



Basic Details			
Organisation Chain	Directorate General of Shipping		
Tender Reference Number	11-33/28/2024-COMP/DGS/31418		
Tender ID	2025_DGS_852834_1	Withdrawal Allowed	Yes
Tender Type	Open Tender	Form of contract	EOI
Tender Category	Services	No. of Covers	1
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No

Cover Details, No. Of Covers - 1			
Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical/Finance	.pdf	Technical Qualification document
		.pdf	Signed EOI

Tender Fee Details, [Total Fee in ₹ * - 0.00]				EMD Fee Details			
Tender Fee in ₹	0.00			EMD Amount in ₹	0.00	EMD Exemption Allowed	No
Fee Payable To	Nil	Fee Payable At	Nil	EMD Fee Type	fixed	EMD Percentage	NA
Tender Fee Exemption Allowed	No			EMD Payable To	Nil	EMD Payable At	Nil



Work /Item(s)					
Title	REOI for System Integrator for setting up of Command Control Centre at Directorate General of Shipping, Mumbai				
Work Description	REOI for Selection of System Integrator for setting up of Command Control Centre at Directorate General of Shipping, Mumbai				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Tender Value in ₹	NA	Product Category	Miscellaneous Services	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	180	Period Of Work(Days)	NA
Location	Directorate General of Shipping, Mumbai	Pincode	400042	Pre Bid Meeting Place	Online, link is available at the EOI Document
Pre Bid Meeting Address	Online, link is available at the EOI Document	Pre Bid Meeting Date	24-Mar-2025 02:30 PM	Bid Opening Place	Online
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates			
Publish Date	11-Mar-2025 03:00 PM	Bid Opening Date	01-May-2025 02:00 PM
Document Download / Sale Start Date	11-Mar-2025 03:00 PM	Document Download / Sale End Date	30-Apr-2025 02:00 PM
Clarification Start Date	12-Mar-2025 10:00 AM	Clarification End Date	25-Mar-2025 04:00 PM
Bid Submission Start Date	26-Mar-2025 03:00 PM	Bid Submission End Date	30-Apr-2025 02:00 PM

Tender Documents

NIT Document	S.No	Document Name	Description		Document Size (in KB)
	1	Tendernotice_1.pdf	EOI Notice		1295.00
PreBid Meeting Document	S.No	Document Name	Document Type	Description	Document Size (in KB)
	1	tech_prebid_896540.pdf	PreBid Meeting Document	Pre bid queries reply	10527.86
Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	EOI.pdf	EOI Document	1278.60

Latest Corrigendum List

S.No	Corrigendum Title	Corrigendum Type	View
1	Date Extension corrigendum	Date	
2	Corrigendum	Technical Bid	

Tender Inviting Authority

Name	DDG
Address	Directorate General of Shipping, Govt. of India 9th Floor, Beta Building, i-Think Techno Campus, Kanjurmarg (East), Mumbai - 400 042, India

**Request for Expression of Interest
(REOI)**

for

**Selection of System Integrator for
setting up of Command Control
Centre at Directorate General of
Shipping Kanjurmarg(E), Mumbai**

Published by:

Directorate General of Shipping, Govt. of India
9th Floor, Beta Building,
i-Think Techno Campus, Kanjurmarg (East), Mumbai - 400 042, India

11th March, 2025

Reference No: 11-33/28/2024-COMP – DGS/31418

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Part I: REOI Process

SECTION I: Request for Expression of Interest (REOI)

1. Invitation

Organisation Background / About DGS

The Directorate General of Shipping (DGS), an attached office of the Ministry of Ports, Shipping and Waterways, Govt. of India, deals in matters relating to merchant shipping. The DGS deals with all matters concerning the Maritime Administration, Maritime Education and Training, development of Shipping Industry and other related subjects.

This Directorate deals with implementation of shipping policy and legislation so as to ensure the safety of life and ships at sea, prevention of marine pollution, promotion of maritime education and training in co-ordination with the International Maritime Organisation, regulation of employment and welfare of seamen, development of coastal shipping, augmentation of shipping tonnage, `ination and certification of Merchant Navy Officers, Supervision and Control of the allied departments and officer under its administrative jurisdiction.

The details about DGS and its functions are available at website <https://www.dgshipping.gov.in>

The Directorate General of Shipping (DGS) through (hereinafter referred to as 'the Authority', 'the Head of Procurement', 'the Procuring Entity' and 'the Procuring Organisation' respectively), invites Request for Expression of Interest (hereinafter referred as the 'REOIs') from eligible and qualified Indian companies/agencies for **Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai.**

DGS seeks applications from qualified system integrators for empanelment to support the phased implementation of advanced technological solutions at its Command & Control Centre, located at: Head Office: 9th Floor, Beta Building, I-Think Techno Campus, Kanjurmarg (East), Mumbai - 400 042, India.

This initiative aligns with DGS's vision of *leveraging technology to enhance transparency, efficiency, and sustainability in India's maritime sector*. Participating agencies will play a crucial role in modernizing maritime operations through innovative technology-driven solutions.

Phases of Implementation:

Phase I: Deployment of Command Control Centre Infrastructure

- Installation of a Video Wall and Computing Hardware.
- Provision of technical support and training.

Phase II: Business Intelligence (BI) and Analytics System

- Development and deployment of BI tools.
- Implementation of real-time dashboards and analytics.

Applicants meeting the qualification criteria would be shortlisted and may be invited for presentation before the selection committee of the Directorate General of Shipping for the final selection. The date and venue of the presentation will be intimated with bidders later. It may be noted that the information in this REOI is indicative only and is liable to change. The actual Scope of Work will be available in the Request for Proposal (RFP) document which will be issued to the eligible / short listed bidders selected through this REOI. **Only bidders shortlisted through this REOI will be eligible to respond to the RFP.**

2. Instructions for REOI

2.1 Important Dates

#	Particulars	Date
1	Date of availability of REOI on CPPP portal	11/03/2025; 03:00 PM
2	Start date for submission of queries	12/03/2025; 10:00 AM
3	End date for submission of queries	25/03/2025; 04:00 PM
4	Start date for submission of EOI response	26/03/2025; 03:00 PM
5	Pre bid meeting Link for the meeting: https://tinyurl.com/2waezb9j	24/03/2025; 02:30 PM
6	Last date for submission of EOI response	14/04/2025; 02:00 PM
7	Opening of Bids	15/04/2025; 02:00 PM

2.2 Advertisement of REOI

The REOI document shall be published on Central Public Procurement Portal – CPPP (<https://eprocure.gov.in/eprocure/app>) and official website of DGS (<https://www.dgshipping.gov.in>). All corrigenda, addendums, amendments, date change to REOI shall be posted at the aforesaid portals and no separate notification shall be issued.

2.3 Governing Language and Law

The REOI submitted by the system integrators and all subsequent correspondence and documents relating to the REOI exchanged between the system integrator and the DGS, should be written in the language specified in Section II: Appendix (or English if nothing is specified - hereinafter referred to as the 'REOI Language'). However, the language of any printed literature furnished by a system integrator in connection with its REOI may be written in any other language provided a certified translation accompanies the same in the REOI language. For interpretation of the REOI, translation in the language of the REOI shall prevail.

The REOI process shall be subject to the laws of the Union of India and the exclusive jurisdiction of courts relevant to the address of the Tender Inviting Authority.

2.4 Acronyms

The following Acronyms have been used in this REOI document:

CA	Chartered Accountant
CERT-In	Indian Computer Emergency Response Team
CIN	Corporate Identity No.
CMMI	Capability Maturity Model Integration
CPPP	Central Public Procurement Portal
DGS	Directorate General of Shipping
DPIIT	Department for Promotion of Industry and Internal Trade
DPR	Detailed Project Report
DSC	Digital Signature Certificate
EOI	Expression of Interest
EPF	Employees' Provident Fund

ESI	Employees' State Insurance
FBS	Fixed Budget Selection
FY	Financial Year
GST	Goods and Services Tax
GSTIN	Goods and Services Tax Identification Number
INDOS	Indian National Database of Seafarers
INR	Indian Rupee
JV	Joint Venture
JV/C	Joint Venture/ Consortium
LCS	Least-Cost Selection
LLP	Limited Liability Partner
MMD	Mercantile Marine Department
MS Act	Merchant Shipping Act
MSA	Master Service Agreement
O & M	Operations and Maintenance
PAN	Permanent Account Number
PO	Purchase Order
PQ	Pre-Qualification
PSU	Public Sector Undertaking
QCBS	Quality Cost Based Selection
REOI	Request for Expression of Interest
RFP	Request for Proposal
SMS	Short Message Service
SSS	Single Source Selection
STQC	Standardisation Testing and Quality Certification
TIA	Tender Inviting Authority
TOR	Terms Of Reference
UAT	User Acceptance Testing
URL	Uniform Resource Locator

2.5 The Contents of the REOI document

This REOI document provides the relevant information and instructions to assist the prospective system integrator's in preparing and submitting REOIs. It also includes the mode and procedure for receipt/ opening, evaluation of REOIs, and shortlisting of system integrators.

The REOI document consists of the following parts. If additional sections/ appendices are included in a specific REOI, these would be detailed in Section II: Appendix.

Part I: REOI process

- 1) Section I: Request for Expression of Interest (REOI)
- 2) Section II: Appendix
- 3) Section III: Qualification Criteria

Part II: Schedule of Requirements

- 1) Section IV: Terms of Reference

Part III: REOI Submission Formats

- 1) Form 1: REOI Form (Covering Letter)
 - a) Form 1.1: System integrator Information
 - b) Form 1.2: Eligibility Declarations
- 2) Form 2: Qualification Criteria – Compliance
 - a) Form 2.1: Performance Capability Statement
 - b) Form 2.2: Financial Capability Statements
 - i) Form 2.2.1: Financial Statement
 - ii) Form 2.2.2: Average Annual Turnover
- 3) Form 3: Checklist for system integrator
- 4) Form 4: Declaration for No Conflict of Interest
- 5) Form 5: Details of ineligibility for corrupt or fraudulent practices / blacklisted with any of the Government or Public Sector Units
- 6) Form 6: Authorisation to Attend Pre-REOI Conference
- 7) Form 7: Other information required

2.5.1 Section II: Appendix

Variable parameters and information related to this specific REOI process are summarised in the appendix.

2.5.2 Section III: Qualification Criteria:

This section lays down the Qualifying Criteria for shortlisting system integrator. The system integrator must have requisite experience with assignments similar in nature in general and specific sectors relevant to the subject assignment. It may indicate the extent of dispensation, if any, allowed for Start-ups under Clause 5.1 below. Unless otherwise stated in Section II: Appendix, system integrator may associate with other firms to enhance their qualifications but should indicate clearly whether the association is in the form of a joint venture/consortium (JV/C) and/or a sub-consultancy. In response to this section, system integrator must submit Form 2: Qualification Criteria – Compliance and its sub-forms 2.1, 2.2, 2.2.1 and 2.2.2.

2.5.3 Section IV: Terms of Reference (TOR)

‘Section IV: Terms of Reference (TOR)’ describes the background, purpose/ objectives, description/ scope, deliverables/ outcomes, and timelines of Services (hereinafter called the ‘Service’) required. The ‘Service’ may include incidental Goods, Works, and other Services if so indicated therein. Any generic reference the ‘Service’ shall be deemed to include such incidental Goods, Works, and other Services.

2.5.4 REOI Formats for submission (To be filled, digitally signed, and uploaded by system integrator)

The system integrator must fill, digitally sign and upload the REOI in the Formats given in Part III: REOI Submission Formats.

2.6 Corrigenda/Addenda to the REOI document

1. Before the deadline for submitting REOIs, the DGS may update, amend, modify, or supplement the information, assessment or assumptions contained in the REOI document by issuing corrigenda and addenda. The corrigenda and addenda shall be published in the same manner as the original REOI document. The system integrators must check the website(s) for any corrigenda/ addenda. Any corrigendum or addendum thus issued shall be considered a part of the REOI document.
2. If considered necessary, the DGS may suitably extend the REOI submission deadline to give reasonable time to the prospective system integrators to take such corrigendum/ addendum into account in preparing their REOI. After the DGS makes such modifications, any system integrator who has submitted his REOI shall have the opportunity to either withdraw his REOI or re-submit his REOI superseding the original REOI within the extended time of submission as per Clause 8.4 below.
3. The DGS may extend the deadline for the REOI submission by issuing an amendment. In such a case, all rights and obligations of the DGS and the system integrators previously subject to the original deadline shall then be subject to the new deadline for the REOI submission.

3. DGS – Right to reject any or all REOIs.

The issue of the REOI document does not imply that the Procuring Entity is bound to shortlist system integrators. The Procuring Entity reserves its right to accept or reject any or all REOIs, abandon/ bypass/ cancel the REOI process and issue another REOI for the same or similar Services before or after shortlisting system integrators. It would have no liability to the affected system integrators or any obligation to inform the affected system integrators of the grounds for such action(s).

4. Participation IN REOI – Eligibility Criteria

4.1 Eligibility Criteria

Subject to other provisions in the REOI document, participation in this shortlisting process is open to all system integrator who fulfil the 'Eligibility' and 'Qualification' criteria. The system integrator should meet the following eligibility criteria as of the date of their REOI submission and should continue to meet these until the subsequent RFP process and contract award. The system integrator shall be required to demonstrate fulfilment of the Eligibility Criteria in Form 1.2 (Eligibility Declarations). The system integrator unless otherwise stipulated in Section II: Appendix.

EC #	Condition	Criteria	Supporting Document
EC1	Legal Entity	The bidder / Lead Bidder must be a private entity (a Consulting Company/ LLC/ LLP /Partnership firm/ Society registered in India under the Companies Act, 1956, 2013,	Copy of certificate for Registration To be submitted for - <ul style="list-style-type: none">• Single Bid - Bidder

EC #	Condition	Criteria	Supporting Document
		2020 / LLP Act, 2008 and subsequent amendments thereto), a public Entity (Government-owned enterprise or institution), or unless otherwise stipulated in Section II: Appendix - Joint Venture/ Consortium (an association of several persons, firms, or companies - hereinafter referred to as JV/C).	<ul style="list-style-type: none"> Consortium Bid – Lead Bidder
EC2	Registration Certification by the concerned authority/government	The bidder / Lead Bidder must have valid registration regarding GSTIN, PAN, EPF, ESI, Labour, or equivalent registration certificate issued by the concerned authority/government as applicable to the subject Services.	<p>Copy of certificate for Registration</p> <p>To be submitted for -</p> <ul style="list-style-type: none"> Single Bid – Bidder Consortium Bid – Lead Bidder
EC3	Declaration of Insolvency, Bankruptcy, etc.	The bidder / Lead Bidder must not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended, and must not be the subject of legal proceedings for any of aforesaid reasons.	<p>Declaration by authorised signatory in Form 1.2</p> <p>In case of:</p> <ul style="list-style-type: none"> Single Bid – Bidder Consortium Bid – All members
EC4	Blacklisting by Govt.	<p>i. The bidder / Lead Bidder must Not stand declared ineligible/ blacklisted/ banned/ debarred by the Procuring Organisation or its Ministry/ Department from participation in its procurement processes; and/ or</p> <p>ii. Not be convicted (within three years preceding the last date of EOI submission) or stand</p>	<p>Declaration by authorised signatory in Form 1.2</p> <p>In case of:</p> <ul style="list-style-type: none"> Single Bid – Bidder Consortium Bid – All members

EC #	Condition	Criteria	Supporting Document
		<p>declared ineligible/ suspended/ blacklisted/ banned/ debarred by appropriate agencies of the Government of India from participation in procurement processes of all its entities, for:</p> <p>a. offenses involving moral turpitude in business dealings under the Prevention of Corruption Act, 1988 or any other law; and/or</p> <p>b. offenses under the Indian Penal Code or any other law for causing any loss of life/ limbs/ property or endangering Public Health during the execution of a public procurement contract and/ or</p> <p>c. suspected to be or of doubtful loyalty to the Country or a National Security risk as determined by appropriate agencies of the Government of India.</p> <p>iii. Not have changed its name or created a new "Allied Entity", consequent to having declared ineligible/ suspended/ blacklisted/ banned/ debarred as above</p>	
EC5	Conflict of Interest	<p>The bidder / Lead Bidder must Not have a conflict of interest (as defined in clause 1.5, Conflict of Interest below), which substantially affects fair competition. No attempt should be made to induce any other Bidder to submit or not to</p>	<p>Declaration by authorised signatory in Form 1.2</p> <p>In case of:</p> <ul style="list-style-type: none"> • Single Bid – Bidder • Consortium Bid – All members

EC #	Condition	Criteria	Supporting Document
		submit an EOI to restrict competition.	

