS Dept, SERC Room 102

Deadline for submission of Techno-Commercial offers: March 15, Friday, 2019

Technical Evaluation, Presentations, POC by eligible vendors:  
Venue DIGITS Conference room from 10.30 AM onwards March 22<sup>nd</sup>, Friday

Shortlisting technically qualified vendors : March 25, Monday, 2019

Opening commercial bids: March 26, Tuesday,, 2019

Negotiation and final selection: April 4<sup>th</sup>, Thursday, 2019

Purchase order release April 30, 2019

Dead line for installation & Commissioning: July 31st, 2019

## WISE -II PHASE- A CAMERA LOCATION DETAILS

LOCATION	QTY
1.CSA/CIVIL JUNCTION	02
2.CANARA BANK-NESARA JUNCTIION	02
3.JUICE CENTRE JUNCTION	01
4BIOLOGICAL SCIENCE ENTRANCE	01
5. NANO SCIENCE ENTRANCE	01
6.CVH ENTRANCE/CAR PARKING AREA	02
7.MAIN GUEST HOUSE ENTRANCE	01
8.MATHS EARTH SCIENCE JUNCTION	02
9.IAP ENTRANCE	02
10.CSA TO SERC JUNCTION	02
11.CSA TO SUBSTATION JUNCTION	02
12.MAIN BUILDING GROUND &1 <sup>ST</sup> FLOOR	02
13.BEHIND MAIN BUILDING	02
14.SERC ENTRANCE	02
15. DESE BUILDING ENTRANCE	01
16.DIVECHA CENTRE TO CAOS JUNCTION	02
17. SERC TO DESE JUNCTION	02
18. NEW F& A BLDG ENTRANCE	01
19.U BLOCK BOY'S HOSTEL GATE ENTRY	01
20. N BLOCK BOY'S HOSTEL	01
21. KAVERI GIRL'S HOSTEL ENTRY	01
22. M BLOCK HOSTEL ENTRY	01
23. ASHWINI GIRL'S HOSTEL ENTRY	01
24.KRITIKA BOY'S HOSTEL ENTRY	01

25.ROHINI GIRL'S HOSTEL ENTRY	01
26.BHARANI GIRL'S HOSTEL ENTRY	01
27. S-BLOCK BOY'S HOSTEL GATE	01
28. FACULTY CLUB TO SBI JUNCTION	02
29. NEW STAFF HOUSE TO NEW BOYS HOSTEL JN	02
30. BIOCHEMISTRY AND ICER PASSAGE JUNCTION	02
31. CANARA BANK TO PENSIONERS OFFICE JUNCTION	02
32 AERO ENTRANCE	01
33. AERO SPACE TURNING JUNCTION	02
34. IAP & SUBWAY JUNCTION	02
35. SARVAM COMPLEX	07

**BILL OF MATERIALS FOR ALL LOCATIONS (PHASE A)**

<b>SL.NO</b>	<b>ITEM DESCRIPTION</b>	<b>QTY</b>
1.	Outdoor bullet cameras	59Nos
2.	32GB SD cards Class 10	59Nos
3.	64 Channel NVR	01 Nos
4.	10TB,2.5-inch SATA HDD Enterprise version	05 Nos
5.	55-inch LED display Monitor	01 Nos
6.	UPS Online 1 KVA 2 hrsbackuptime with SMF batteries	15Nos
7.	3 mtr height ,76mm dia GI pole with arm of 50 cm lengthfor mounting cameras	10 Nos
8.	Mountings/brackets for outdoor cameras	59Nos
9.	Outdoor 6 Core Single Mode OFC, make AMP/MOLEX/COMMSCOPE	7000 Meters
10.	3 core 2.5mm Armoured outdoor Power Cable	7000 Meters
11.	2-inch ISI marked HDPE pipe	2000 Meters
12.	CAT-6 UTP Cable, make MOLEX/AMP/COMMSCOPE	1500 Meters
13.	25mm PVC conduit	1250 Meters
14.	Single Mode Pigtails with LC Connector, make MOLEX/AMP/COMMSCOPE	300 Nos
15.	Compact 8 UTP port & 1/2 SFP Port, POE Layer-2 Manageable Enterprise, make Cisco or Juniper	15 Nos

16.	Single Mode 1G Transceiver (SFP), make Cisco/Juniper	48Nos
17.	LC-LC, 1-Meter Duplex Patch Cord, make MOLEX/AMP/COMMSCOPE	48Nos
18.	3-Meter Cat-6 UTP Patch Cord, make MOLEX/AMP/COMMSCOPE	30 Nos
19.	Compact 6 port LIU with LC type connector, make MOLEX/AMP/COMMSCOPE	23 Nos
20.	5 Amps Power Socket with Box	23 Nos
21.	IP67 Compliant pole mountable box to accommodate compact network switch, LIU and electrical socket	15 Nos
22.	6U Wall Mountable Network Rack to accommodate Switches, make Netrack/Rittal	9Nos
23.	Rack mountable 8-UTP port & 1/2 SFP Port, POE Layer-2 Manageable Enterprise Switch, make Cisco/Juniper	9Nos
24.	RJ-45 I/O box assembly, make AMP/MOLEX/COMMSCOPE	17Nos
25.	1-Meter Cat-6 UTP Patch Cord, make AMP/MOLEX/COMMSCOPE	15Nos
26.	RJ-45 Connector,make AMP/MOLEX/COMMSCOPE	50 Nos
27.	Rack mountable Fully Loaded Fibre LIU with 12 port duplex LC type connector, makeAMP/MOLEX/COMMSCOPE	14Nos
28.	8 Fibre port (SFP) Layer-2 Manageable Enterprise Switch, make Cisco/Juniper	5 Nos
29.	16 Fibre port (SFP) Layer-2 Manageable Enterprise Switch, make Cisco/Juniper	1 Nos

