

COCHIN PORT TRUST
MARINE DEPARTMENT
E- Tender No. DC/VTMS/2019



TENDER DOCUMENT

NO. DC/VTMS/2019

UP-GRADATION OF
VESSEL TRAFFIC MANAGEMENT SYSTEM
OF
COCHIN PORT TRUST

DEPUTY CONSERVATOR
COCHIN PORT TRUST
WILLINGDON ISLAND,
COCHIN- 682009

TENDER DOCUMENT

FOR

UP-GRADATION OF

VESSEL TRAFFIC MANAGEMENT SYSTEM

OF

COCHIN PORT TRUST

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SECTION 1

1. General

Project

Cochin port Trust (CoPT) intends to up-grade its existing integrated “Vessel Traffic Management System (VTMS)” with latest state-of-the-art system in order to improve safety and efficiency of marine traffic and to safeguard the protection of the environment as per the IMO & I.A.L.A. guidelines.

1.1. Intent of the document

The intent of this document is to provide an overall view of the total project and specify the conditions of the contract. The document describes in brief the specifications for up-grading the system and sub systems along with specific instructions to the contractor and the terms and conditions which would be binding in fulfilling the scope of work under this tender.

1.2. Layout of the document

This document is broadly divided into 9 sections. A brief description of each section is given below.

- Section 1: Gives introductory information of the tender along with general lay out of the port
- Section 2: Notice inviting tender (NIT).
- Section 3: Instruction to tenderers.
- Section 4: General conditions of contract.
- Section 5: Special conditions of contract.
- Section 6: System specifications.
- Section 7: Tenderers qualifications.
- Section 8: Technical proposal (Cover-I) forms
- Section 9: Price bid (Cover-II) forms.
- Enclosures Annexure 2.1 to 2.3
- Appendix

1.3. Cochin Port Trust (CoPT).

The Cochin Port is an all weather natural port, and is situated at Latitude 9^o.58'N longitude 76^o.14'E on the South-West of India, about 930km South of Mumbai and 320 km north of Kanyakumari. Cochin with its proximity to the International sea route between Europe and the Far East and Australia can attract a large number of

container liners offer other immense sailing opportunities. The entrance of the Port is through the Cochin Gut between the peninsular head land Vypeen and Fort Cochin. The port limit extends up to the entire back water and connecting creeks and channels.

The approach channel up to the Cochin Gut is about 16 km long with width of about 260 meters and maintained a dredged draft of 15.95 m with 4 turning circles of 350/500/670meters. The gut channel divides into Mattancherri channel and Ernakulum channel leading to west and east of Willingdon Island respectively and berthing facilities for ships/vessels have been provided in the former wharves, berths, Jetties and stream moorings alongside these channels,

The 'International Container Transshipment Terminal' (ICTT), part of the Cochin Port, is a major container transshipment facility in India. The port is well-connected with Major ports of the world; and today is fast emerging as the hub port of Indian subcontinent. Cochin is an ISO 9001:2015 certified Port. It complies with all provisions of ISPS and MARPOL Regulation and member of International Association of Ports & Harbors. The present total capacity of the Port is 76.92 Million tones.

The Layout of the port and the location of the radar sites are shown in figure in para 6.2.1.

1.4. Port Facilities

(a) Berths

The port has following number of berths.

Sl. No.	Berth	Type	Draught in metres	Quay Length (m)
1	Q1	Gen. Cargo	9.14	188
2	Q2	Gen. Cargo	9.14	228
3	Q3	Passenger/Gen. Cargo	9.14	228
4	Q4	Other liquids	9.14	251
5	Q5	Gen. Cargo	10.00	503
6	Q6	Passenger/Gen. Cargo	10.00	503
7	Q7	Gen. Cargo	10.50	503
8	Q8	Gen. Cargo	11.00	414
9	Q9	Gen. Cargo	11.00	414
10	Q10	Fertilisers/Raw materials.	11.70	278.
11	BTP	Multi Purpose/Cruise	10	270
12	NCB	Passenger/& General Cargo	9.14	209

13.	COT	Crude & POL Products	12.50	430
14	NTB	POL Products	9.14	298
15	SCB	Liquid cargo	9.14	192
16	STB	POL Products	9.14	266
17	SPM	Crude oil	22.50	N/A
18	UTL	Passenger	5.30	300
19	ICCT Vallarpadam	Containers	14.50	600
20	LNG Puthuvypin	LNG	12.50	376.50

(b) **Cargo Handling Equipments**

The Port has the following cargo handling equipments.