Not have a conflict of interest (as defined in clause 4.5 below), which substantially affects fair competition. No attempt should be made to induce any other consultant/ system integrator to submit or not to submit an REOI to restrict competition.

4.2 Eligibility of system integrator from Restricted Countries

4.2.1 Restrictions based on Reciprocity.

Entities from countries (if so, identified in Section II: Appendix) as not allowing Indian companies to participate in their Government procurement shall not be allowed to participate (directly or as a sub-contractor or as a member of a JV/C) on a reciprocal basis in this REOI process under the "Public Procurement (Preference to Make in India) Order 2017¹" (MII – para 10 -d) of Department for Promotion of Industry and Internal Trade, (DPIIT). The system integrator must apprise themselves of the latest version of this order.

4.2.2 Restrictions based on Land Borders

Order (Public Procurement No. 1) issued by the Government of India (Ministry of Finance Department of Expenditure Public Procurement Division) restricting procurement from system integrator from certain countries that share a land border with India shall apply to this procurement. The system integrator must apprise themselves of the latest version of this order. Any system integrator from a country that shares a land border with India, excluding countries to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects (as listed on the website of the Ministry of External Affairs), – hereinafter called 'Restricted Countries' shall be eligible to participate in this REOI, only if the system integrator is registered with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). The system integrator shall enclose the certificate in Form 1 - REOI Form.

4.3 Sub-Consultants/Sub-Contracting

The system integrator may propose to associate Sub-consultants for specialised parts of the Services provided their names and details are clearly stated in the REOI. Such Sub- consultants should not circumvent the eligibility condition laid down above. The value of such sub-contracts shall not exceed the limit specified (25% of the contract price, if not specified) in Section II: Appendix. Nevertheless, the system integrator shall solely remain responsible for sub-contracted portions of the Services. Key and Non-key personnel, whether full-time employees or on contract, shall not be considered sub-consultants. Procurement of incidental goods, equipment hires, or labour engagement shall not be treated as sub-contracting.

4.4 Joint Venture/Consortium (JV/C)

- 1) In the case where a system integrator is or proposes to be a Joint Venture/ Consortium (that is, an association of several persons, firms, or companies - hereinafter referred to as JV/C), then unless otherwise specified in Section II: Appendix, in JV/C:
 - a) members should not be more than four (04)

- b) no member should have less than 10% participation.
 - c) members having participation between 10% and 20% shall be termed as non-substantial members.
 - d) Members having more than 20% participation shall be termed as substantial members.
 - e) The Lead member must have at least 40% participation.
 - f) The lead member/consultant and various categories of members of the JV/C must be identified.
 - g) Number of non-substantial members shall not be more than one (01)
- 2) The JV/C and all members must satisfy all the eligibility requirements in this REOI document.
 - 3) JV/C and its members must jointly meet the qualification criteria in Section III
 - Qualification Criteria. The technical/ experience qualification of all JV/C members (substantial members, Lead member and non-substantial members) shall be evaluated jointly as per Evaluation Criteria. However, for financial criteria of qualification, credentials of substantial and lead members (excluding non-substantial members) shall only be considered.
 - 4) All the members shall be jointly and severally liable for the entire contract if selected in the RFP Process.

4.5 Conflict of Interest

- 1) Any system integrator with a conflict of interest that substantially affects fair competition shall not be eligible to participate in this procurement process. REOIs found to have a conflict of interest shall be rejected as nonresponsive. Consultant shall be required to declare the absence of such conflict of interest in Form 1.2 - Eligibility Declarations. A consultant in this procurement process shall be considered to have a conflict of interest if the consultant:
 - a. directly or indirectly controls, is controlled by or is under common control with another Consultant; or
 - b. receives or has received any direct or indirect subsidy/ financial stake from another system integrator; or
 - c. has the same correspondence address or same legal representative/ agent as another system integrator for purposes of this REOI; or
 - d. has a relationship with another system integrator, directly or through common third parties, which puts it in a position to have access to information about or influence the REOI of another system integrator; or
 - e. would be providing goods, works, or non-consulting services resulting from or directly related to consulting services that it provided (or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm) for the procurement planning (inter-alia preparation of feasibility/ cost estimates/ Detailed Project Report (DPR), design/ technical specifications, terms of reference (TOR)/ Activity Schedule/ schedule of requirements or the REOI/ RFP Document etc) of this procurement process; or
 - f. has a close business or family relationship with a staff of the Procuring Organisation who:
 - i. are directly or indirectly involved in the preparation of the REOI document or Terms of Reference of the procurement process and/or the evaluation in REOI and/ or RFP process; or
 - ii. would be involved in the implementation or supervision of the resulting contract
 - iii. Any conflict stemming from such a relationship must be reported and resolved in a manner acceptable to the Procuring Entity throughout the REOI and RFP processes and execution of the contract.

- iv. A system integrator may participate as a sub-consultant in more than one bid but only in that capacity (i.e., without bidding in an individual capacity). Bids submitted in violation of this procedure will be rejected.
- 2) Participation of only One Entity from Affiliates: Only one entity from among a system integrator and its affiliates (that directly or indirectly control or are controlled by or are under common control with that firm) individually or as part of a joint venture or as a Sub-consultant shall be permitted to participate in REOI.
- 3) The system integrator shall furnish information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this REOI and RFP process.

5. Purchase preference policies of the government

5.1 Relaxation in Prior Turnover and Experience to Start-ups

Intentionally Removed

6. Downloading the REOI document, clarifications and pre-EOI conference

6.1 Availability and Downloading of the REOI Document

The REOI Document containing the details of qualification criteria, submission requirement, brief objective & scope of work, etc. is enclosed. REOI document is also available for downloading from the CPPP Portal (<https://eprocure.gov.in/eprocure/app>) and from DGS website www.dgshipping.eov.in. Further details, if any, may be obtained from Shri Ravi K Moka, DDG – IT and E-Governance, Directorate General of Shipping, 9th Floor, BETA Building, I-Think Techno Campus, Kanjur Village Road, Kanjurmarg (E), Mumbai-400042. Email: ravi.k43@gov.in

Interested system integrators should provide sufficient and relevant information demonstrating that they meet the specified eligibility criteria and have the required qualifications to be shortlisted for providing the Services.

6.2 Clarifications

A System integrator may seek clarification of the REOI document only through the CPPP portal (<https://eprocure.gov.in/eprocure/app>) before the date and time prescribed in Section II: Appendix (or, if not mentioned, before fourteen days of the deadline for the REOI submission). This deadline shall not be extended in case of any intervening holidays. No other means of submission of queries shall be entertained. All such queries shall relate to the REOI document alone, and queries related to a detailed analysis of Reference, payment terms and mode of selection shall only be entertained during the RFP Process. The Procuring Entity shall respond no later than seven days before the deadline for REOI submission. The query and clarification shall be shared with all prospective system integrators on the portal without disclosing its source. If required, the Procuring Entity may modify the REOI document that may become necessary due to the clarification through an Addendum/ Corrigendum issued as per clause 2.4 above

7. Preparation of REOI

7.1 REOI Submission Formats:

The system integrator must fill and submit the REOI in the Formats in Part III - REOI Submission Formats'. REOI by the system integrator shall include inter-alia duly signed or digitally signed scanned copies of the original documents in pdf format.

7.2 EOI Validity

- 1) Unless specified to the contrary in Section II: Appendix, REOIs shall remain valid for a period not less than 90 (sixty) days from the deadline for the REOI submission stipulated in Section II: Appendix. An REOI valid for a shorter period shall be rejected as nonresponsive.
- 2) In case the day up to which the REOIs are to remain valid falls on/ subsequently declared a holiday or closed day for the Procuring Entity, the REOI validity shall automatically be deemed to be extended up to the next working day.
- 3) In exceptional circumstances, before the expiry of the original time limit, the Procuring Entity may request the system integrator to extend the validity period for a specified additional period. The request and the consultants' responses shall be made in writing or electronically. A system integrator may agree to or reject the request. A system integrator who has agreed to the Procuring Entity's request for extension of EOI validity, however, in no case he shall be permitted to modify his REOI.

8. Signing and uploading of REOIs

8.1 Relationship between System Integrator and eProcurement Portal

The Procuring Entity is neither a party nor a principal in the relationship between the system integrator and the organization hosting the e-procurement portal (<https://eprocure.gov.in/eprocure/app>) (hereinafter called the portal). System Integrators must comply with the rules, conditions, regulations, procedures, and implied conditions/ agreements of the eProcurement portal, including registration, compatible Digital Signature Certificate (DSC) etc. System Integrators shall settle clarifications and disputes, if any, regarding the portal directly with them. In case of conflict between provisions of the portal with the REOI document, provisions of the portal shall prevail. System Integrators may study the resources provided by the Portal for System Integrators.

8.2 Signing of REOI

The individual signing/ digitally signing the REOI or any other connected documents should submit an authenticated copy of the document(s), which authorizes the signatory to commit and submit REOIs on behalf of the System Integrator along with Form 1.1: System Integrator Information.

8.3 Submission/Uploading of REOIs

8.3.1 Submission/Uploading to the Portal

- 1) REOIs must be uploaded on the eProcurement Portal (<https://eprocure.gov.in/eprocure/app>) mentioned in Section II: Appendix until the submission deadline. If the office happens to be closed on the deadline to submit the REOIs as specified above, this deadline shall not be extended. No manual REOIs shall neither be made available nor accepted for submission. REOI submitted through modalities other than those stipulated in Section II: Appendix shall be liable to be rejected as nonresponsive.
- 2) In the case of downloaded documents, System Integrators must not make any changes to the contents of the documents while uploading, except for filling in the required information. Otherwise, the REOI shall be rejected as nonresponsive. Uploaded Pdf documents should not be password protected. System Integrators should ensure the clarity/ legibility of the scanned documents uploaded by them.
- 3) The date and time of the e-Procurement server clock, which is also displayed on the dashboard of the system integrator, shall be taken as the reference time for deciding the closing time of REOI submission. System Integrators are advised to ensure they submit their REOI within the

deadline of REOI submission, taking the server clock as a reference, failing which the portal shall not accept the REOIs. No request on the account that the server clock was not showing the correct time and that a particular system integrator could not submit their REOI because of this shall be entertained. Failure or defects on the internet or heavy traffic at the server shall not be accepted as a reason for a complaint. The Procuring Entity shall not be responsible for any failure, malfunction or breakdown of the electronic system used during the e-Tender process.

- 4) Only one copy of the REOI can be uploaded, and the System Integrator shall digitally sign all statements, documents, and certificates uploaded by him, owning sole and complete responsibility for their correctness/ authenticity as per the IT Act 2000 as amended from time to time. An REOI submitted by a Joint Venture shall be digitally signed by an authorized representative who has a written power of attorney signed by each member's authorized representative to be legally binding on all members.
- 5) All REOIs uploaded by system integrators to the portal shall get automatically encrypted. The encrypted REOI can only be decrypted/ opened by the authorized persons on or after the due date and time. They should ensure the correctness of the REOI before uploading and take a printout of the system-generated submission summary to confirm successful REOI upload.

8.3.2 Implied acceptance of procedures by System integrator

Submission of REOI in response to the REOI document is deemed to be acceptance of the procedures and conditions of the e-Procurement and REOI document.

8.3.3 Responsibility of the System Integrator to declare all changes.

System Integrator must advise DGS immediately in writing of any material change to the information provided in their REOI submission, including any substantial change in their ownership, eligibility, or financial or performance capacity. For shortlisted System Integrators, this requirement applies until a contract is awarded in the following RFP process. For the consultant successful in the RFP process, this requirement shall apply till the execution of the resultant contract.

8.4 Modification, Resubmission and Withdrawal of REOIs

8.4.1 Modification and Re-submission

Once submitted in e-Procurement, System Integrator cannot view or modify their REOI since it is locked by encryption. However, resubmission of the REOI by System Integrators for any number of times superseding earlier REOI(s) is allowed up to the submission deadline by the procedures prescribed in the portal. Resubmission of an REOI shall require uploading all documents afresh. The system shall consider only the last REOI successfully submitted.

8.4.2 Withdrawal

The consultant may withdraw his REOI before the submission deadline by following procedures prescribed by the portal, and it shall be marked as withdrawn and shall not get opened during the REOI opening. Once withdrawn, the consultant will not allow to submit the same REOI. No REOI should be withdrawn after the submission deadline and before its validity period expires.

9. REOI opening.

REOIs received shall be opened on date and time in Section II: Appendix.

10. Evaluation of REOIs and shortlisting of System Integrators

10.1 General Norms

10.1.1 Evaluation is based only on declared criteria

- 1) The evaluation shall be based upon scrutinising and examining all relevant data and details submitted by SI in its/ his EOI and other allied information deemed appropriate by DGS. Evaluation of EOIs shall be based only on the criteria/ conditions included in the REOI document.
- 2) Information relating to the evaluation of EOIs and shortlisting results shall not be disclosed to any participant or any other persons not officially concerned with such process until the notification of shortlisting is made in accordance with clause 10.2.5 below.
- 3) The determination shall not consider the qualifications of other firms, such as the system integrator's subsidiaries, parent entities, affiliates, or any other firm(s) different from the system integrator.

10.1.2 Clarification of REOIs and shortfall documents

- 1) During the evaluation of REOIs, the DGS may, at its discretion, but without any obligation to do so, ask system integrators to clarify its EOI by a specified date (or, if not specified, seven days from the date of receipt of such request). The system integrator should answer the clarification within that specified date. The clarification request and response shall be submitted in writing or electronically. No change in the substance of the EOI shall be sought, offered, or permitted that may grant any undue advantage to such a system integrator. Any clarification submitted by a system integrator regarding its EOI that is not in response to a request by the Purchasing Entity shall not be considered.
- 2) DGS reserves its right to, but without any obligation to do so, seek any shortfall information/ documents. Provided such information/ documents are historical, which pre-existed at the time of the EOI opening and which have not undergone change since then and do not grant any undue advantage to any System Integrator. There is a provision on the portal for requesting Short-fall documents from the system integrators. The system allows taking the shortfall documents from system integrators only once after the EOI opening.
- 3) If the system integrator fails to provide satisfactory clarification and/or missing information, its EOI shall be evaluated based on available information and documents.

10.1.3 Contacting Procuring Entity during the evaluation

From EOI submission to shortlisting of System Integrators, no System Integrator shall contact DGS on any matter relating to the submitted EOI. If a System Integrator needs to contact DGS relating to this EOI, it should do so only in writing or electronically. Any effort by a System Integrator to influence DGS during the REOI process shall be construed as a breach of the Code of Integrity, and EOI shall be liable to be rejected as non-responsive in addition to other punitive actions for such a breach as per the REOI document.

10.2 Evaluation of REOIs and Shortlisting

In evaluating the EOI, conformity to the eligibility and qualification criteria to those in the REOI document is ascertained. Additional factors incorporated in the REOI document shall be considered as indicated therein.

10.2.1 Determining Responsiveness

Only substantively responsive EOIs shall be evaluated for shortlisting. A substantively responsive EOI is complete and conforms to the REOI document's essential terms and conditions. Unless otherwise stipulated in Section II: Appendix, the following are some of the crucial aspects for which an EOI shall be rejected as nonresponsive:

- 1) The EOI is not in the prescribed format or is not submitted as per the stipulations in the REOI document.
- 2) The system integrator is not eligible to participate in the EOI as per laid down eligibility criteria.
- 3) The EOI validity is shorter than the required period.
- 4) The EOI departs from the essential requirements stipulated in the EOI document.
- 5) Non-submission or submission of illegible scanned copies of stipulated documents/ declarations if any
- 6) The system integrator fails to provide and/ or comply with the required information, instructions etc., incorporated in the REOI document or gives evasive information/ reply against any such stipulations.
- 7) The system integrator furnishes wrong and/ or misleading data, statement(s) etc. In such a situation, besides rejecting the EOI as nonresponsive, it is liable to attract other punitive actions under relevant provisions of the REOI document for breach of the Code of Integrity

10.2.2 Evaluation of Eligibility

DGS shall determine, to its satisfaction, whether the system integrators are eligible as per Clause 4 above to participate in the REOI process as per submission in 'Form 1.2: Eligibility Declarations'. The eligibility evaluation shall be on a "pass" or "fail" basis. A system integrator must achieve a "pass" on all the criteria to proceed to the next step. Any system integrator not achieving a 'pass' in any of the eligibility criteria shall be rejected as nonresponsive.