30.	15 AMPs 3 pin top	23 Nos
31.	POE injector, make Cisco/Juniper	14 Nos
32.	Wireless devices for camera connectivity	05 units

## TECHNICAL SPECIFICATIONS

### CAMERAS(3MP) BULLET TYPE

Sensor:	1/2.8 " progressive CMOS sensor
Effective Pixels:	2048(H)X1536(V)
Electronic Shutter speed: Auto/Manual	1/3 s to 1/100000s
Minimum Illumination :	0.003-0.005 lux @F1.4 colour 0 Lux IR ON
S/N Ratio:	better than 50db
Lens : Motorised Focal Length 2.8mm – 12 mm or better	Focus Motorised control
Optical Zoom: :	5x or better
Max Aperture:	F1.4
Video Compression:	H.264/H.265
Number of streams:	2/3
Bit rate control :	VBR/CBR
Bit rate:	Selectable from 14Kbps to 9000kbps or better
Frame Rate:	Selectable from 5 fps to 25 fps
Day/Night function:	Auto(IR cut filter) colour, B/W
IR Range:	40- 50 mtrs with smart IR feature to be supported
BLC Mode:	BLC/HLC/WDR
White Balance:	Auto/Manual/Natural/outdoor/indoor

Gain Control :	AGC (ON/OFF)
Noise Reduction:	3D DNR
EIS feature :	Yes, to be supported
Defog feature :	Yes, to be supported
DigitalZoom:	14x or better
Flip :	0deg/90deg/180deg/270deg
Mirror :	ON/OFF
Network:	Etherne RJ 45 100/1000 Base-T
Protocols support:	HTTP,HTTPs,TCP,ARP,RTSP,RTP,UDP,SMTP,FTP,DHCP,DNS,DDNS,PPPoE IPv4/6,QoS,UPnP,NTP,Multicast,ICMP,IGMP,SNMP
Interoperability:	ONVIF,PSIA,CGI
Streaming:	Multicast/Unicast
Local storage :	32 GB SD card with ANR features support
Web Viewer:	IE,Chrome,Firefox, Safari
Certifications:	CE (EN 60950: 2000)
:	UL 60950-1
Power:	12VDC,PoE, IEEE 803.af
Environmental:	Operating conditions -40degC to 60 deg C
Enclosure	IP67, Vandal proof

## **NETWORK VIDEO RECORDER (NVR)**

IP Video inputs:	64 Channels
Maximum input bandwidth:	320 Mbps or better
Recording Resolution:	Upto 12 Megapixels
No of Hard disk bays:	8 (SATA drives) Max, capacity per bay upto 10TB
Support for HDD hot swap with RAID 0,1,5,6,10 storage configurable	

Video Formats to be supported:	H.264,H.265
Compliance :	All type of ONVIF cameras to be supported
Video outputs:	2 HDMI, 1 VGA
Audio Input :	1 channel RCA interface
Network interface	2x RJ45 10/100/1000 Mbps Ethernet ports
USB interface:	2x USB 2.00 in the front panel 1x USB 3.00 in the rear panel
Serial interface:	RS 232, RS-485, Keyboard
Power :	200-240 Volts AC, 50 Hz
Operating Temperature:	- 10 degC to 55 degC
Chasis:	19 inches Rack mountable, 2U

Functions to be supported: Record, Search,Playback, (playback at different speeds 2x,4x,8x),export video etc  
Multiple screen windows

## **LED DISPLAY MONITOR**

Display :	LED Full HD Resolution
Screen Size :	55 inches Diagonal
Panel Resolution	1920x1080P Full HD
Aspect Ratio:	16:9
Contrast Ratio:	16,000:1
Connectors & Ports:	HDMI- 2 ports USB 2.0 -01port

Power:	200-240V AC 50 Hz
Mounting :	Wall Mounting
Remote Control unit :	Full function IR remote control unit
Applications:	Control room CCTV monitoring suitable for 24x7x365 operation

### **Wireless device connectivity for cameras**

Wireless 2.4/5 GHz technology add-on or integrated support for IP surveillance cameras to carry compressed video data streams. The equipment if an add-on should support Power Over Ethernet. The data rates should support 1Gbps. Wi-Fi technology is preferable. The Gateway which includes the WiFi Access Point and related controller software should support at least 10 wireless IP surveillance cameras. If proprietary solution is provided, then the gateway device specifications should be specified separately. At least 10 IP cameras are expected to be supported by the gateway.