- Harbour Mobile Crane (40 Tons) : 1 No
- Mobile Crane (10 Tons) : 1 No.
- Diesel Fork Lift Trucks – 3 Tons : : 11 Nos.
- Diesel Fork Lift Trucks - 5 Ton : 1 No
- Tractor-3 Ton : 1 No
- Reach Stacker- 45 Ton : 2 nos.
- Trailer -1 Ton. : 2 Nos.

(c) **Buoys**

The present fair way buoy is located at Latitude 09⁰-58'N and longitude 76⁰-16'E. The main channel is marked with 16 number (8sets) of channel marker buoys.

(d) **Floating Crafts**

Sl.No.	Description	Remarks
1.	Tugs – 5 nos	
	• VALLARPADOM	Bollard Pull:45 Tons
	• VYPEEN	Bollard Pull: 45Tons
	• OCEAN ELITE	Bollard Pull: 60 Tons
	• OCEAN PIONEER	Bollard Pull: 60Tons
	• OCEAN ENTERPRISE	Bollard Pull 60 Tons
2.	Pilot launch- 3 nos	
	• Pilot II	BHP 2X280
	• Pilot	BHP 2X325
	• Deepam (Hired)	BHP: 2X400

Sl.No.	Description	Remarks
3.	Mooring Launches – 5 nos	
	• ML Chellanam	1X89 BHP
	• ML Diamond	1X109 BHP
	• ML Candle	1X109 BHP
	• ML Aroor II	1X130 BHP
	• ML Gundu II	1X130 BHP
4.	Dredgers-1 no.	
	GHD Nehru Shatabdi.	1500CuM Hopper Capacity.
5.	Speed Boats –2 Nos.	
6.	Others - 1 No	Harbour Patrol Launch
	M.V.Venad	10 Tons

(e) **Leading lights**

There are three leading lights installed on the towers in line with the centre of the approach channel.

No of Ships handled	(2018-19)	: 1608.
Traffic handled during	(2018-19)	: 32.02 Million Tonnes.
Container Traffic	-do-	: 594592 TEUS.
Cruise Vessels.	-do-	: 47 Nos
Passenger Vessels & Others	-do-	:413 Nos.
Total POL handled	-do-	: 22.41 MMT.

1.5. Developmental Works

The Port Trust undertakes several development works under Plan, Non Plan, Private Sector/Joint Venture, Grant- in Aid & Projects under deposit scheme.



SECTION 2
COCHIN PORT TRUST

Tele Fax: 91-0484-2666 417/
Tele: 91-0484-258 2500
Email: dc@cochinport.gov.in
Website: www.cochinport.gov.in

Deputy Conservator's Office
Cochin Port Trust
Willingdon Island ,
Cochin – 682009, KERALA

Tender No. DC/VTMS/2019

NOTICE INVITING TENDER

1. Electronic Tenders (**e-tenders**) are invited by Deputy Conservator, Cochin Port Trust (CoPT) from the interested, reputed, well experienced Companies/ Firms under single stage two cover bidding procedure [Technical Bid and Financial bid], meeting the Minimum Qualifying Criteria specified in Instruction To Tenderers for the work of **“Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ”.**
2. **Cost of Tender Documents:**
The cost of the tender document is INR 10,500/-(Ten Thousand Five Hundred Indian National Rupees Only) Inclusive of GST @ 5 %.
3. **Eligibility of the Tenderer:-**
This tender is open to all firms including company(ies), Government Owned Enterprises registered and incorporated in India as per Company Act, 1956/2013 including JVs, Foreign manufacturer / foreign suppliers etc and those Tenderers with whom business is not banned by the CoPT. The Tenderer shall not indulge in the prohibited practices, directly or indirectly, at any stage during the procurement process or during execution of resultant contracts. Any Tenderers found to be indulging any of the above practices will be disqualified.

4. Minimum Qualification Criteria (MQC):**(A) Work Experience:**

The Tenderer should have successfully completed 'similar' type of tendered work during the last 7 seven years. (Ending 31/10/19) either of the following:

- (a) 3 (three) similar completed works each costing not less than amount equivalent to Rs.4.92 Crores or equivalent in foreign currency
OR
- (b) 2 (two) similar completed works each costing not less than amount equivalent to Rs.6.16 Crores or equivalent in foreign currency
OR
- (c) 1 (one) similar completed work costing not less than amount equivalent to Rs.9.85 Crores or equivalent in foreign currency.