10.2.3 Evaluation of Qualification Criteria

- 1) DGS shall determine whether the System Integrators are qualified and capable in all respects to be shortlisted to provide the 'Services' (subject to dispensation, if any, for Start-ups, as per clause 5.1 above), as per Section III: Qualification Criteria and submission in Forms listed in Part II: 'EOI Submission Formats'. The determination shall not consider the qualifications of other firms, such as the system integrator's subsidiaries, parent entities, affiliates, or any other entity different from the system integrator. DGS reserves the right to waive minor deviations in the qualification criteria if they do not materially affect the capability of a system integrator to perform the contract. The Experience of Key Experts are not included in the shortlisting criteria but shall be evaluated at the RFP stage.
- 2) System integrator's planning to subcontract any of the Key Activities indicated in Part II Schedule of Requirements to Sub- system integrators in accordance with clause 4.3 above, shall specify the activity(ies) or parts of the Services to be subcontracted in their EOI identifying the proposed Sub-consultants in their EOI. Experience (but not Financial Qualifications) of such proposed Sub-consultant(s) can be used to meet the experience requirements specified in Section III Qualification Criteria.
- 3) Unless otherwise stipulated in Section II: Appendix, assignments completed by the system integrator's individual experts working privately or through other consulting firms cannot be claimed as the relevant experience of the Consultant or that of the system integrator's partners or sub-consultants in Form 2.1: Performance Capability Statement.

10.2.4 Verification of Original Documents at RFP Process

The DGS reserves its right to call for verification, originals of all self-certified copies of uploaded documents from the system integrator's during the following RFP Process. If the shortlisted system integrator fails at that stage to provide such originals or, in case of substantive discrepancies in such documents, it shall be construed as a breach of the Code of Integrity (see clause 12 below). Such RFP proposals shall be liable to be rejected as nonresponsive in addition to other punitive actions for such a breach.

10.2.5 Declaration of Shortlisted system integrator

- 1) EOIs of system integrator that succeed in the above evaluation shall be shortlisted. Provisionally shortlisted system integrator will be informed of the condition(s) that must be met before submitting their Proposal in the RFP process. Such shortlisting shall remain valid for a period specified in Section II: Appendix (six months from the date of declaration, if not so specified).
- 2) Only shortlisted (including provisionally shortlisted) system integrator shall be invited to participate in the following RFP process. If stipulated in Section II: Appendix, if there are a larger number of consultants meeting the evaluation criteria, the shortlist shall be restricted to a specified number of system integrator (if not specified, eight (8) system integrators) based on higher Average Turnover (or any other criteria, if so, stipulated therein).
- 3) The name and address of the shortlisted system integrator (s) shall be published in the portal and notice board/ bulletin/website of DGS. All system integrators shall be advised about shortlisting of their EOIs or otherwise without disclosing the comparative position of their EOIs with that of others. Shortlisted system integrators must not advertise or publish the same in any form without the prior written consent of the Procuring Entity.
- 4) Shortlisting a system integrator is an administrative process and does not confer any legal or contractual rights on him. Since original documents/ certificates are not being called for and examined at this stage, all shortlisted shall be conditional upon final verification of such documents/ certificates during the RFP Process.

10.3 Publication of RFP following with REOI

DGS shall publish a Request for Proposal (RFP) addressed exclusively to shortlisted system integrator for the following procurement process through the eProcurement portal (<https://eprocure.gov.in/eprocure/app>). DGS/ the Portal may issue notifications/ alerts to such system integrator but without any liability. Such system integrator shall be responsible for being on the lookout for the RFP on the portal. While publishing the RFP, the Procuring Entity reserves its right to elaborate further on the brief overview of the proposed procurement/scope of work, qualification Criteria and other terms & conditions without vitiating the shortlisting process. Shortlisted system integrator shall have no claim in this regard.

11. Grievance redressal/complaint procedure

- 1) System integrators have the right to submit a complaint or seek de-briefing if he is not shortlisted in this REOI process, in writing or electronically, within ten days of the declaration of REOI evaluation results. The complaint shall be addressed to the Head of Procurement.
- 2) Within five working days of receipt of the complaint, the Tender Inviting Authority shall acknowledge the receipt in writing to the complainant, indicating that it has been received. The response shall be sent in due course after a detailed examination.
- 3) The Tender Inviting Authority shall convey the final decision to the complainant within 15 days of receiving the complaint. No response shall be given regarding the confidential process of evaluating EOIs before the results are notified, although the complaint shall be kept in view during such a process. However, no response shall be given regarding the following topics explicitly excluded from such complaint process:
 - a) Only a system integrator who has participated in the REOI process and has not been shortlisted can make such a representation. Complaints regarding shortlisting or exclusion of other system integrators shall not be entertained.

- b) No third-party information (REOIs, eligibility/ qualification) shall be sought and must not be included in the response.
- c) Following decisions of the DGS shall not be subject to review:
 - i) Determination of the need for procurement.
 - ii) Complaints against eligibility and qualification criteria except under the premise that they are either vague or too specific to limit competition.
 - iii) Choice of the selection procedure.
 - iv) Provisions limiting the participation of system integrators in the REOI process, in terms of policies of the Government.
 - v) Provisions regarding purchase preferences to specific categories of system integrators in terms of policies of the Government.
 - vi) Cancellation of the REOI process except where it is intended to subsequently re-tender the same Services

12. Code of integrity in public procurement, misdemeanours and penalties

Code of Integrity and penalties for violating the Govt of India, Ministry of Finance, Department of Expenditure shall apply to this REOI process. Procuring authorities, consultants, suppliers, contractors, and system integrators should observe the highest standard of integrity and not indulge in prohibited practices or other misdemeanours, either directly or indirectly, during the entire procurement Process (including this REOI) or the execution of resultant contracts.

Note: For further details, please refer to appended Section II: Appendix.

Digitally Signed by

Tender Inviting Authority (TIA)

[Shri. Ravi K Moka, DDG - IT and E- Governance, email id: ravi.k43@gov.in]

13. Audit by Third Party

DGS at its discretion may appoint third party(s) for auditing the activities of onsite services and operations of entire services provided to the DGS. The services shall include, not limited to, hardware's supplied to DGS, Software's etc.

Section II: Appendix

Request for Expression of Interest Document No. xx-xx/x/xx/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

Publisher: Directorate General of Shipping (DGS), Govt of India

1.0 Basic REOI Details			
Tender Title	REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai		
Name of Project	Setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai		
Tender Reference Number	xx-xx/x/xx/REOI/001	Tender ID	Refer CPPP Portal
Tender Type	Expression of Interest	Tender Category	Services
No. of Covers	Single Cover	Product Category	Providing complete
Domestic/ Global Procurement	Domestic Procurement	Organisation:	Directorate General of Shipping (DGS)
The Procuring Entity:	Directorate General of Shipping (DGS)	Authority on whose behalf EOI is invited	The President of India, through the Head of Procurement of the Directorate General of Shipping (DGS)
Through the	Shri Ravi K Moka, DDG	Tender Inviting Authority (TIA)	Directorate General of Shipping (DGS)
Address	Directorate General of Shipping, Govt. of India 9th Floor, Beta Building, i-Think Techno Campus, Kanjurmarg (East), Mumbai - 400 042, India		
2.0 Critical Dates (Clause 6; 7; 8, and 9)			
Published Date	Refer CPPP	EOI Validity (Days from the date of EOI Opening) – REOI Clause 7.2	Min. 90 days
Document Download Start Date & Time	Refer CPPP	Document Download End Date & Time	Refer CPPP

Clarification Start Date & Time	Refer CPPP	Clarification End Date & Time	Refer CPPP
EOI Submission Start Date & Time	Refer CPPP	EOI Submission Closing Date & Time	Refer CPPP
EOI Opening Date & Time	Refer CPPP		
3.0 Eligibility Criteria			
As mentioned in REOI; <i>Refer Section I (clause 4: Eligibility Criteria)</i>			
4.0 Obtaining the REOI document and clarifications (Clauses 6 & 8)			
eProcurement and Procuring Entity's Portal/ Help Desk	https://eprocure.gov.in/eprocure/app	Refer CPPP	
	https://www.dgshipping.gov.in/		
Cost of REOI document (INR)	Nil		
Office/ Contact Person/ email for clarifications	Shri. Ravi K Moka, DDG IT and E - Governance Email id: ravi.k43@gov.in		

5.0 Pre-EOI Conference (Clause 6.3)			
Is a Pre-EOI Conference proposed to be held?		No	
Place, time, and date of the Pre-EOI Conference		NA	
Place, time, and date before which Written queries for the pre-EOI conference must be received		NA	
Place, time, and date before which registration of participants for the pre-EOI conference must be received		NA	
6.0 Preparation and Submission and Opening of EOIs (Clauses 7 and 8)			
EOIs to be Addressed to	President of India, Through Head of Procurement, Directorate General of Shipping (DGS), Govt of India		
Instructions for Online EOI Submission	Refer CPPP		
Language of Submission	English	EOI Validity	Min. 90 days

EOI Opening Place	Online CPPP Portal		
7.0 Evaluation of EOI and Qualification Criteria			
As mentioned in REOI; Section I (Clause 10); Section III Qualification Criteria			
8.0 About RFP that would follow – clause 10.3			
RFP to be issued	Limited to shortlisted system integrator/s from this EOI	Form of Contract from RFP	To be mentioned in RFP
Selection Method	QCBS 70:30	Bid Security Requirements	To be mentioned in RFP
Performance Security	To be mentioned in RFP		

Section III: Qualification Criteria

REOI document No. xx-xx/x/xx/REOI/001

Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

Note for System integrator: Regarding this section, system integrators shall submit the following forms:

- 1) Form 2: Qualification Criteria – Compliance
 - a) Form 2.1: Performance Capability Statement
 - b) Form 2.2: Financial Capability Statements
 - i) Form 2.2.1: Financial Statement
 - ii) Form 2.2.2: Average Annual Turnover
 - c) Form 3: Checklist for System integrator
 - d) Form 4: Declaration for No Conflict of Interest
 - e) Form 5: Details of ineligibility for corrupt or fraudulent practices / blacklisted with any of the Government or Public Sector Units
 - f) Form 6: Other information required.
 - g) Relevant date when the specified period ends for different supporting reports shall be:
 - i) For all annual reports, the periods mentioned end date with the financial year.
 - ii) For other statements, the periods mentioned end on the month before the last date of EOI submission.

S.NO	QC #	Condition	Criteria	Supporting Document
Criteria 1 General and Similar Experience				
	QC1	Similar Experience	<i>. During the last five years, the bidder/lead bidder must have system integrator experience in setting up a Command and Control Centre project, including infrastructure deployment, operational support, and compliance monitoring.</i>	Form 1.1: Bidder Information Form 2.1: Performance Capability Statement.
	QC2	Similar Experience	<i>During the last five years, the bidder/lead bidder must have experience in data integration, legacy system modernization, disaster recovery, and interoperability for large-scale IT infrastructure projects.</i>	Form 2.1: Performance Capability Statement.
	QC3	General (Certification)	The Service Provider in case of consortium must have been assessed for	Copy of valid certificate In case of: • Single Bid – Bidder

S.NO	QC #	Condition	Criteria	Supporting Document
			<p>I. ISO 9001 for Quality Management</p> <p>II. ISO 27001 for Information Security Management</p> <p>III. CMMI Level 3 and above certification</p> <p>The certifications should be valid on the date of bid submission. In case the certification is under renewal, the Bidder shall provide the details of the previous certifications and the current assessment consideration in the Bid Process. Bidder to submit a valid certificate at the time of signing the contract (if selected) otherwise bidder will be disqualified.</p> <p>Bidder shall ensure that the certifications continue to remain valid till the end of the Agreement</p>	<ul style="list-style-type: none"> • Consortium Bid – Lead bidder and Consortium members
Criteria 2 - Financial Capability				
	QC4	Turnover	<p>Turnover: Minimum average annual turnover of INR 25 Cr. at least, calculated as total certified payments received for contracts in progress or completed within the last 3 years.</p> <p>For MSME INR 10 Cr. for the last three financial years ending 31st March 2024 as evidenced by the audited accounts of the company.</p> <p>In case of consortium, consortium member (except Lead Bidder) must have a minimum turnover of INR 10 Crore (Ten Crores)</p>	<p>Form 2.2: Financial Capability Statements</p> <p>In case of:</p> <ul style="list-style-type: none"> • Single Bid – Bidder • Consortium Bid – Lead bidder
	QC5	Financial: Net worth	<p>The bidder (for single firm) should have a positive net for 3 consecutive years i.e. 2021-22, 2022-23 and 2023-24</p> <p>In case of a Consortium, the Lead Member must have positive net worth.</p>	<p>CA Certificate for 3 Years</p> <ul style="list-style-type: none"> • Single Bid – Bidder • Consortium Bid – Lead bidder <p>Bidder to provide CA certificate for 2021-22, 2022-23 and 2023-24.</p>

S.NO	QC #	Condition	Criteria	Supporting Document
Criteria 3 - Project Experience				
	QC6	Technical Capability	<p><i>The bidder (single firm or any member of the consortium) must have System Integrator experience of successful Go-Live/completed project during the last three years (from the last date of bid submission) in either</i></p> <p><i>ONE Command and Control Centre project of amount not less than Rs. 5 crores</i></p> <p>OR</p> <p><i>TWO Data Integration/Interoperability projects of amount not less than Rs. 2.5 crores each.</i></p> <p>THREE and more will have added weightage in the QCBS bidding format</p> <p>Each of which includes setting up of Command-and-Control Centre, implementation of a Business Intelligence (BI) tool and data analytics, Software Support, training, support manpower & maintenance involving services to any state / central government organization in India and PSU in India or abroad during the last three financial years.</p> <p>The proposed BI Tool for analytics and dashboards must have been listed in the "Leaders" segment of Gartner's Magic Quadrant in at least one of the last three years.</p>	<ul style="list-style-type: none"> • Project completion certificates • Form 2.2: Financial Capability Statements • Proof of Gartner listing for the proposed BI Tool.

Note to system integrator: During RFP Process, while original documents/ certificates are called for to authenticate the qualification claimed, the following may be kept in mind:

1. When a joint venture or other association submits the bid, in that case, all members (other than non-substantial members) in the JV/C must submit their financial statements in order of the member's share in the partnership, greatest to least. The figures of members of a JV/C (other than non-substantial members) shall be added to determine compliance with the minimum financial qualifying criteria. However, unless otherwise stated in Section II: Appendix, for a JV/C to qualify, the Lead member must meet at least 40 percent of those minimum criteria for an

individual Bidder and other members at least 20% of the criteria. Failure to comply with this requirement shall result in the rejection of the JV/C's bid.

2. The system integrator shall submit the audited balance sheet and/or banking reference along with their RFP proposal. An authorised representative of the system integrator must -sign the statement.

Part II: Schedule of Requirements

SECTION IV: Terms of Reference (TOR)

1. Background

The Directorate General of Shipping (DGS), operating under the Ministry of Ports, Shipping, and Waterways, Government of India, serves as the apex authority overseeing merchant shipping in the country. It is responsible for managing various aspects of Maritime Administration, Maritime Education & Training, and the overall development of the shipping sector. To enhance efficiency, DGS has implemented multiple IT and e-Governance solutions across its headquarters and associated offices, catering to a wide range of stakeholders, including seafarers, shipping companies, multimodal transport operators, Maritime Training Institutes, and Recruitment and Placement Service providers.