Definition of similar works:- similar works means "Design, Development, Construction, Supply, Delivery, Installation, Testing, and Commissioning " of an Integrated Vessel Traffic System (VTS) or Vessel Traffic Management System (VTMS) with integration of minimum of one Radar and Automatic Identification System or Up-gradation/renewal of existing "Vessel Traffic Management System" (VTMS) of any Indian Major Port (established under Major Port trust Act 1963) or in any International Ports. Installation of Costal security/surveillance/platform systems for ISPS compliance & Costal 'VTS' system and installations in the oil field with Radar & AIS are considered as similar works.

The above completed works shall be with or without AMC. For the purposes of evaluation of the MQC in the case of a contract where commissioning is complete and AMC is ongoing, the value of the completed portion of the AMC will only be considered subject to production of certificate to that effect from the client.

(B) Financial Criteria:

The minimum average annual turnover for the past three financial years 2015-16, 2016-17 and 2017-18 ending with 31st March of each financial year should be at least Rs.3.70 **Crores** (30% of estimated cost of the project). In case the financial year of the firm/company is from January to December then they can submit their statements for the period ending with December of each financial year.

(C) Criteria for Joint Venture / Consortium:

In case of bid submitted by JV/ Consortium the minimum qualifying criteria except financial turnover can be fulfilled collectively by the partners of the JV / Consortium. However the lead partner of the JV / Consortium shall meet the minimum qualifying criteria of financial turnover. The most experienced partner shall be nominated as the lead partner. The most experienced partner shall be identified based on the total value of the eligible works done by the partners furnished as per form no. 7.7 of the tender document. Therefore documentary

proof as in the case of Minimum Qualifying Criteria shall necessarily be produced by the bidders towards the fulfillment of the above condition.

The documents to be submitted to establish Minimum Qualification Criteria stated at Clause 4.

- a. Copies of supply orders issued by the clients, clearly indicating value of the contract. Details of supply orders shall also be furnished in Schedule 8.1
- b. Copies of satisfactory completion certificate from the client.
- c. Average Financial Turn Over in Schedule no. 7.6 accompanied with auditor's report and balance sheet.

Note:- For Tender evaluation purpose, the average financial turnover and cost of the works expressed in other currencies shall be converted into INR at the TT selling rate of SBI on the date of Notice inviting Tender.

5. Pertinent information to the tender is given in the following Tables:

Schedule of different activities till submission of the bid are detailed as under:

Sl. No.	Particulars	Date and Time
1	Tender e- publication date	18/11/2019
2	Download period of Bid Documents	18/11/2019 to 20/12/2019 up to 1400 Hrs.
3	Date of pre-bid meeting	02/12/2019 at 1500 hrs
4	Last date and time of submission of Tender	20/12/2019 at 1500 Hrs
5	Date and time of opening the Tender	20/12/2019 at 1530 Hrs
6	Opening of price bid of technically qualified Tenderer	Will be informed at appropriate time to the Technically qualified tenderers.
7	Estimated Amount put to Tender	INR.12.31 Crores (excluding Custom duties and GST)
8	Earnest Money Deposit	INR. 12,31,000/- (Rupees Twelve Lakhs Thirty One Thousand only)To be furnished either through Demand Draft or Banker's Cheque drawn in favour of Financial Adviser &Chief Accounts Officer, CoPT from any Nationalized Bank/ Scheduled Bank in India OR can be submitted by way of Bank Guarantee as per required format enclosed.
9	Cost of Tender document	INR. 10,500/- (Ten Thousand Five Hundred Indian National Rupees only), including GST@ 5%. To be furnished either through

		Demand Draft or Banker's Cheque drawn in favour of Financial Adviser & Chief Accounts Officer, CoPT from any Nationalized Bank/ Scheduled Bank in India.
10	Validity period of Tender	120 days from the Last Date for Receipt of Tenders.
11	Time for Completion	6 Months from date of issue of Work Order.

6. The Scope of the work is:

The equipment shall be of Commercial-Off-The-Shelf (COTS)/latest version or better standards available at the time of contract execution/delivery. All non-COTS items must be clearly documented in the proposal, stating the extent of any development required the extent of any custom fabrication, the expected reliability of such non-COTS items and other similar non-COTS considerations.

The proposed system configuration includes the following,

Sensors:-

- a) 2 X-Band Radars dual Tx Rx 25 Kw down mast configuration dual polarization (H/C) 12'SWG antenna System with all relevant accessories.
- b) AIS Base System.

Servers:-

- a) VTS Servers (dual redundant)
- b) VTS DB Servers (dual redundant)
- c) Time Servers (dual redundant)

Port Control station:-

- a) 2 x Operator console with VHF communication. (24" LCD)
- b) 1 x Supervisor console with VHF communication (24" LCD).
- c) Other necessary ancillaries and sensors required for satisfactory operation.

Remote Monitoring Terminals:-

- a) 4 nos. display Remote Monitoring display units (slave mode) –Port Administrative building.

Other equipments:-

- a) Voice recording and replay system.
- b) Communication Link (Microwave Link-Optional).
- c) UPS System.
- d) LAN System Hardware
- e) Radar display recording and replay system.

The contractor shall bear complete responsibility of procurement/ development of all the above equipment/sub-stems. Contractor shall be totally responsible for installation, commissioning and testing of the complete system including the

interfacing of all the equipments. All details should be enclosed in the technical bid. The materials used for the execution of work shall be of highest standard.

7. Tender Documents can be downloaded from the e-Tendering portal www.tenderwizard.com/COPT on the dates specified in the above table by making online requisition. Bid document will also be available in Cochin Port website www.cochinport.gov.in as well as Central Public Procurement (CPP) Portal www.eprocure.gov.in/cppp. The cost of Bid document shall be furnished in the form of Demand Draft/ Banker's Cheque drawn in favour of FA & CAO, CoPT along with the submission of Bid.
8. The Bidders need to obtain the one time User ID & password for log-in to in e-Tendering system from the service provider M/s. **KEONICS** by paying registration amount of **Rs.1124/-** by online payment using Credit/Debit Card/Net banking or DD in favour of "KSEDCL, Bangalore.
9. The intending Bidder must have valid Class-II or III digital signature certificate to submit the Bid. For further details and to obtain the digital signature please contact e-Tender Help Desk No.080-49352000 / 9605557738
10. Tenders shall be submitted "**online**" strictly in accordance with the Instructions to Bidders and Terms & Conditions given in the Tender Document.
11. The Bidder is responsible to download Addenda/ Amendments/ Errata/ Replies to the queries of Bidder etc., if any, issued by CoPT, from the website before submission of the Bid. Any shortfall in submissions of the said Addenda/ Amendments/Errata/Replies to the queries of Bidder etc. duly signed along with the downloaded documents while submitting the Bid will not be considered. Incomplete Bid documents may be rejected.
12. All Bids are to be submitted **online only** on the website www.tenderwizard.com/COPT. No Bids shall be accepted off-line (Hard copy).
13. Cochin Port Trust will not be held responsible for any technical snag or network failure during online submission It is the Bidders responsibility to comply with the system requirement i.e. hardware, software and internet connectivity at Bidder's premises to access the e-Tender portal. Under any circumstances, Cochin Port Trust shall not be liable to the Bidders for any direct/indirect loss or damages incurred by them, arising out of incorrect use of the e-Tender system or internet connectivity failures.
14. The complete Tender Document shall be submitted online as tender offer on or before the due date and time of submission. The scanned copy of financial instruments towards cost of Tender Document and EMD / Bid Security shall be uploaded with the Tender Document - Technical Bid while submitting the tender electronically in the e-procurement Portal. The Bidder shall submit the originals of (i) DD/ Pay Order/ Banker's Cheque / Bank Guarantee (BG) towards the cost of Tender Document and EMD, (ii) Power of Attorney, if applicable, and (iii) Pre Contract Integrity Pact, along **with letter of submission** in a sealed cover duly mentioning the Tender No. & Name of Work, due date of opening of Bid and Name of the Bidder to the **Deputy Conservator Cochin Port Trust, W/Island, Cochin – 682009, KERALA**, up

to **15.00 hrs. on 20/12/2019. Non submission of the original financial instruments towards cost of Tender Document and EMD and Pre contract Integrity Pact within the above period leads to disqualification of Bids.**

15. **Integrity Pact (IP)** shall cover this tender throughout its various phases, and IP would be deemed as a part of the contract through an appropriate provision. The Bidders should sign and submit an “Integrity Pact” to be executed between the Bidder and Cochin Port Trust in Technical Bid. Bids not accompanied by a duly signed “Integrity Pact” shall be liable for rejection. IP would be implemented through the following Independent External Monitor (IEM) for this tender.