In line with its commitment to service excellence and operational efficiency, DGS continues to drive various IT and e-Governance initiatives. These efforts include system implementation, upgrades, and strategic planning for future deployments. A comprehensive overview of all current, planned, and future IT & e-Governance solutions within DG Shipping is presented in Figure 1: DGS Ecosystem.



Figure 1: DGS Ecosystems

As part of its digital transformation, DGS ensures that all existing and future IT & e-Governance initiatives align with a standardized Data and Cybersecurity Framework. These initiatives strictly comply with the regulatory guidelines set by the Ministry of Electronics and Information Technology (MeitY),

the National e-Governance Division (NeGD), the Digital Personal Data Protection (DPDP) Act, and the National Critical Information Infrastructure Protection Centre (NCIIPC). To maintain data security and integrity, these standards will be embedded within all IT & e-Governance solutions, with compliance enforced through Service Level Agreement (SLA) based contracts. This approach aims to establish a secure, resilient, and efficient IT & e-Governance ecosystem for the Directorate.

In line with this, the Directorate seeks applications from qualified system integrators for **empanelment to support the phased implementation of advanced technological solutions at its Command & Control Centre**, located at: Head Office: 9th Floor, Beta Building, I-Think Techno Campus, Kanjurmarg (East), Mumbai - 400 042, India.

This initiative aligns with DGS's vision of **leveraging technology to enhance transparency, efficiency, and sustainability in India's maritime sector**. Participating agencies will play a crucial role in modernizing maritime operations through innovative technology-driven solutions.

2. Purpose/ Objectives

The Directorate General of Shipping (DGS), Mumbai, invites Expressions of Interest (Eoi) for phased implementation from reputed and experienced system integrators for the following:

- I. Phase I: Deployment of Command Control Centre Infrastructure
 - Installation of a Video Wall and Computing Hardware.
 - Provision of technical support and training.
- II. Phase II: Business Intelligence (BI) and Analytics System
 - Development and deployment of BI tools.
 - Implementation of real-time dashboards and analytics.

This infrastructure will enable real-time visualization, analysis, decision-making, and monitoring of maritime operations. Additionally, this will enable maintaining a Business Intelligence (BI) & Analytics System to support data-driven decision-making, incident management, and policy formulation for maritime activities under DGS.

Scope of Work

The work is broadly divided into two phases:

Phase I: Deployment of Command & Control Centre Infrastructure

A. Video Wall System

i. Design, Supply, and Installation:

- Supply and installation of a high-resolution, seamless LED/LCD video wall with a minimum resolution of 4K UHD.
- The video wall should support 24x7 continuous operation.
- Modular architecture with expandable configurations to add more display units in the future.

ii. Display Management System:

- A centralized Video Wall Controller with advanced content management software.
- Multi-source display capability to accommodate live feeds, dashboards, geospatial maps, maritime analytics, and surveillance footage.
- Remote and local control options with secure access authentication.

iii. Integration Capabilities:

- Ability to integrate with maritime monitoring systems, satellite AIS data, VTS (Vessel Traffic Services), and other government data sources.

- Capability to display data from CCTV cameras, weather monitoring systems, and emergency alert mechanisms.

iv. Security & Redundancy:

- the system should have failover redundancy mechanisms.
- Secure access control with role-based user privileges.

B. Computing Hardware & IT Infrastructure

i. High-Performance Workstations:

- Provision of high-end computing systems for data processing, analytics, and AI applications.
- Minimum specifications: Intel Core i9 or equivalent, 32GB RAM, dedicated GPU, 2TB SSD.

ii. Server Infrastructure:

- High-performance servers for hosting the BI & Analytics Tool, supporting multi-user, multi-session operations.
- Minimum specifications: Dual Intel Xeon Processors, 128GB RAM, 10TB Storage, High-Availability RAID Architecture.
- Ability to support cloud-based and on-premises hybrid deployment.

iii. Networking & Connectivity:

- High-speed LAN/WAN connectivity with fibre-optic backbone.
- Secure VPN access for remote monitoring and operational support.

iv. Data Backup & Disaster Recovery:

- Implementation of a disaster recovery (DR) plan with automated scheduled backups.
- Redundant storage solutions to ensure zero data loss and minimal downtime.

v. Technical Support & Training:

- The agency will provide onsite and remote technical support for at least 3 years post-deployment.
- Comprehensive training programs for DGS personnel to manage and operate the system effectively.

C. Indicative IT Infrastructure Components

The Indicative IT infrastructure components for both hardware and software are in the following table.

Sr. No.	IT Infrastructure
A	ACTIVE LED with cabling and accessories
1	Active-Led Type-1
2	Active-Led Type-2
3	Active-Led Type-3
B	Active-Led Video Wall Controller with cabling and accessories
1	For 4 inputs
2	For 8 inputs
3	For 12 inputs
C	LCD Panel (NXN) with cabling and accessories
1	LCD Panel Type-1
2	LCD Panel Type-2

Sr. No.	IT Infrastructure
D	LCD Video Wall Controller with cabling and accessories
1	For 4 inputs
2	For 8 inputs
3	For 12 inputs
E	CCTV Solution with cabling and accessories
1	Dome camera
2	16 Channel NVR
F	Desktop Computer
G	Streaming Solution
1	Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 20X)
2	Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 12X)
3	Recording and Streaming Device
4	Audio system
5	Mini Audio-Conferencing Solution
6	High-End Conferencing Solution
H	Podium
1	Smart Podium
2	Digital Podium High-end
3	Full HD Visualizer -Compact
4	Full HD Visualizer- Large
I	UPS-10KVA with 6-hours back-up
J	Server Rack
K	Furniture
L	Switches
M	Any other details required for set-up to be proposed by vendor.

Phase II: Development & Deployment of BI & Analytics System

The phase two aims to engage a specialized agency for the implementation of a Business Intelligence (BI) Tool to facilitate analytics and dashboard functionalities for maritime operations.

The key scope and terms of engagement are outlined below:

- i. DGS Mumbai will appoint an agency to design, develop, and implement a BI Tool based on the specifications outlined in this document for the DGS departments (indicated in figure is for reference purpose) and subsequent Request for Proposal (RFP).

- ii. The appointed agency will consult maritime stakeholders and relevant departments to align system requirements with operational needs.
- iii. A comprehensive study of existing systems at DGS Mumbai will be conducted to identify dashboard views, data trends, insights, and Key Performance Indicators (KPIs), culminating in a detailed project report.
- iv. The BI system will be developed and deployed based on the findings of the requirement study.
- v. The complete implementation of the BI Tool is expected within **90 days** from the agency's appointment.
- vi. Training, knowledge transfer, and handholding sessions will be provided to key project stakeholders post-deployment.
- vii. The trained personnel will be capable of generating KPIs, reports, and dashboards independently, with the agency defining the required training duration.
- viii. The agency will provide **three years of solution maintenance and support, including version upgrades.**
- ix. The agency will furnish software licenses required for both implementation and support phases.
- x. Hardware specifications and bandwidth requirements for optimal BI Tool performance will be defined and provided by the agency.
- xi. The technical specifications of the BI Tool will be established in collaboration with DGS Mumbai and its stakeholders.
- xii. The agency will determine and procure the necessary core, user, and concurrent user licenses as per system requirements.
- xiii. DGS Mumbai will supply an indicative list of KPIs, subject to finalization during system requirement analysis.
- xiv. The BI Tool must support role-based access and views with detailed drill-down capabilities.
- xv. Data integration from multiple sources, including vessel tracking, compliance databases, and performance reports, will be implemented.
- xvi. The BI Tool should be highly scalable, supporting increased maritime operations and an expanding stakeholder base.
- xvii. **A high-availability deployment architecture with built-in redundancy must be ensured, targeting 99.9% uptime.**
- xviii. The BI Tool should support both **on-premises and cloud deployments** without feature limitations.
- xix. Data sharing with approved research institutions and agencies should be enabled, subject to DGS Mumbai's prior approval.

A. Key BI Tool Features

i. Reporting & Export Capabilities

- Users can generate and export reports in multiple formats, including Excel, Word, PDF, and printer-friendly versions.
- Dashboard Management & User Personalization
- Users can configure custom dashboards based on roles and responsibilities.
- Multiple visual elements (charts, maps, alerts, gauges) should be supported within the same interface.

ii. **Interactive Visualizations & Analytics**

- The BI system must support various chart types (bar, line, scatter, doughnut, etc.) and GIS-enabled spatial maps with heatmap functionality.
- Customization of titles, labels, legends, colours, and icons should be available.
- KPI indicators with color-coded alerts (green/yellow/red) for quick insights into vessel utilization, turnaround times, and compliance.
- Drill-down functionalities for detailed analysis across categories like vessel type, port location, and operational metrics.

iii. **Contextual Analytics & Advanced Features**

- Contextual insights and deep analytics must be available for each metric.
- GIS-based maps should allow zooming, panning, and spatial analysis of shipping routes and port traffic.
- Calendar-based navigation for tracking vessel inspections, cargo schedules, and compliance audits.
- Advanced search functionalities to streamline access to large datasets.
- AI/ML capabilities for predictive analytics and trend forecasting.

B. Dashboard Functionalities

i. **Real-Time Monitoring**

- Live tracking of vessel movements, port activities, and operational KPIs.
- Custom alerts for key events such as delays, safety breaches, and capacity overloads.

ii. **Historical Data Analytics**

- Trend analysis for vessel throughput, financial performance, and compliance rates.

iii. **Interoperability & Integration**

- Seamless data exchange with AIS, GMDSS, port management systems, and regulatory authorities.
- Role-based access ensuring secure and tailored data visibility.

iv. **Scalability & Customization**

- The system must accommodate growing maritime data needs and support future expansion.
- Configurable features to align with specific regulatory and operational requirements.

C. Minimum System Requirements

- i. Real-Time Data Processing: High-speed, low-latency performance.
- ii. Cross-Platform Web Access: Compatibility with Windows, Linux, macOS, and mobile devices.
- iii. Data Export Options: Supports CSV, PDF, Excel, JSON.
- iv. Secure API Connectivity: RESTful API support for third-party system integration.
- v. Advanced Analytics: AI & ML-based deep learning models.
- vi. GIS Mapping Capabilities: Real-time vessel tracking and port analytics.

D. Training, Support & Maintenance

i. **Training & Capacity Building:**

- Conduct detailed workshops and hands-on training for DGS officials.

- Enable users to customize dashboards, generate reports, and interpret analytics.
- ii. **24x7 Helpdesk & Maintenance:**
- Technical support with defined Service Level Agreements (SLAs).
 - Regular updates, security patches, and system optimizations for three years post-deployment.

Tentative Timeline and Scope

The timeline and scope outlined in this EOI are **indicative and subject to further refinement**. Interested bidders must conduct a **feasibility survey** to assess project requirements and constraints. Based on this assessment, bidders are expected to develop a comprehensive **"Approach and Methodology"** and present a detailed **work plan** at the RFP stage. The final scope, deliverables, and execution plan will be determined based on feasibility study findings and discussions with the authority.

Space Specifications

The proposed Command Centre shall be designed within a space of **7.1 meters (length) x 10.29 meters (breadth) x 3 meters (height)** to accommodate mission-critical operations, real-time monitoring, and collaborative decision-making.

Deliverables and Timeline of Services

The System integrator shall provide the following deliverables:

Activity	Timeline
Video Wall Procurement & Installation	3 months
Deployment of Computing Hardware	3 months
BI & Analytics Tool Development	6 months
System Integration & Testing	2 months
Training & Capacity Building	Ongoing
Maintenance & Support	Three years

Key Terms & Conditions

1. DGS reserves the right to accept or reject any Eol without prior notice.
2. The project will be executed in phases, with payments linked to milestone completion.
3. The agency must have at least 5 years of experience in AI, BI, and maritime analytics.
4. Compliance with international maritime safety and cybersecurity standards is mandatory.
5. The BI solution should support future expansion and interoperability with evolving maritime technologies.
6. Detailed Project Report (DPR) Submission: The appointed agency must submit a DPR covering:
 - a. System architecture and technical specifications.
 - b. Deployment roadmap and timeline estimates.
 - c. Security, redundancy, and risk mitigation plans.
 - d. Data integration strategies and future scalability provisions.
 - e. Operational and maintenance guidelines.
 - f. Training & knowledge transfer framework.

The DPR must be approved by the designated authority before proceeding with system deployment.

Resource Requirements (Indicative)

Bidder to propose the following but not limited to resources:

Resources for Phase I		
#	Key Resources	No. of Resources
1.	Project Manager	To be proposed by bidder
2.	System Design and Integration expert	
3.	Cloud Infrastructure specialist	
4.	Networking Engineer	
5.	Developers/ Technical Consultant	
6.	Data Base Administrator (DBA)	
7.	Mechanical Engineer and Electrical Engineer on required basis.	
8.	Any other resource required	

Resources for Phase II		
#	Non-Key Resources	No. of Resources
1	Business Analyst	To be proposed by bidder
2	BI Developer	
3	UI/UX Designers	
4	Data Analysts	
5	Data Engineer	
6	Training & Support Staff	
7	Any other resource required	

PART III. REOI Submission Formats

Form 1: REOI Form (Covering Letter)

(On System integrator's Letterhead)

System integrator's Name _____

[Address and Contact Details]

System integrator 's Reference No. _____ Date.....

To

Directorate General of Shipping, 9th Floor,

BETA Building, I-Think Techno Campus,

Kanjur Village Road, Kanjurmarg (E),

Mumbai-400042

Ref: Your REOI document No. xx/x/xxCOMP/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

Sir/ Madam

Having examined the abovementioned REOI document, we, the undersigned, hereby submit/ upload our Expression of Interest (REOI) for being shortlisted for the performance of the Services.

1) About us:

We, M/s _____, hereby certify that We are a firm (or members of our JV/C are) of proven, established, and reputed System integrator having the required Experience, Past performance, Personnel, and Financial capability, with offices at _____.

2) Our Eligibility and Qualifications to participate:

- a) We comply with all the eligibility criteria stipulated in this REOI document, and the relevant declarations are made along with documents in Form 1.2 of this REOI-Form.
- b) We fully meet the qualification criteria stipulated in this REOI document, and the relevant details are submitted along with documents in Form 2: 'Qualification Criteria – Compliance' and its sub-forms.
- c) We undertake to provide originals of all self-certified copies of uploaded documents during the RFP Process. We have understood the ramifications of failure to do so as detailed in clauses 10.2.4 and 10.2.5 of Section I: REOI.
- d) We have / don't have any conflict of interest with any other System integrator as per clause 4.5 of Section I: REOI.
- e) No commissions and gratuities have been paid or are to be paid to agents or any other party by us relating to this REOI and RFP processes.

Following commissions and gratuities have been paid/ are to be paid to agents or any other party by us relating to this procurement process: -----

3) Affirmation of terms and conditions of the REOI document:

We have understood the complete terms and conditions of the REOI document. We accept and comply with these terms and conditions without reservations, although we are not signing and submitting some of the sections of the REOI document.

4) Abiding by the REOI Validity

We agree to keep our REOI valid for acceptance for a period up to -----, as required in the REOI document, or for a subsequently extended period, if any, agreed to by us.

5) Non-tempering of Downloaded REOI documents and Uploaded Scanned Copies

We confirm that we have not changed/ edited the contents of the downloaded REOI Formats. We realise that any such change noticed at any stage, including after the contract award, shall be liable to punitive action in this regard stipulated in the REOI document. We also confirm that scanned copies of documents/ affidavits/ undertakings uploaded along with our REOI are valid, true, and correct to the best of our knowledge and belief. We shall be responsible if any dispute arises regarding the validity and truthfulness of such documents/ affidavits/ undertakings. Upon our successful shortlisting, we undertake to submit for scrutiny, on-demand by the Procuring Entity, originals and self-certified copies of all such certificates, documents, and affidavits/ undertakings.

6) Signatories:

We confirm that we are duly authorised to submit this REOI and make commitments on behalf of the system integrator. Supporting documents are submitted in Form 1.1, annexed herewith. We acknowledge that our digital/digitised signature is valid and legally binding.

7) Rights of the Procuring Entity to Reject REOI(s):

We understand that you are not bound to accept the lowest or any REOI you may receive against your above-referred REOI document.

.....

(Signature with date)

.....

(Name and designation)

Duly authorised to sign REOI for and on behalf of name, address, and seal of the
System integrator]

Form 1.1: System integrator Information
(On System integrator's Letterhead)

System integrator's Name _____

[Address and Contact Details]

System integrator's Reference No. _____ Date.....

REOI document No. xx/x/xxCOMP/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

Note: System integrator shall fill in this Form following the instructions indicated below.

System integrator shall enclose certified copies of the documentary proof/ evidence to substantiate the corresponding statement wherever necessary and applicable. System integrator's wrong or misleading information shall be treated as a breach of the Code of Integrity. Such REOIs shall be liable to be rejected as nonresponsive, in addition to other punitive actions provided for such a breach in the REOI document.

(Please tick appropriate boxes or strike out sentences/ phrases not applicable to you)

1) System integrator/ Contractor particulars:

a) Name of the System integrator's Organisation:	
b) Corporate Identity No. (CIN):	
c) Registration, if any, with The Procuring Entity:	
d) Date of incorporation/ start of business:	
e) Place of Registration/ Principal place of business":	
f) Number of Years in Business:	
g) Number of Years in implementing ERP systems	
h) System integrator's Website URL:	
i) Complete Postal Address:	
j) Pin code/ ZIP code:	
k) Telephone nos. (with country/ area codes):	
l) Mobile Nos.: (with country/ area codes):	
m) Contact persons/ Designation:	
n) Email IDs:	
o) PAN Number:	
p) GSTIN No:	

NB: In the case of JV/C, repeat these details for all members

Submit documents to demonstrate eligibility as per REOI Clause 4.1-1) - A self-certified copy of registration certificate – in case of a partnership firm – Deed of Partnership; in case of Company –

Notarised and certified copy of its Registration; In case of JV, letter of intent to form JV or JV agreement and in case of Society – its Byelaws and registration certificate of the firm.

- 2) System integrator/JV's Organisation Structure: Submit the overall organisation structure of the firm.
- 3) System integrator/JV's Overall profile: Submit the overall profile of the firm, highlighting technical and managerial capabilities.

Authorisation of Person(s) signing the REOI on behalf of the system integrator

Full name: _____

Designation: _____

Signing as:

- A sole proprietorship firm: The person signing the REOI is the sole proprietor/ constituted attorney of the sole proprietor,
- A partnership firm: The person signing the REOI is duly authorised being a partner to do so under the partnership agreement or the general power of attorney,
- A company. The person signing the REOI is the constituted attorney by a resolution passed by the Board of Directors or in pursuance of the authority conferred by the Memorandum of Association/ Articles of Association.
- A Society. The person signing the REOI is the constituted attorney.
- A Joint Venture/ Consortium. The person signing the bid is the designated lead member, as named in the JV/C agreement/ MOU or similar document in connection with the formation of the JV/C or are all future proposed members, in case (JV/C) has not been legally constituted at the time of bidding.

Documents to be submitted: Registration Certificate/ Memorandum of Association/ Partnership Agreement/ Power of Attorney/ Board Resolution System integrator's Authorized Representative Information

Name:

Address:

Telephone/ Mobile numbers:

Email Address:

(Signature with date)

.....

(Name and designation)

Duly authorised to sign REOI for and on behalf of name, address, and seal of the System integrator]

DA: As above

Form 1.2: Eligibility Declarations

(Ref REOI Clause 2.3)

(On System integrator's Letterhead, supported with copy of Incorporation Certificates (for all member in case of consortium), and copy of PAN, GST registration certificate)

REOI document No. xx/x/xxCOMP/REOI/001

Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

System integrator's Name _____

[Address and Contact Details]

System integrator's Reference No. _____

Date.....

[Note: The list below is indicative only. You may attach more documents as required to confirm your eligibility criteria.]

Eligibility Declarations

(Please tick appropriate boxes or cross out any declaration not applicable to the system integrator)

We hereby confirm that we comply with all the stipulations of REOI Clause 4.1 of the REOI document and declare as under and shall provide evidence of our continued eligibility to the DGS as and when it may be requested:

- 1) **Legal Entity of System Integrator:** We are:
 - a) : _____ relevant documents enclosed)
 - b) We are a system integrator with valid registration regarding GSTIN, PAN, EPF, ESI, Labour, or equivalent registration certificate as applicable to the subject Services.
- 2) **Eligibility:** We solemnly declare that we (including our affiliates or subsidiaries, or constituents):
 - a) are not insolvent, in receivership, bankrupt or being wound up, not have our affairs administered by a court or a judicial officer, not have our business activities suspended and are not the subject of legal proceedings for any of these reasons.
 - b) (including our affiliates or subsidiaries, or constituents for any part of the assignment):
 - i) Do not stand declared ineligible/ blacklisted/ banned/ debarred by the Procuring Organisation or its Ministry/ Department from participation in its procurement processes; and/ or
 - ii) Are not convicted (within three years preceding the last date of REOI submission) or stand declared ineligible/ suspended/ blacklisted/ banned/ debarred by appropriate agencies of the Government of India from participation in procurement processes of all its entities for offences mentioned in REOI document in this regard.
 - iii) We have neither changed our name nor created a new "Allied Entity", consequent to the above disqualifications.
 - c) Do not have any association (as system integrator/ partner/ Director/ employee in any capacity) with such retired public official or near relations of such officials of DGS, as counter-indicated, in the REOI document.
- 3) We have no conflict of interest, which substantially affects fair competition. The quoted prices are competitive without adopting unfair/ unethical/ anti-competitive means. No attempt has been made

or shall be made by us to induce any other system integrator to submit or not to submit an REOI to restrict competition.

- a) We certify that we fulfil other additional eligibility conditions if prescribed in the REOI document.
- 4) We certify that we are not an entity from a country identified to restrict System Integrators from India from participation in their Government Procurements as per REOI clause 4.2.1
- 5) Restrictions on procurement from system integrators from a country or countries or a class of countries under Rule 144 (xi) of the General Financial Rules 2017:**

"We have read the clause regarding restrictions on procurement from a system integrator of a country which shares a land border with India and on sub-contracting to contractors from such countries, and solemnly certify that we fulfil all requirements in this regard and are eligible to be considered. We certify that:

- a) we are not from such a country or, if from such a country, we are registered with the Competent Authority (copy enclosed). and;
- b) we shall not subcontract any assignment to a contractor from such countries unless such a contractor is registered with the Competent Authority.

5) Start-up Status:

We confirm that we are (Certificate of Recognition issued by the Department for Promotion of Industry and Internal Trade (DPIIT) enclosed herewith)/ are not a Start-up entity as per the Department of Promotion of Industrial and Internal Trade – DPIIT.

6) Penalties for false or misleading declarations:

We hereby confirm that the particulars given above are factually correct and nothing is concealed and undertake to advise any future changes to the above details. We understand that any wrong or misleading self-declaration would violate the Code of Integrity and attract penalties.

.....
(Signature with date)

.....
(Name and designation)

Duly authorised to sign REOI for and on behalf of

.....
..... Name, address, and seal of the system integrator

DA: As in Sr 1 to 5 above, as applicable

Form 2: Qualification Criteria – Compliance

(Ref Section III: Qualification Criteria)

(Along with supporting documents, if any)

(On system integrator's Letterhead)

REOI document No. xx/x/xxCOMP/REOI/001

Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

System integrator's Name _____

[Address and Contact Details]

System integrator's Reference No. _____

Date.....

Note to system integrator: The Procuring Entity reserves its right to call for verification originals of all self-certified copies of stipulated documents supporting the fulfilment of qualifying criteria during the following RFP Process. If the shortlisted system integrator fails at that stage to provide such originals or, in case of substantive discrepancies in such documents, it shall be construed as a breach of the Code of Integrity (see clause 12 below). Such RFP proposals shall be liable to be rejected as nonresponsive in addition to other punitive actions for such a breach.

Summary of Response to Qualification Criteria

Criteria	Qualification Criteria Met (Yes, or No)
During the last five years, The Bidder / Lead bidder must have system integrator experience, and the implementation must include setting up of command and control centre project and which includes the implementation of a Business Intelligence (BI) tool and Analytics, Operations, and maintenance of the services, Training and Capacity Building, Providing Technical human resource/workforce Support and it shall be completed or substantially completed should be at least 3. These work orders should be from any of the State/Central Government Departments /Organisations / Public Sector Undertakings.	
During the last five years, The Bidder / Lead bidder must have experience, in Data Custodianship & Interoperability, Legacy Data Integration, Data Archival & Validation, Disaster Recovery & Business Continuity and integration with IT infrastructure, databases, IoT devices, and legacy systems. These work orders should be from any of the State/Central Government Departments /Organisations / Public Sector Undertakings.	
The Service Provider in case of consortium must have been assessed for ISO 9001 for Quality Management ISO 27001 for Information Security Management CMMI Level 3 and above certification	

Criteria	Qualification Criteria Met (Yes, or No)
<p>The certifications should be valid on the date of bid submission. In case the certification is under renewal, the Bidder shall provide the details of the previous certifications and the current assessment consideration in the Bid Process. Bidder to submit a valid certificate at the time of signing the contract (if selected) otherwise bidder will be disqualified.</p> <p>Bidder shall ensure that the certifications continue to remain valid till the end of the Agreement</p>	
<p>Turnover: Minimum average annual turnover of INR 25 Cr. at least, calculated as total certified payments received for contracts in progress or completed within the last 3 years.</p> <p>For MSME INR 10 Cr. for the last three financial years ending 31st March 2024 as evidenced by the audited accounts of the company.</p> <p>In case of consortium, consortium member (except Lead Bidder) must have a minimum turnover of INR 10 Crore (Ten Crores)</p>	
<p>The bidder (for single firm) should have a positive net for 3 consecutive years i.e. 2021-22, 2022-23 and 2023-24. In case of a Consortium, the Lead Member must have positive net worth.</p>	
<p>The Bidder (Single firm or any member of the consortium) must have System Integrator experience of successful Go-Live / completed project during the last Three years (from the last date of bid submission) in</p> <p>ONE Command Control Centre project of amount not less than Rs. 5 crores</p> <p>OR</p> <p>TWO Command Control Centre projects of amount not less than Rs. 2.5 crores each</p> <p>OR</p> <p>THREE Command Control Centre projects of amount not less than Rs. 2 crores each.</p> <p>THREE and more will have added weightage in the QCBS bidding format</p> <p>Each of which includes setting up of Command-and-Control Centre, implementation of a Business Intelligence (BI) tool and data analytics, Software Support, training, support manpower & maintenance involving services to any state / central government organization in India and PSU in India or abroad during the last three financial years.</p> <p>The proposed BI Tool for analytics and dashboards must have been listed in the "Leaders" segment of Gartner's Magic Quadrant in at least one of the last three years.</p>	

Note: system integrators shall provide evidence of their continued qualification to perform the Services satisfactorily to the Procuring Entity, as the Procuring Entity may request at any stage during the RFP process that would follow this REOI.

.....
(Signature with date)

.....
(Name and designation)

Duly authorised to sign REOI for and on behalf of

..... Name, address, and seal of the system integrator

DA: As above, if any

Form 2.1: Performance Capability Statement

Statement of Performance of Services

(Ref REOI Clause 2.3, Section III: Qualification Criteria)

(On system integrator's Letterhead)

REOI document No. xx/x/xxCOMP/REOI/001

Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

System integrator's Name _____

[Address and Contact Details]

System integrator Reference No. _____

Date.....

Note to system integrator:

1. *System integrator or member of a Joint Venture/Consortium (JV/C) must fill in this Form to prove conformance to Section III Qualification Criteria. Mention contracts in which a system integrator or a member of a JV/C is or has been a party, whether as a system integrator, affiliate, associate, subsidiary, or any other role. The list below is indicative only. You may attach more documents as required to highlight your past performance. Add additional details not covered elsewhere in your REOI in this regard. Statements and Documents may be mentioned/ attached here.*
2. *List only those assignments for which the system integrator was legally contracted as a company or was one of the joint venture members. Assignments completed by the system integrator's individual experts working privately or through other firms cannot be claimed as the relevant experience of the system integrator or that of the System integrator 's partners or sub-system integrator s but can be claimed by the Experts themselves in their CVs. Assignments of Sub-system integrator (s) can be used to meet the Experience requirements specified in Section III, Qualification Criteria. The system integrator should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if the Client requests.*
 - 1) **The number of years of experience in development of Complete ERP Solution:** Provide evidence for the required length of experience in similar Services and cross-reference the list of assignments below.
 - 2) **In the specified period, list similar Services assignments completed or substantially completed in a tabular form** (Period specified in Section III – Qualification Criteria Note: List only the most important and relevant ones. List the largest value and most relevant projects to this assignment first)
 - a) country, client, (source of funding),
 - b) project title, project reference number, project value, project period
 - c) brief description of the system integrator 's role in the project
 - d) # of international staff months, # of national staff months deployed by you on the project
 - e) Is it a Similar Experience as per Section III: Qualification Criteria (Yes or No)
 - f) Is it in General Sector as per Section III: Qualification Criteria (Yes or No)
 - g) Is it in Specific Sector as per Section III: Qualification Criteria (Yes or No)

.....
(Signature with date)

.....
(Name and designation)
Duly authorised to sign REOI for and on behalf of

.....
..... Name, address, and seal of the System integrator]

DA: Performance records/ contracts

Form 2.2 Financial Capability Statements

(Ref REOI Clause 2.3, Section III: Qualification Criteria)

(On System integrator 's Letterhead)

REOI document No. xx/x/xxCOMP/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

System integrator 's Name_____

[Address and Contact Details]

System integrator 's Reference No._____

Date.....

Note to system integrator: Fill out this Form for the system integrator and each member of a joint venture or other association that is a party to the system integrator to highlight conformance to Criteria 2: Financial Capability. The list below is indicative only. You may attach more documents as required. Add additional details not covered elsewhere in your REOI in this regard.

13.1

Form 2.2.1: Financial Statements

Note: Each system integrator or member of a Joint Venture/Consortium making up a must fill in this Form.

Financial Data for Previous Three (3) Years			
	Year 1:	Year 2:	Year 3:
Information from the Balance Sheet			
Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			
Working Capital			
Information from Income Statement			
Total Revenues			
Profits Before Taxes			
Profits After Taxes			

Attached are copies of financial statements (either audited financial statements supported by audit report or certified financial statements supported by Income tax returns), complying with the following conditions.

- 1) All such documents reflect the financial situation of the system integrator or a member of a Joint Venture or other association and not a sister or parent company.
- 2) A Chartered accountant must audit historical financial statements.
- 3) Historical financial statements must be complete, including all notes to the financial statements.
- 4) Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

.....
(Signature with date)

.....
(Name and designation)

Duly authorised to sign REOI for and on behalf of

.....

..... Name, address, and seal of the system integrator]

13.2 Form 2.2.2: Average Annual Turnover

(Ref REOI Clause 2.3, Section III: Qualification Criteria)

(On system integrator's Letterhead)

REOI document No. xx/x/xxxCOMP/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai System integrator's Name _____

[Address and Contact Details]

System integrator's Reference No. _____

Date.....

Note: Each system integrator or member of a Joint Venture/Consortium must fill in these forms.

Annual Turnover Data (Rs Crores) for the Last Three (3) Financial Years		
Year	Total Turnover Amount	Turnover from ERP Implementation (supported by a certificate from the Chartered Accountants)
Average Annual Turnover		

.....
(Signature with date)

.....
(Name and designation)

Duly authorised to sign REOI for and on behalf of

.....

..... Name, address, and seal of the system integrator

Form 3: Checklist for System integrator

Ref REOI Clause 2.3)

(On system integrator's Letterhead)

System integrator's Name _____

[Address and Contact Details]

System integrator 's Reference No. _____

Date.....

REOI document No. xx/x/xxCOMP/REOI/001

Tender Title: REOI for Selection of System Integrator for setting up of IT Infrastructure for Command Control Centre at Directorate General of Shipping Kanjurmarg(E), Mumbai

Note to system integrator's: This checklist is merely to help the system integrators to prepare their REOIs. It does not override or modify the requirement of the REOI. system integrators must do their due diligence also.