Shri. P R Ravikumar, IRS (Retd.),
Akshath, No.84, First Avenue,
Kumaranasan Nagar,
Elamkulam (PO),
Ernakulam – 682020.

For full details of the scheme of IP, you may visit the website of Central Vigilance Commission, New Delhi.

16. The undersigned reserves the right to reject/cancel/postpone any one or all tenders at any stage of the tender, which will be binding on all Bidders.

**Deputy Conservator
Cochin Port Trust**

SECTION 3

3 Instructions to Tenderers

3.1 General

The equipment and materials used for the up gradation work shall be of best quality and fulfilling the work specifications. The design of the proposed system consisting of replacing the outdated 'X' Band Radars, Interfacing with new latest version AIS, VHF, Communication links, Computer system etc, shall be of latest state-of-the-art-technology. Any outdated/out of manufacturing same shall be replaced with latest version complying with the tender specifications.

3.2 Scope of Work

The scope of work under this contract shall be as detailed in **SECTION 6** of this document.

3.3 Cost of Tendering

All costs associated with the preparation and submission of this tender shall be borne by the tenderer and CoPT will in no case be responsible or liable for such costs.

3.4 Minimum Qualification Criteria (MQC) of Tenderers

To be eligible for award of contract the tenderers shall provide satisfactory evidence, to the Employer, of their eligibility, their capacity and adequacy of resources to carry out the subject contract effectively. It is an essential requirement that tenderers shall have prior experience in Installation and commissioning of "Vessel Traffic Management System" in any Indian Major Port Trusts/International Ports or in Up-gradation/renewal of the VTMS system in Indian Major Ports Trusts/International Ports or as defined in the similar works.

The tenderer should fulfill the following criteria mentioned in clause nos. 3.4.1 to 3.4.6

3.4.1 Financial Criteria:- The minimum average annual turnover for the past three financial years 2015-16, 2016-17 and 2017-18 ending with 31st March of each financial year should be at least Rs.3.70 **Crores** (30% of estimated cost of the project). In case the

financial year of the firm/company is from January to December then they can submit their statements for the period ending with December of each financial year

The tenderer should submit and upload in the E- Tender portal either notarized or self attested copies of audited Annual Reports for their last 3 years (i.e. from 2015-16, 2016-17, and 2017-18) giving the audited profit and loss account and balance sheets. In case the accounts for the year 2017-18 are not audited then unaudited profit and loss account and balance sheets may be enclosed.

3.4.2 Experience Criteria:- The tenderer should be in the business of Installation, Testing and Commissioning of 'VTMS' or Up-grading the 'VTMS' in any Indian Major Port trusts/ International Ports/or as defined in the definition of similar works for at least 5 years. The tenderer should submit documentary evidence related to business registration/commencement. It is desirable that the bidder should have experience in the Maintenance of the installed VTS/VTMS, but is not an essential criterion.

3.4.3 Work Experience Criteria:-

The Tenderer should have successfully completed 'similar' type of tendered work during the last 7 seven years. (Ending 31/10/19) either of the following:

- (a) 3 (three) similar completed works each costing not less than amount equivalent to Rs.4.92 Crores or equivalent in foreign currency
OR
- (b) 2 (two) similar completed works each costing not less than amount equivalent to Rs.6.16 Crores or equivalent in foreign currency
OR
- (c) 1 (one) similar completed work costing not less than amount equivalent to Rs.9.85 Crores or equivalent in foreign currency.

Definition of similar works: - similar works means "Design, Development, Construction, Supply, Delivery, Installation, Testing, and Commissioning of an Integrated Vessel Traffic System (VTS) or Vessel Traffic Management System (VTMS) with integration of minimum of one Radar and Automatic Identification System or Up-gradation/renewal of existing "Vessel Traffic Management System" (VTMS) of any Indian Major Port (established under Major Port trust Act 1963) or in any International Ports. Installation of Costal security/surveillance/platform systems for ISPS compliance & Costal 'VTS' system and installations in the oil field with Radar & AIS are considered as similar works.