Sr No.	Documents submitted, duly filled, signed	Yes/ No/ NA
1.	Form 1.- REOI Form (to serve as covering letter and declarations)	
2.	Form 1.1: system integrator's Information and Power of attorney and Registration Certificates etc.	
3.	Form 1.2: Eligibility Declarations, along with supporting documents	
4.	Form 2: Qualification Criteria - Compliance	
4.a	Form 2.1, 2.2 (and its sub-forms) to support Form 2 along with supporting documents	
5.	Form 3: Checklist for system Integrator	
6.	Form 4: Declaration for No Conflict of Interest	
7.	Form 5: Details of ineligibility for corrupt or fraudulent practices / blacklisted with any of the Government or Public Sector Units	
8.	Form 6: Other information required	
9.	Any other requirements, if stipulated in Section II: Appendix; or if considered relevant by the system integrator	

.....
(Signature with date)

.....
(Name and designation)

Duly authorised to sign REOI for and on behalf of.....

[Name, address, and seal of the system integrator]

Form 4: Declaration for No Conflict of Interest
<<To be submitted on the Company Letter head of the Lead Bidder>>

Date:

To

Directorate General of Shipping,
9th Floor, Beta Building,
i-Think Techno campus
Kanjurmarg (East), Mumbai – 400042

Sir,

Sub: Undertaking on No Conflict of Interest

I / We as System Integrator (SI) do hereby undertake that there is absence of, actual or potential conflict of interest on our part, on part of our Consortium partner (in case of a Consortium) due to prior, current, or proposed contracts engagements, or affiliations with Directorate General of Shipping, Government of India.

I / We also confirm that there are no potential elements (time frame for service delivery, resource, financial or other) that would adversely impact our ability to complete the requirements of this REOI.

We undertake and agree to indemnify and hold Directorate General of Shipping, Government of India harmless against all claims, losses, damages, costs, expenses, proceeding fees of legal advisors (on a reimbursement basis) and fees of other professionals incurred (in the case of legal fees & fees of professionals, reasonably) Directorate General of Shipping, Government of India and / or its representatives, if any such conflict arises later.

Yours faithfully,

Authorized Signatory
Designation
Date
Time
Seal
Business Address

**Form 5: Details of ineligibility for corrupt or fraudulent practices /
blacklisted with any of the Government or Public Sector Units**

<<On the letterhead of the Bidding Organization>>

**<<In case of consortium, separate certificates to be submitted from respective authorized
representatives>>**

Date:

To:

Directorate General of Shipping
9th Floor, Beta Building,
i-Think Techno campus
Kanjurmarg (East), Mumbai - 400042

Subject: Declaration for not being under an ineligibility for corrupt or fraudulent practices or blacklisted
with any of the Government or Public Sector Units in India

Dear Sir,

We, the undersigned, hereby declare that

We are not under a declaration of ineligibility / banned / blacklisted by any State or Central
Government / any other Government institutions in India for any reason as on last date of
submission of the Bid or convicted of economic offence in India for any reason as on last date
of submission of the Bid.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

Form 6: Other information required

(All Questions except S.No.6 are mandatory for bidders who are submitting the response for this REOI)

1. Approach and Methodology (Mandatory)

Sr. No.	Question
1.1	<p>What is your proposed methodology for the deployment of the Command Control Centre Infrastructure?</p> <p>How will you ensure seamless integration of the video wall and computing hardware?</p> <p>What is your approach to developing and deploying the Business Intelligence (BI) and Analytics System?</p> <p>How will you ensure real-time data visualization and analytics?</p> <p>Features and functionality of the proposed BI tool along with associated technical specifications, license schema, bandwidth requirement and hardware requirement for hosting the system</p>
1.2	<p>Please list the physical infrastructure/ equipment's envisaged for the proposed Command Control Centre?</p>
1.3	<p>Can you describe your understanding of the project objectives and scope?</p> <p>How is your organization planning to conduct the above-mentioned processes differently (Innovative solutions)?</p> <p>What are the key challenges you anticipate in this project, and how do you plan to address them?</p> <p>What are the risks and the mitigation strategies?</p>
1.4	<p>What are the methodologies proposed by your organization to ensure data security and confidentiality efficiently?</p> <p>Compliance: Ensure compliance with relevant cybersecurity guidelines, such as CERT-In guidelines, GDPR, etc.</p> <p>Network Security: Firewall Implementation: Deploy advanced firewalls to protect against external threats.</p> <p>Data Center Considerations: Data Center Location: Choose data center locations with low risk of natural disasters and high physical security standards.</p> <p>Disaster Recovery (DR) Site: Establish a geographically separated DR site to ensure business continuity.</p> <p>Multi-Factor Authentication (MFA): Implement MFA to add an extra layer of security for user access.</p> <p>Role-Based Access Control (RBAC): Use RBAC to restrict system access based on user roles and responsibilities.</p> <p>Data Protection: Data Encryption: Encrypt data at rest and in transit to protect against unauthorized access.</p>

Sr. No.	Question
	<p>Data Masking and Anonymization: Use data masking and anonymization techniques for non-production environments to protect sensitive information.</p> <p>Monitoring and Incident Response:</p> <p>Security Information and Event Management (SIEM): Deploy SIEM systems to monitor and analyse security events in real-time.</p> <p>Incident Response Plan: Develop and regularly update an incident response plan to address potential security breaches effectively.</p> <p>Regular Security Assessments:</p> <p>Vulnerability Assessments and Penetration Testing: Conduct regular vulnerability assessments and penetration testing to identify and mitigate security weaknesses.</p> <p>Security Audits: Perform regular security audits to ensure ongoing compliance and effectiveness of security measures.</p> <p>User Training and Awareness: Security Training Programs: Implement regular security training programs for employees to raise awareness about best practices and potential threats.</p> <p>Phishing Simulations: Conduct phishing simulations to educate employees on recognizing and avoiding phishing attacks.</p>
1.5	<p>What quality assurance processes will you implement to ensure the project's success?</p> <p>How will you measure and report on project performance and quality?</p>
1.6	<p>What training programs will you provide for the operations team and end-users?</p> <p>How will you ensure ongoing technical support and maintenance post-deployment?</p>
1.7	Please specify the assumptions and exclusions if any

2. Tentative Timeline & Rough Cost estimation component wise. Also, what milestones and deliverables do you propose for each phase of the project?

S.No.	IT Infrastructure	Total Price with no. of units
A	ACTIVE LED with cabling and accessories	
1	Active-Led Type-1	
2	Active-Led Type-2	
3	Active-Led Type-3	
B	Active-Led Video Wall Controller with cabling and accessories	
1	For 4 inputs	
2	For 8 inputs	
3	For 12 inputs	
C	LCD Panel (NXN) with cabling and accessories	

1	LCD Panel Type-1	
2	LCD Panel Type-2	
D	LCD Video Wall Controller with cabling and accessories	
1	For 4 inputs	
2	For 8 inputs	
3	For 12 inputs	
E	CCTV Solution with cabling and accessories	
1	Dome camera	
2	16 Channel NVR	
F	Desktop Computer	
G	Streaming Solution	
1	Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 20X)	
2	Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 12X)	
3	Recording and Streaming Device	
4	Audio system	
5	Mini Audio-Conferencing Solution	
6	High-End Conferencing Solution	
H	Podium	
1	Smart Podium	
2	Digital Podium High-end	
3	Full HD Visualizer -Compact	
4	Full HD Visualizer Large	
I	UPS-10KVA with 6-hours back-up	
J	Server Rack	
K	Furniture	

3. Please provide examples of similar projects you have successfully completed. What references can you provide to demonstrate your capability and reliability?
4. Details of the Software solution (Mandatory)

Sr No.	Particulars	Response
4.1	Is it open source-based software solution	Yes/No
4.2	Whether Source code can be transferred after the development?	Yes/No
4.3	Whether the software is certified by Cert-In empanelled agency	Yes/No
4.4	Whether customization of the software is possible?	Yes/No
4.5	What would be the mode of Software hosting?	Cloud/ On-premises
4.6	Whether your software can maintain records?	Yes/No

A. Feedback/Suggestion on the Terms of References/Scope of the REOI (Optional)

Annexure 1: Technical Requirements Specification

1. ACTIVE LEDs

A. 1. Active-Led Type-1

S. No.	Parameters	Specifications	Description
1	Basic Information	Pixel Pitch	Minimum 1.88 mm
		Pixel Density	270000 Pix / Sq-Mtr or above
		Service Access	Front
		Ingress Protection	IP20 or better
2	Physical Parameters	Diagonal Size	163" inches or above
		Aspect Ratio	16:9
		Clearance required at the back	Front access screen - 150mm Maximum
			Back Access Screen - 600mm Maximum
3	Visual Parameters	Brightness	330 nits (cd/m2) or above
		Viewing Angle	160x140 or better
		Data Processing	Up to 16 Bit
		Refresh	≥3000 or better
		Contrast	5000:1 or above
4	Electrical Parameters	Input Voltage	100-240V AC, 50/60Hz
		Max. Power Consumption	700 W/m2
		Average Power Consumption	250 W/m2
		Special Features	Power Factor Correction
5	Environmental Conditions	Temperature Range	Minimum Operating 0° to 40°C
		Humidity	Minimum Operating 10 to 80%
6	LED Wall Controller	Minimum Input	1x HDMI, 1x Audio, 1x DVI
		Minimum Output	2x LED Outputs over Ethernet
		Minimum Control	1x USB, Ethernet/RS232
		Input Voltage	AC-100-240V-50/60Hz
		Overall, Power Consumption	16W or less
		Working Temperature	0°C ~ 40°C or better
		Working Humidity	10%~80%

B. Active-Led Type-2

S. No.	Parameters	Specifications	Description
1	Basic Information	Pixel Pitch	Minimum 1.56 mm
		Pixel Density	406000 Pix / Sq-Mtr or above
		Service Access	Front
		Ingress Protection	IP20 or better
2	Physical Parameters	Diagonal Size	135" inches or above
		Aspect Ratio	16:9
		Clearance required at the back	Front access screen - 150mm Maximum
			Back Access Screen - 600mm Maximum
3	Visual Parameters	Brightness	330 nits (cd/m2) or above
		Viewing Angle	160x140 or better
		Data Processing	Up to 16 Bit
		Refresh	≥3000 or better
		Contrast	5000:1 or above
4	Electrical Parameters	Input Voltage	100-240V AC, 50/60Hz
		Max. Power Consumption	700 W/m2
		Average Power Consumption	250 W/m2
		Special Features	Power Factor Correction
5	Environmental Conditions	Temperature Range	Minimum Operating 0° to 40°C
		Humidity	Minimum Operating 10 to 80%
6	LED Wall Controller	Minimum Input	1x HDMI, 1x Audio, 1x DVI
		Minimum Output	2x LED Outputs over Ethernet
		Minimum Control	1x USB, Ethernet/RS232
		Input Voltage	AC-100-240V-50/60Hz
		Working Temperature	0°C ~ 40°C or better
		Working Humidity	10%~80%

C. Active-Led Type-3

S.no	Parameters	Specifications	Description
1	Basic Information	Pixel Pitch	Minimum 1.25 mm
		Pixel Density	640000 Pix/Sq-Mtr or above
		Service Access	Front
2	Physical Parameters	Ingress Protection	IP20 or better
		Diagonal Size	108 inches or above
		Aspect Ratio	16:9
		Clearance required at the back	Front access Back Access Screen-screen 150mm Maximum 600mm Maximum
3	Visual Parameters	Brightness	330 nits (cd/m2) or above
		Viewing Angle	160x140 or better
		Data Processing	Up to 16 Bit
		Refresh	3000 or Better
		Contrast	5000:1 or above
4	Electrical Parameters	Input Voltage	100-240V AC, 50/60Hz
		Max. Power Consumption	700 W/m2
		Average Power Consumption	250 W/m2
		Special Features	Power Factor Correction
5	Environmental Conditions	Temperature Range	Minimum Operating 0° to 40°C
6	LED Wall Controller	Humidity	Minimum Operating 10 to 80%
		Minimum Input	1x HDMI, 1x Audio, 1x DVI
		Minimum Output	2x LED Outputs over Ethernet
		Minimum Control Input	1x USB, Ethernet/ RS232
		Input Voltage	AC-100-240V-50/60HZ
		Working Temperature	0 Degree C ~ 40 degree C or better
		Working Humidity	10%-80%

D. Active-Led Video Wall Controller with cabling and accessories

Parameters	Description
Input Port	4 x HDMI or more
Output Port	4 x HDMI or more
Colour depth	32 Bit or Better
Native Resolution	1920 x 1080 or higher
Networking	1 x Gigabit Ethernet
Scalability	The input and output can be increased as per user's demand.
Format Supported	SD(PAL/NTSC/SECAM), FULL HD(1080p)
Design	Industrial Casing, Rack Mountable
Cable & Connectors	All necessary Cables & Connectors to be provided
Software	Multi display system Management software, capable of displaying multiple inputs simultaneously on Display system. Capable of display system as single logical screen, capable of resizing & relocating multiple input displays on the Multi display system

2. LCD panel (NXN)

A. LCD-Panel Type-1

S.No	Parameters	Description
1	Screen Size	55" or above
2	Panel Technology	IPS/VA
3	Back Light Type	Back Lit LED Direct
4	Aspect Ratio	16:09
5	Native Resolution	1,920 X 1,080 (FHD) or better
6	Brightness	350nit or Higher
7	Dynamic Contrast Ratio	Minimum 200,000:1
9	Uniformity	91% or more
10	Viewing Angle (H x V)	178 x 178
11	Colour Depth	1.07 billion (10 bit) or better
12	Response Time	8ms (G to G) or lesser
13	Lifetime (Typ.)	Min 60,000Hrs (Typ.) or high
14	Operation Hours	24Hrs
15	Orientation	Portrait & Landscape
16	Minimum Inputs ports	HDMI-1, DP-1, DVI-D-1, USB-1, RJ45 (LAN-1), IR in-1
17	Minimum Output ports	DP-1, RJ45 (LAN-1)-1
18	Bezel to Bezel (Gap)	2 mm or less (Even Bezel from all side)
20	Operation Humidity	10% to 80%

21	Power Supply	100-240V~, 50/60Hz
22	Power Consumption	170 watts or less

3. LCD Video wall Controller

A. Video wall Controller 4 inputs

Parameters	Description
Input Port	4 x HDMI or more
Output Port	4 x HDMI or more
Colour depth	32 Bit Or better
Native Resolution	1920 x 1080 or higher
Networking	1 x Gigabit Ethernet
Scalability	The input and output can be increased as per user's demand.
Format Supported	SD(PAL/NTSC/SECAM), FULL HD (1080p)
Design	Industrial Casing, Rack Mountable
Cable & Connectors	All necessary Cables & Connectors to be provided
Software	Multi display system Management software, capable of displaying multiple inputs simultaneously on Display system. Capable of display system as single logical screen, capable of resizing & re-locating multiple input displays on the Multi display system

B. Video wall Controller 8 inputs

Parameters	Description
Input Port	8 x HDMI or more
Output Port	8 x HDMI or more
Colour depth	32 Bit Or better
Native Resolution	1920 x 1080 or higher
Networking	1 x Gigabit Ethernet
Scalability	The input and output can be increased as per user's demand.
Format Supported	SD(PAL/NTSC/SECAM), FULL HD (1080p)
Design	Industrial Casing, Rack Mountable
Cable & Connectors	All necessary Cables & Connectors to be provided
Software	Multi display system Management software, capable of displaying multiple inputs simultaneously on Display system. Capable of display system as single logical screen, capable of resizing & re-locating multiple input displays on the Multi display system

C. Video wall Controller 12 inputs

Parameters	Description
Input Port	12 x HDMI or more
Output Port	4 x HDMI or more
Colour depth	32 Bit or better
Native Resolution	1920 x 1080 or higher
Networking	1 x Gigabit Ethernet
Scalability	The input and output can be increased as per user's demand.
Format Supported	SD(PAL/NTSC/SECAM), FULL HD (1080p)
Design	Industrial Casing, Rack Mountable
Cable & Connectors	All necessary Cables & Connectors to be provided
Software	Multi display system Management software, capable of displaying multiple inputs simultaneously on Display system. Capable of display system as single logical screen, capable of resizing & relocating multiple input displays on the Multi display system