The above completed works shall be with or without AMC. For the purposes of evaluation of the MQC in the case of a contract where commissioning is complete

and AMC is ongoing, the value of the completed portion of the AMC will only be considered subject to production of certificate to that effect from the client.

Note:-For Tender evaluation purpose, the average financial turnover and cost of the works expressed in other currencies shall be converted into INR at the TT selling rate of SBI on the date of Notice inviting Tender.

The documents to be submitted to establish Minimum Qualification Criteria stated at Clause 3.4.3

- a. Copies of supply orders duly notarized/ self attested, issued by the clients, clearly indicating value of the contract. Details of supply orders shall also be furnished in Schedule 7.2.
- b. Copies of satisfactory completion certificate/ performance certificate from the client.
- c. Average Financial Turn Over in Schedule 7.6 accompanied with Auditors report and balance sheet.

The tenderers should also upload notarized/self attested copies of FAT (Factory Acceptance Test), SAT (Site Acceptance Test) and certificate(s) of satisfactory completion of the project and performance of the same during warranty period of one year in respect of each work.

In case the tenderer unable to produce the copies of supply orders on account of the rules /regulations of that country then they must produce/upload the notarized or self attested certificate from the supplier and from the concerned port authorities certifying the details asked for.

3.4.4 Current Litigation Criteria:-The tenderers should furnish information regarding any current litigation with Government of India or state Governments.

3.4.5 JV/ Consortium Clause:- The tenderer can exercise an option of forming a JV / consortium with Indian firm in India for executing the project. In such an event the tenderer should fulfill the following criteria.

- a. JV/Consortium should be in the nature of legally acceptable agreement and such agreement should have been formed prior to submission of tender. The tender should be submitted in the name of JV/Consortium firms.
- b. Such agreement should be notarized

- c. JV / Consortium agreement should contain explicitly the scope and responsibilities of all the partners in terms of financial and technical commitments / contributions. The JV / Consortium should be severally and jointly responsible.
- d. JV / Consortium should be formed in India as per the provisions of Indian Acts and shall be executed in the stamp paper of requisite value. The validity of the agreement should be not less than six years after commissioning of the 'VTMS' at Cochin Port Trust.
- e. In case of bid submitted by JV/ Consortium the minimum qualifying criteria except financial turnover can be fulfilled collectively by the partners of the JV / Consortium
However the lead partner of the JV / Consortium shall meet the minimum qualifying criteria of financial turnover.
The most experienced partner shall be nominated as the lead partner.
The most experienced partner shall be identified based on the total value of the eligible works done by the partners furnished as per annexure - (to be entered) of the tender document.

Therefore documentary proof as in the case of Minimum Qualifying Criteria shall necessarily be produced by the bidders towards the fulfillment of the above condition.

The JV/Consortium partner should also furnish all the relevant details like their audited financial statements, firm are reg. no and other commercial details along with bids.

Note. In case of foreign bidders and those who do not have registered office/business in India then they have been advised to bid the tender in JV/Consortium or they can execute the work through their authorized sub-contractor or agent in India, as the work involves payment in Indian Rupees. A copy of the agreement executed with their authorized Indian agent shall be enclosed with the Technical bid. However the prime bidder is responsible for the entire project.

If any Company is having fully owned subsidiary company in India then they may use their subsidiary company for bidding. However, the principal (holding 100% shares of subsidiary company) should guarantee for all commitments of the

subsidiary company. In this case the experience and financial status of the principal company will be considered.