4. CCTV

A. Dome camera

Parameters	Description
Image Sensor	1/2.8" 2 Megapixel progressive CMOS
Lens Type	2.8 mm Fixed, F1.6
Resolution	1920 x 1080
Minimum Illumination	0.002 Lux / F1.6 (colour, 30IRE), 0 Lux with IR on
IR Distance	Min 30 Metre
Electronic Shutter Speed	1/3~1/100000s
Day/Night	Auto (ICR) / Colour / B&W
Noise Reduction	3D DNR
Backlight Compensation	120dB WDR, BLC, HLC
Edge Base Storage	Supports max. 256 GB Micro SD card
Event	No SD card, SD card error, Capacity warning, Network disconnection, IP conflict, Illegal access
Audio	Built-in Mic
Video Compression	H.265 / H.264 or better
Video Streaming	Dual

Parameters	Description
Supported Protocols	HTTP, HTTPS, TCP; ARP, RTSP, RTP, RTCP, UDP; SMTP, DHCP, DNS, PPPOE, IPV4/v6; QoS; UPnP, NTP, Bonjour, IEEE 802.1x; Multicast, ICMP, IGMP; TLS
Compatibility	ONVIF Profile S, G, T
Operating Temperature	0°C to +60°C
Relative Humidity	Less than 90%, non-condensing
Cyber SECURITY	User account and password protection HTTPS, IP Filter, Digest authentication, User access log, TLS1.2 only, AES-128 / 256, SSH, Telnet closed, sFTP by default, PCIDSS compliance
Analytics	Motion Detection, Video Tampering, Scene Changing, Tripwire Intrusion
Housing	IP66/IK10
Power Supply	DC12V PoE (802.3 af)(Class 0)
Certificates	Emissions: FCC, Immunity-CE, Safety-UL, RoHS- CE (EN 63000), BIS

B. Specification for 16 Channel NVR

Parameters	Description
Operating System	Embedded LINUX
PROCESSOR	Quad-core embedded processor
Resolution	3840 x 2160; 1920 x 1080; 1280 x 1024; 1280 x 720; 1024 x 768
Video Input Recording	Up to 16 channels
POE	16 Port
Record Bit/Frame Rate	RECORD BIT RATE
Interface	1 HDMI (up to 3840 x 2160); 1 VGA
Video Standard	PAL or NTSC
Video Codec	H.265/H.264/MJPEG/MPEG4
Multi-screen layout	1/4/8/9/16
Audio Input	1 Channel Input/1 Channel Output, RCA, Two Way Communication
Motion Detection	Support
Alarm Event	Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Snapshot, Buzzer
Alarm/Relay Output	16/6 Channels
Internal Storage capacity	4 SATA ports, up to 32TB
Backup	USB storage device, Network download
Recording Mode	Schedule, Motion Detection, Alarm, Manual, Stop

Parameters	Description
Search Mode	Time/Date, Alarm, Motion Detection (MD), Exact Search (accurate to a second), Smart Search
Playback	1/4/8/16 (maximum 4-ch @ 8 MP, 8-ch @ 4 MP, or 16-ch @ 1080p simultaneous playback)

C. Desktop Computer

S.No.	Parameters	Description
1	Display	21" or Higher WVA Panel
2	Native Resolution	Resolution of 1920x1080 or higher.
3	Contrast ratio	1000:1
4	Aspect Ratio	16:09
6	CPU	Intel Core i5 Intel (10th gen or better)
7	RAM	8 GB RAM or better
8	Hard Disk	1 TB or better
9	In-Built Wi-Fi / Wireless LAN Card	Should have a inbuilt Wi-Fi / Wireless LAN Card
10	Ports (Minimum)	DP/HDMI x 1, USB 2.0 ports x 2, USB 3 ports x 3, LAN Port x 1
11	Standard Keyboard	Wired Keyboard
12	Optical Mouse	Wired Mouse
13	Operating System	Windows 10 pro or better

5. Streaming Solution

A. Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 20X)

S.No.	Parameters	Description
1	Image Sensor	The camera should have a 1/2.8" CMOS camera sensor or better
2	Effective Pixels	The camera should be 2 megapixel or better
3	Signal To Noise ratio	The camera should have a s/n >= 50dB or better
4	Minimum Illumination	The camera should have a minimum Illumination of 5 Lux.
5	Field of View	The camera should have a 59.5 or more degrees Wide field of view and 3.2 or more degrees tele field of view.
6	Zoom	The camera should have an optical Zoom of 20X or more and digital zoom of 2X or more
7	Pan/Tilt Range	The camera should have a PAN range of -170° to +170° or more and Tilt range of -30° to +30° or more.
8	Presets	The camera should have at least 65 presets

S.No.	Parameters	Description
9	Video Output	The camera should have Video Output through USB 3.0 for Unified devices, Digital DVI-D Port and 3G-SDI port.
10	Control	The Camera should have RS-232 control port
11	Resolutions Support	The camera should support resolutions of 1080p/60, 1080p/50, 1080p/30, 1080p/25, 720p/60, 720p/50, 720p/30, 720p/25 or better.
Panaroma Camera		
12	Image Sensor	The camera should be a 1/2.8" CMOS sensor or better
13	Effective Pixels	The camera should be 2 megapixel or better
14	White Balance	It should have auto white balance
15	Exposure	It should support auto exposure.
16	Field of View	It should have a field of view of Horizontal: 86°; Vertical: 52° or better
17	Accessories	The system should come up with all the accessories, like control cables, power cables, tracking software, hardware, setup, etc.
Others		
18	RJ-45 Port	It should have RJ-45 port.
19	RJ-45 Port	It should support 128 Kbps-8192Kbps or better.
20	Protocols	It should support TCP, HTTP, RTSP, RTMP, ONVIF, UDP or more.
21	Video Compression	It should support H.265/.264/MJPEG or better compression.
22	Teacher tracking function	It should track the target even if the target is stationary for a long time. Also, it should lock the tracking target without being disturbed by other moving targets or the contents of the projector. It should support self-adaptive teacher height function.

B. Full HD PTZ Camera for Faculty with Tracking facility (Optical Zoom 12X)

S.No.	Parameters	Description
1	Image Sensor	The camera should have a 1/2.8" CMOS camera sensor or better
2	Effective Pixels	The camera should be 2 megapixel or better
3	Signal To Noise ratio	The camera should have a s/n >= 50dB or better
4	Minimum Illumination	The camera should have a minimum Illumination of 5 Lux.

S.No.	Parameters	Description
5	Field of View	The camera should have a 59.5 or more degrees Wide field of view and 3.2 or more degrees tele field of view.
6	Zoom	The camera should have an optical Zoom of 12X or more.
7	Pan/Tilt Range	The camera should have a PAN range of -170° to +170° or more and Tilt range of -30° to +30° or more.
8	Presets	The camera should have at least 65 presets
9	Video Output	The camera should have Video Output through USB 3.0 for Unified devices, Digital DVI-D Port and 3G-SDI port.
10	Control	The Camera should have RS-232 control port
11	Resolutions Support	The camera should support resolutions of 1080p/60, 1080p/50, 1080p/30, 1080p/25, 720p/60, 720p/50, 720p/30, 720p/25 or better.
Panoramic Camera		
12	Image Sensor	The camera should be a 1/2.8" CMOS sensor or better
13	Effective Pixels	The camera should be 2 megapixel or better
14	White Balance	It should have auto white balance
15	Exposure	It should support auto exposure.
16	Field of View	It should have a field of view of Horizontal: 86°; Vertical: 52° or better
17	Accessories	The system should come up with all the accessories, like control cables, power cables, tracking software, hardware, setup, etc.
Others		
18	RJ-45 Port	It should have RJ-45 port.
19	RJ-45 Port	It should support 128 Kbps-8192Kbps or better.
20	Protocols	It should support TCP, HTTP, RTSP, RTMP, ONVIF, UDP or more.
21	Video Compression	It should support H.265/.264/MJPEG or better compression.
22	Teacher tracking function	It should track the target even if the target is stationary for a long time. Also, it should lock the tracking target without being disturbed by other moving targets or the contents of the projector. It should support self-adaptive teacher height function.

C. Recording and Streaming Device

S.No.	Parameters	Description
1	Interactive Panel (Size)	Minimum 10" inches or more
2	HDMI Inputs	2 x HDMI In or more
3	HDMI Output	1 x HDMI Out for Local Display
4	Audio Inputs	1 x Line In and 1 x MIC In (unbalanced)
5	Audio Output	1 x Line Out
6	USB 3.0	1x USB 3.0 ports
7	Storage	1TB (Internal) or more
8	Video Compression	H.264 or better
9	Bitrate	300kbps to 16 Mbps or better
10	Resolution	1080p, 720p, 480p, 270p, User Selectable up to 1920 x 1080p
11	Video Switching	During Live Streaming and recording via the touch screen or Web UI
12	Video Layout	PIP, POP, Single video
13	Encoded Streams	2 simultaneous 1080p streams at 30 fps (with up to Full HD Sources)
14	Audio Encoding	AAC (Sampling @ 48 khz) up to 320kbps
15	Network	1 x 1000 Ethernet port (RJ45)
16	Video Format	MP4, 1080p
17	Controls	Web UI Panel, 10.1" touch screen, RS232 and RS485 or more
18	Power Consumption	Max up to 30W/2.5Amp
19	Additional Component	Power On/Off Switch, Reset Button
Operational Requirement		
20	Touchscreen	Should have user friendly touchscreen and web interface makes switching easy between your connected sources or layouts
21	Audio Support	should have 3.5mm line-level input/ unbalanced MIC input and Built-in attenuation and gain control for perfect sound fidelity
22	Stream to View Everywhere	Should have capability of live stream to YouTube/ Facebook or web browsers locally over RTMP or RTMPS
23	Integration	Device should have capability to Integrates with 3rd Party central control systems
24	Internal Storage	Should have minimum 1 TB Internal Storage

S.No.	Parameters	Description
25	Local Video Output	Should able to view content to a larger display through the local HDMI output. Configure to share all input sources or switched program output
26	Full HD Recording	Should supports 1080p Full HD recording
27	Table Mount	Table mount stand should be supplied to mount the streaming device
28	Table Mount	Table mount stand should be supplied to mount the streaming device

D. Audio System

S.No.	Parameters	Description
1	Amplifier	Inbuilt of 120-Watt audio amplifier or better
2	Speakers	Four Speakers of 20 Watt Each or more
4	Sub-woofer	One External sub-woofer of 20 Watt or better
5	Microphone Receiver	Dual Chanel Microphone receiver
6	Wireless microphone	One Handheld and One Headband Wireless Microphone
7	Connectivity	1x HDMI (ARC), 1x USB, 1x Audio In, 1x Wireless Bluetooth or better
8	Remote control	Should have remote control

E. Mini Audio-Conferencing Solution

S.No.	Parameters	Description
1	Connectivity	wireless USB, Wired USB, Aux In/Out, Bluetooth
2	Special features	Device should have capability to cascade with min 2 mic and all should be operated as a single unit
3	Battery Life	8 Hours or better
4	Inbuilt Speakers	Should have minimum 10-watt speaker
5	Inbuilt Mic	Should have inbuilt 6 microphone connected in array
6	Range of Mic	Audio pickup range of 6 meter or better.
7	Certifications	CE & ROHS

F. High-End Conferencing Solution

Parameters	Description
Speakerphone	
Speaker Output	Speaker system should include 2 speakers of 10 watt each housed in single unit

Parameters	Description
Controls	Should have touch button to control the device
Function Control	Power ON/OFF (Battery status), Volume+, Volume-, Speaker mute, Microphone mute, Scene switch, Language switch etc.
Status Indication	Should have LED Light Indication
Connectivity	Should have USB wired and wireless USB dongle connectivity
Inbuilt Battery	Should have inbuilt battery with minimum 2 hours battery backup
Power Supply	DC 12 Volts, 2 Amp.
Expansion Microphone	
Wireless Microphone	Solution should supplied with minimum 4 Wireless expansion microphones
Microphone type	Digital Silicon Omnidirectional Microphone
Sensitivity	-26dBm
Frequency Response	100Hz - 16kHz
Signal to Noise Ratio	60dB or better
Sampling Rate	48 kHz or better
Voice Pick up Range	3 Meters or more
Wireless Transmission	Should connect with 2.4 Ghz wireless transmission
Controls	Should have touch button to control the device
Function Control	Power ON/OFF, Microphone mute
Status Indication	Should have LED Light Indication for charging, Mute and working status
Inbuilt Battery	Should have inbuilt battery with minimum 6 hours battery backup
Charging	Charging mode USB type C & Charging tray
Charging Tray	
Charging Tray	System should supply with minimum 2 nos. of charging tray.
Charging Capacity	Charging tray should have charging capacity of up to 2 Microphone
Charging Interface	USB type C
Power Supply	DC 5 Volts, 2 Amp.
Operational Requirements	
Echo Cancellation	Solution should support echo cancellation up to 256ms or more
Noise Cancellation	Solution should support noise cancellation
Certifications	CE & RoHS

6. Podium

A. Smart Podium

S.No.	Parameters	Description
1	Type/Mounting	Free Standing
2	Construction	The enclosure should be made of Polycarbonate/Metal Body and Steel Frame with Soft wheels. The Top sliding (Opening/Closing) cover should be made of Polycarbonate Body. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed on the outer body for breakage/mishandling. ¹
3	Display	Built-in highly sensitive Interactive Panel with adjustable Motorized tilt & a mechanism to make the Panel stable so that it does not shake while writing with following minimum features -
(a)	Technology	Interactive Panel should have both EMR (Electromagnetic resonance) & P-CAP touch technologies to have finger and 2 mm thick touch stylus
(d)	Screen Type	LED
(c)	Size	53.0 cm (21 inches) or higher
(d)	Resolution	1920 x 1080 or higher
(e)	Aspect ratio	16:09
(f)	Computer interface	One USB, One VGA/DVI/HDMI Port
(g)	Interactive Resolution	4000 Lpi (lines per inch)
(h)	Response Time	5ms
(i)	Viewing Angles	170(H); 160(V)
(j)	Touch	Finger and Stylus
(k)	Reading accuracy	±0.5 mm (center)
(l)	Tracking speed	Approximately 200 points per second
(m)	Pen Pressure sensitivity	1024 Levels
4	System Details	
(a)	Processor	Intel Core i5 (10th Gen or better processor)
(d)	Small Form Factor	Computer should be of 2 liters Volume or less
(c)	In-Built Wi-Fi / Wireless LAN Card	Should have a inbuilt Wi-Fi / Wireless LAN Card
(d)	RAM	8 GB
(e)	Hard Disk	128 GB SSD with 1 TB HDD or better
(f)	Ports (Min.)	HDMI x 1, DP (Display Port) x 2, USB ports x 5, LAN Port x 1
(g)	Keyboard & Mouse	Wireless
(h)	Operating System	Windows 10

S.No.	Parameters	Description
(i)	Antivirus	Norton Anti-Virus/MacAfee or equivalent with 1 year license
5	Multimedia Controller	
(a)	Ports on front Panel of Controller (Minimum)	VGA, HDMI, USB3.0x2, Audio IN or more
(d)	Buttons on front Panel of Controller (Minimum)	Push buttons to control Volume Up& Down, Volume Mute and to switch sources of HDMI Visual Presenter, VGA Visual Presenter, HDMI Laptop, PC HDMI, VGA Laptop, VGA PC and Controller Power On/Off, Display Power On and Power Off or more
(c)	Ports on Rear Panel of Controller (Minimum)	USB 3.0 X 2, VGA Input x 2, VGA Output x 2, RCA Audio IN X 1, RCA Audio Output x 2, HDMI Inputx2, HDMI Outputx2, Programming Port (Phoenix connector) or more
(d)	Built in HDMI Repeater	Yes (HDMI Output port should support 15mtr HDMI cable)
(e)	Controller Resolution Output	4K (3840 x 2160) Native
(f)	Power	5 V DC (Suitable Adaptor should be supplied with controller)
6	Built in devices	
(a)	Gooseneck Microphone	Gooseneck Microphone with XLR output. It should be Phantom powered so that there is no requirement of batteries thereby eliminating consumable cost. The gooseneck length should be at least 21.5cm with ON/OFF switch and with LED light indicating ON/OFF status. The gooseneck microphone shall be permanently polarized condenser, highly directional featuring hyper cardioid /lobar directivity
(d)	Amplifier	250 Watts minimum
(c)	Speakers	Two speakers of Minimum 100 W each shall be a part of standard Supply.
(d)	Wireless Microphone Units	One handheld Microphone and One Lapel Microphone with single receiver Should be supplied with a range of 10 meters.
7	B. Sliding Trays	Provision for keeping Keyboard & Mouse
8	Power Supply	180 -240V, 50Hz, AC Supply