3.5 Tender Documents:

- i. Tender documents can be downloaded from the e-Tendering portal www.tenderwizard.com/COPT on the dates specified in NIT by making online requisition. Tender document can also be downloaded from Cochin Port website www.cochinport.gov.in or Central Public Procurement (CPP) Portal www.eprocure.gov.in/cppp. Demand Draft /Banker's cheque for cost of tender document drawn in favour of the Financial Adviser & Chief Accounts Officer (FA &CAO), CoPT from any Scheduled / Nationalized Bank having its branch at Cochin shall be submitted at the time of off line submission of tenders and scanned copy of the same shall be uploaded ONLINE in e-tender portal.
- ii. The bidder shall upload the tender document through e-Tendering portal www.tenderwizard.com/COPT on or before the due date of tender submission. The required certificates / documents to prove the MQC, Integrity Pact and cash receipt/ DD/ BG in lieu of cost of tender documents and EMD shall be scanned and uploaded to the e tender portal on or before due date of submission of tender document. The scanned copy of all documents to prove the MQC as above and originals of receipt for tender fee and EMD shall be submitted in sealed envelope to the Deputy Conservator's Office of Cochin Port Trust on or before the date fixed or extended date (if any). The tenders who fail to submit the above document on or before the time and date prescribed shall be summarily rejected.
- iii. The tenderer shall download full tender document from website and sign each pages of the document and submit along with the other document within the due date of submission of tender.
- iv. The tender procedures, contract terms and technical specifications are incorporated in the tender document. The tenderer shall furnish all the information required in as per tender document and any tender which is not responsive to the tender conditions will result in rejection of tender.

3.6 Pre-bid Meeting:

A pre-bid meeting will be held on the date as indicated in NIT / as amended in the avenue fixed by the Port, in which the bidders will have an opportunity to visit the site and for obtaining clarifications if any. The tenderers are advised to examine the tender document carefully and if there appears to be any ambiguity or discrepancy in the

document or any clarification needed on the tender document shall be referred to the Deputy Conservator, CoPT in writing/E-mail so as to reach him at least two days before the date fixed for pre-bid meeting. It is to be noted that no queries, clarifications will be entertained after pre-bid meeting at any cost. The clarification given to queries of tenderers shall be published in e- tender portal, CPP Portal as well as in Cochin Port Trust official website as Addendum/corrigendum. Any modification of the tender documents as a result of the pre-bid meeting shall be made exclusively through the issue of an Addendum/corrigendum.

3.7 Correspondence

All the correspondence in connection with the Tender shall be addressed to:

Deputy Conservator
Cochin Port Trust
Willingdon Island,
Cochin – 682009.
Kerala State, India
Tele Fax: 91 0484-2666417
Email: dc@cochinport.gov.in

3.8 Amendment to the Tender Document

The Deputy Conservator shall have the right to omit or suspend certain items of work or revise or amend the tender documents prior to the due date of submission of the tender by issuance of addendum/corrigendum. Any addendum /corrigendum thus issued shall be part of the tender documents. The addendum/corrigendum, if any, shall only be hosted in the e-tender portal, CPP Portal as well as in the website of the Cochin Port. It is the responsibility of the Tenderer to download such addendum/corrigendum hosted in the website and submit the same duly signed along with the Tender. In order to afford the Tenderers with reasonable time to take addendum into account, or for any other reason, the Port Trust may, at its discretion, extend the due date for submission of Tender and tender extension notice shall be hosted in the web site.

3.9 Language

The tender and all the correspondences and supporting documents shall be in English language only.

3.10 Tender submission:-

Tender shall be submitted in two parts, Part - I: Technical Bid and Part - II: Price Bid through e- tender mode.

I) Part - I: Technical Bid

For online submission of Technical Bid, the scanned copies of the following documents need to be submitted through e-Tendering mode (online) on www.tenderwizard.com/COPT. (Additionally, originals of the documents at (a) to (d) to be submitted in cover-A)

- a) Power of Attorney: A power of attorney, duly notarized/self attested indicating that the person(s) signing the tender has (ve) the authority to sign the tender.
- b) Integrity Pact: The Tenderer shall submit the Integrity Pact, as per appendix which shall be applicable for tendering as well as contract execution, duly signed on each page by the person signing the tender and shall be submitted by the tenderer in original along with the Techno - Commercial Part in a separate packet, duly superscripted with 'Integrity Pact'. (In cover A) The Bidder shall submit the Integrity Pact on a non-judicial stamp paper of Rs. 200/-.
- c) Cost of Tender document: INR. 10,500/- (Rupees Ten Thousand Five Hundred only), including GST@ 5%. To be furnished either through Demand Draft or Banker's Cheque drawn in favour of Financial Adviser & Chief Accounts Officer, CoPT from any Nationalised Bank/ Scheduled Bank in India- The scanned copy shall be uploaded in e-tender portal and original shall be put in a separate cover A1 and this cover shall put in cover A along with other documents.
- d) Earnest Money Deposit (EMD): Tender should be accompanied by an EMD of INR 12,31,000/- and to be submitted as per following mode.
 - i. For Domestic tenderer:- By way of BG as per the format attached (Annexure 2.3).The Bank Guarantee shall be furnished from any Nationalized/Scheduled Bank enforceable and encashable at Cochin. The validity of the BG shall be for a minimum period of four months from the due date of submission of tender and shall be renewed thereafter as and when required by Cochin Port Trust OR through Demand Draft or Banker's Cheque drawn in favour of Financial Adviser & Chief Accounts

Officer, CoPT from any Nationalized Bank/ Scheduled Bank in India, payable at cochin.