C. Digital Podium High-end

S.No.	Parameters	Description
1	Type/Mounting	Free Standing
2	Construction	The Podium shall be wheel mounted capable of moving in all directions with a facility of lock them ¹ while the electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. ² The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualiser is in use and not in use. At the time of using the Visualiser, drawer can be opened, and Visualiser can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling.
3	Display	Built-in highly sensitive Interactive Panel with Adjustable Motorized tilt & a mechanism to make the Panel stable so that it does not shake while writing with following minimum features-
(a)	Screen Type	LED
(d)	Size	53.0 ⁴ cm (21 inches) or higher
(c)	Resolution	1920 x 1080 or higher
(d)	Aspect ratio	16:9/16:10
(e)	Computer interface	One USB, One VGA/DVI/HDMI Port
(f)	Interactive Resolution	4000 Lpi (lines per inch)
(g)	Response Time	5ms
(h)	Viewing Angles	170(H); 160(V)
(i)	Touch	Finger Touch
(j)	Reading accuracy	±0.5 mm (center)
(k)	Tracking speed	Approximately 200 points per second
(l)	Pen Pressure sensitivity	2048 Levels
(m)	Speakers	Display panel should have Inbuilt Speaker
4	System Details	
(a)	Processor	Intel Core i5 (10th Gen or better processor)
(d)	Small Form Factor	Computer should be of 2 litres Volume or less
(c)	In-Built Wi-Fi / Wireless LAN Card	Should have a inbuilt Wi-Fi / Wireless LAN Card
(d)	RAM	8 GB
(e)	Storage	128 GB SSD with 1 TB HDD or better
(f)	Ports (Min.)	HDMI x 1, DP (Display Port) x 2, USB ports x 5, LAN Port x 1

S.No.	Parameters	Description
(g)	Keyboard & Mouse	Wireless
(h)	Operating System	Windows 10
(i)	Antivirus	Norton Anti-Virus/MacAfee or equivalent with 1 year license
5	Controller	
(a)	Ports on front Panel of Controller (Minimum)	VGA, HDMI, USB3.0x2, Audio IN or more
(d)	Buttons on front Panel of Controller (Minimum)	Push buttons to control Volume Up& Down, Volume Mute and to switch sources of HDMI Visual Presenter, VGA Visual Presenter, HDMI Laptop, PC HDMI, VGA Laptop, VGA PC and ¹ Controller Power On/Off, Display Power On and Power Off or more ²
(c)	Ports on Rear Panel of Controller (Minimum)	USB 3.0 X 2, VGA Input x 2, VGA Output x 2, RCA Audio IN X 1, RCA Audio Output x 2, HDMI Inputx2, HDMI Outputx2, ³ Programming Port (Phoenix connector) or more ⁴
(d)	Built in HDMI Repeater	Yes (HDMI Output port should support 15mtr HDMI cable)
(e)	Controller Resolution Output	4K (3840 x 2160) Native
(f)	Power	5 V DC (Suitable Adaptor should be supplied with controller)
6	Built in devices	
(a)	Gooseneck Microphone	Gooseneck Microphone with XLR output. It should be Phantom powered so that there is no requirement of batteries thereby eliminating consumable cost. The gooseneck length should be at least 21.5cm ¹ with ON/OFF switch and with LED light indicating ON/OFF status. The gooseneck microphone shall be permanently polarized condenser, ² highly directional featuring hyper cardioid /lobar directivity.
(d)	Built in Amplifier Power	250 Watts minimum
(c)	Speakers	Two speakers of Minimum 100 W each shall be a part of standard supply.
(d)	Wireless Microphone Units	Wireless Hand Held & Lapel microphone with receiver.
7	Sliding Trays	Provision for keeping laptop and Keyboard & Mouse
8	Power Supply	180-240V, 50Hz, AC Supply
9	Security	Integrated authentication System having RFID, Password protection & Physical Key for secure access to system.
10	Fans	Suitable cooling fans to be provided in the lower body.

D. Full HD Visualizer Compact

Parameters	Description
Camera Sensor	1/4" CMOS Sensor F=2.8
Effective Pixels	Min. 8 Mega Pixel or better
Frame Rate	Min. 30fps or better
Inbuilt Microphone	Should available inbuilt Microphone
OCR function	Should support OCR technology
Video Output	It should provide the following resolutions HDMI: Full HD (1080p), HD (720p), VGA (480p); USB: Full HD (1080p), SXGA (1280 x 1024), XGA (1024 x 768), SVGA (800 x 600), VGA (640 x 480), QVGA (320 x 240), VGA HD (1360 x 768), WXGA (1280 x 800), SXGA (1280 x 1024), XGA (1024 x 768)
Shooting Area	Minimum A3 (420MM x 297MM) or better to share information more flexibility.
Zooming Capability	Minimum 100x Zooming Capability or better to capture clear and loss-less magnified image.
Split Screen	Device should allows the live image of an object being captured to be displayed alongside an image stored on the external memory.
Focus Adjustment	It should have option of Auto/Manual Focus Adjustment.
LED Light	Two Type LED system Top LED & Side LED strip
White Balance	Auto
LED Light Brightness Adjustment	Should support LED Light Brightness Adjustment & Dimming capability
Image Rotation	90°, 180°, 270°
Multimedia Function	Freeze, Focus Adjustment, LED on/off, Brightness Adjustment, Contrast, Negative, Black and White, Split Screen, Slideshow, Video Capture, Flicker Reduction, Image Rotation(0/180degrees), Source (PC/SD Card), Image Mirror, Picture in Picture.
Interactive features	Should have Touch screen support to perform interactive features
SD Card	Should support SD/SDHC card with min. 32 GB Capability or more
File Format	JPEG (1920 x 1080), VGA (720p)
Connectivity ports	1x VGA In, 1x VGA out, 1x HDMI out, 1x USB, 1x SD Card
Safety	Should have Kensington lock (K-Lock)
Portability	Device should portable structure allows users to fold and easy to store.
Advance Features	PC Less Annotation, Image roaming drag Region zoom in, Split Screen function, Camera Rotation, Device Portability, Microscope Capability

Parameters	Description
Remote Control	Device should be available with fully functional remote control
Annotation	Device should have on-board Annotation feature without using any other computing device.
On Screen Toolbar	Should have on Screen toolbar to perform Auto focus, Magnifier, zoom in/out, Rotate, Mirror, Freeze, Division, Snap, Record, File Browse, PIP, Annotate, Settings
Key on Visualizer	It should have minimum Zoom in/out, Res/Exit, Menu, VGA/HDMI, Light, Auto/OK, UP/Down buttons or more for ease of access
Certification & Datasheet	BIS, CE, RoHS, FCC and Datasheet should be available on OEM website

E. Full HD Visualizer Large

Parameters	Description
Camera Sensor	1/2.7" CMOS Sensor
Effective Pixels	Min. 8 Mega Pixel or better
Lens	F=1.6~3.0, f=4.7~47mm
Frame Rate	Min. 30fps or better
Inbuilt Microphone	Should available inbuilt Microphone
OCR function	Should support OCR technology
Video Output	It should provide the following resolutions HDMI: Full HD (1080p), HD (720p), SXGA (1280 x 1024), XGA (1024 x 768); USB: Full HD (1080p), SXGA (1280 x 1024), XGA (1024 x 768), SVGA (800 x 600), VGA (640 x 480), QVGA (320 x 240); VGA HD (1360 x 768), WXGA (1280 x 800), SXGA (1280 x 1024), XGA (1024 x 768)
Video Recording	Full HD (1080p), HD (720p), SXGA (1280 x 1024), XGA (1024 x 768)
Shooting Area	Minimum A3 (420MM x 297MM) or better to share information more flexibility.
Optical Zoom	Should Have minimum 12x optical zoom or better to capture clear and loss-less magnified image.
Digital Zoom	Minimum 120x Digital zoom or better
Split Screen	Device should allow the live image of an object being captured to be displayed alongside an image stored on the external memory.
Denoise	Device should have Image Denoise Function to provide clear and crisp image quality.
Text Enhancer	Device should have Text Enhancer Function to provide clear image quality of Textbook/paper.
Image Capture	Device should have capability to capture minimum 200 images within device without connecting storage media.

Parameters	Description
Focus Adjustment	It should have option of Auto/Manual Focus Adjustment
LED Light	Should be available on camera head to provide proper lighting.
White Balance	Auto
Image Rotation	90°, 180°, 270°
Multimedia Function	Freeze, Focus Adjustment, LED on/off, Brightness Adjustment, Negative, Black and White, Split Screen, Slideshow, Video Capture, Image Rotation(0/180degrees), Source (PC/SD Card), Image Mirror, Picture in Picture, Title, Highlight, Mask, Mosaic.
Interactive features	Should have Touch screen support to perform interactive features
SD Card	Should support SD/SDHC card with min. 32 GB Capability or more
File Format	JPEG (1920 x 1080), VGA (720p)
Connectivity ports	1x VGA In, 1x VGA out, 1x HDMI out, 1x USB, 1x SD Card
Safety	Should have Kensington lock (K-Lock)
Advance Features	PC Less Annotation, Image roaming drag Region zoom in, Split Screen function, Camera Rotation, Device Portability, Microscope Capability
Remote Control	Device should be available with fully functional remote control
Annotation	Device should have on-board Annotation feature without using any other computing device.
On Screen Toolbar	Should have on Screen toolbar to perform Auto focus, Magnifier, zoom in/out, Rotate, Mirror, Freeze, Division, Snap, Record, File Browse, PIP, Annotate, Settings
Key on Visualizer	It should have minimum Zoom in/out, Res/Exit, Menu, VGA/HDMI, Light, Auto/OK, UP/Down buttons or more for ease of access
Certification & Datasheet	BIS, CE, RoHS, FCC and Datasheet should be available on OEM website

F. UPS-10KVA with 6-hours back-up

S.NO.	Parameters	Description
1	System	Online UPS System
2	Capacity	10 KVA
3	Output Power Capacity	10000 VA
4	Output	220V, 50Hz
5	Waveform	Pure Sine wave
6	DC to AC Efficiency	Greater than 90%
7	Inverter technology	IGBT based, High Frequency

8	Grid charger	SMPS type constant current constant voltage-Trickle
9	Backup requirement	Minimum 6 hours.
10	Display	LCD

G. Server Rack

- i. Server Rack 42U
- ii. Server Rack 24U

H. Furniture

S.No.	Parameters	Description
1.	Chair	<p>Ergonomic Design</p> <ul style="list-style-type: none"> Designed for comfort and proper posture support Aesthetically appealing and durable <p>Seat & Back Construction</p> <ul style="list-style-type: none"> Made of 15mm thick hot pressed commercial plywood Padded with high resilience moulded polyurethane foam <ul style="list-style-type: none"> Seat: 50mm thick, Density: 45kg/m³ or better Back: 45mm thick, Density: 35kg/m³ or better Upholstered with 1mm thick, 300 GSM fabric tapestry <p>Back & Base Cover</p> <ul style="list-style-type: none"> Polypropylene/ABS moulded cover for durability Backrest contoured to support natural spinal curvature <p>Structural Support</p> <ul style="list-style-type: none"> Seat and back are connected with 50-60µ thick powder-coated HR steel spine <p>Armrest</p> <ul style="list-style-type: none"> Made of black integral polyurethane with metal insert Fully joint with seat and back for better durability Flat armrest design for better comfort <p>Swivel & Tilt Mechanism</p> <ul style="list-style-type: none"> 360-degree revolving mechanism Upright position locking and tilt tension adjustment <p>Pneumatic Height Adjustment</p> <ul style="list-style-type: none"> Seat height adjustable up to 100mm Standard Class-3 gas lift, tested as per standards <p>Base & Castors</p> <ul style="list-style-type: none"> Five-legged pedestal, injection moulded in black 30% glass-filled nylon Pitch circle diameter: 700mm Five twin-wheel castors, injection moulded in 30% glass-filled nylon Tested for 98,000 cycles with 250lbs load <p>Dimensions</p> <ul style="list-style-type: none"> Seat Size: 485±10 mm (W) x 450±10 mm (D) Back Size: 480±10 mm (W) x 400±10 mm (H) (from seat) Overall Height: 810±10 mm <p>Approval & Testing</p> <ul style="list-style-type: none"> Sample must be approved by DGS before mass production Components tested for durability, strength, and performance
2.	Workstation table	Supply and Installation of Workstation Table in Knock-Down Condition

S.No.	Parameters	Description
		<p>The workstation table shall be provided in a fully knock-down condition for on-site assembly, with overall dimensions of 1320mm (L) x 660mm (W) x 1200mm (H). The worktop will measure 1200mm (L) x 600mm (W) and be made of 25mm thick pre-laminated particle board of Grade II as per IS standards. The laminate finish will be as per the approved shade. The rectangular worktop edges shall be sealed with 2mm thick PVC edge banding, applied using an edge banding machine at 200°C to ensure durability and impermeability.</p> <p>A pullout keyboard tray, measuring 525mm (L) x 350mm (W), shall be included. It will be 18mm thick pre-laminated particle board and mounted on a keyboard channel for smooth operation.</p> <p>Partition System</p> <p>The workstation shall feature a 60mm thick panel-based partition with an overall height of 1200mm. The partition will be linear in profile and placed in front as well as on both sides of the user for privacy. Key components of the partition include:</p> <ul style="list-style-type: none"> • Top trim, top bar, mid bar, vertical bar, raceway, and skirting, all made of pre-treated aluminium extrusions and powder-coated with a 40µ-60µ thick finish. • Trims of 60mm x 19mm and 1.5mm thick, fitted with die-cast end caps at joints (L-cover for corners, T-cover for middle sections, etc.). • An aluminium raceway positioned below the worktop with dimensions of 116mm (H) x 60mm (D), featuring a 1.4mm thick cover and a 2mm thick back to accommodate electrical wiring horizontally. • Exposed vertical and horizontal frame surfaces will be snap-fitted with trims for a sleek finish. <p>The partition will incorporate laminated top and bottom tiles on both sides of the user and below the worktop. The concealed wire management system will facilitate the organized and safe routing of power, telecommunications, and LAN/data cables, ensuring separate channels for electrical, data, and telephone wiring. The raceways will include pre-cut slots to accommodate power and data points.</p> <p>A single-sided flapper box will be embedded in the tabletop, housing power and data connections discreetly. It will include a 10-module network switch with a hydraulic cable cubby pop-up box, equipped with:</p> <ul style="list-style-type: none"> • HDMI, VGA, Audio, LAN, Power, and USB ports for versatile connectivity. <p>Zinc-coated small top support brackets will be fixed onto the partition to support the worktop. A decorative skirting will be installed at the base of the partition to protect walls from wear and provide an aesthetic finish. Adjustable leveler shoes shall be included to prevent floor scratches.</p> <p>Storage & CPU Unit</p> <p>A fixed pedestal unit shall be provided with overall dimensions of 400mm (L) x 450mm (W) x 725mm (H). It will be made from pre-laminated particle board (Grade II, IS Standard), with the following specifications:</p> <ul style="list-style-type: none"> • Side, back, top, and facia panels: 18mm thick • Drawer base: 9mm thick • Drawers: 3 compartments—2 box drawers and 1 filing drawer

S.No.	Parameters	Description
		<ul style="list-style-type: none">• SS handles and smooth roller & ball bearing channels for easy operation• Central locking mechanism to synchronize all drawers with a single key <p>A nylon castor-based CPU trolley with dimensions 468mm (L) x 284mm (W) shall also be provided. It will be made of 18mm thick pre-laminated particle board for durability and easy mobility.</p> <p>Design Approval & Manufacturing</p> <p>A 3D design representation shall be created with a proposed color scheme before production. Manufacturing will commence only after receiving final approval of the design.</p>

Signature Not Verified

Digitally signed by RAM SAJAN GUPTA
Date: 2025.03.11 13:53:43 PST
Location: eProcure-EPROC