- ii. For Foreign bidder: By the way of BG as per format attached (Annexure 2.3).The BG shall be from a Branch of a reputed Foreign Bank functioning in India. The Bank Guarantee shall be enforceable and encashable at Cochin. The bidder shall ensure that when foreign currency BG is submitted, the value of the same at the time of opening of bid should not fall short of the EMD amount of Rs 12,31,000/- The validity of the above BG shall be for a minimum period of four months from the due date of submission of tender and shall be renewed thereafter as and when required by Cochin Port Trust. The Nationalized Bank can also give a BG based on the counter guarantee given by a Foreign Bank OR through Demand Draft or Banker's Cheque drawn in favour of Financial Adviser & Chief Accounts Officer, CoPT from any Nationalized Bank/ Scheduled Bank in India/ any reputed foreign bank functioning in India. The tenderer shall ensure that when EMD furnished in foreign currency, the value of the same at the time of opening of bid should not fall short of the EMD amount of Rs 12,31,000/-.
- iii. The Earnest Money deposit will not carry any interest. Any tender not accompanying EMD shall be treated as non responsive and shall be rejected.
- iv. The Earnest Money Deposit of unsuccessful tenderer shall be returned after award of contract to the successful tenderer. The EMD of successful tenderer will be refunded on submission of security deposit as per the tender clause and executing an agreement.
- v. The EMD and cost of tender document shall be scanned and uploaded through ON LINE along with other documents and originals of EMD, Cost of tender document with copies of other documents shall be submitted before the due date or extended date (if any) of tender submission to the Office of Deputy Conservator, Cochin Port Trust, Cochin 682 009 in person or through courier. **The EMD cover (Cover A1) & Cost of tender documents cover (Cover A2) shall put in 'cover A' along with other documents.**

- vi. The cover A shall be sealed and super scribed with "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ", shall be sent either through courier or in person to the "Deputy Conservator's office, Cochin Port Trust, Cochin 682 009" on or before the due date & time of submission of tender document. The Tenderer who wishes to submit the document in person shall deposit the same in the tender box provided in the Deputy Conservator's office. The Tender submitted after the due date & time of submission will be summarily rejected without giving any communication thereof.
- e) The tenderer shall submit following documentary evidences regarding the tenderers eligibility against MQC stipulated in clause 3.4 regarding Experience, Financial Standing. (3.4.1 to 3.4.5).
- f) The check List - The tenderer shall prepare the check list of the documents submitted by him regarding the MQC and other documents mentioned in section 7 and 8.

II) Part - II: Price Bid

The tenderer shall quote the prices of the items in the schedule of work (Section-9) ON LINE only. Manual submission of price bid is not permitted. The tenderer shall quote their prices as below,

Section 'A'-Import component- To be quoted in the foreign currency on CIF basis, exclusive of Custom Duty which will be reimbursed/ paid by CoPT at the prevailing rates.

Section-'B'- Local / Indigenous Items- To be quoted in INR exclusive of GST, delivery at site. However they have to indicate the value of GST as applicable.

Section-'C'- Works- To be quoted in INR exclusive of GST which shall be reimbursed / paid as per actual by CoPT.

Section-'D'- Services- To be quoted in INR exclusive of GST which shall be reimbursed / paid by CoPT.

Section-'E'- AMC- 'The charges for Maintenance' of the up-graded system for a period of five (5) years after the warranty period of one year and six (6) years for existing equipments, as per BOQ shall be quoted in INR exclusive of GST. Spares shall be quoted inclusive of GST. The comprehensive maintenance (AMC) will be inclusive of all spares.

The contract shall be on the total cost of all the above, exclusive of duties and GST. The tenderer should ensure that the quoted prices are not mentioned anywhere in the 'Technical bid directly or indirectly'. If any such mention is made, the tender shall be treated as invalid and shall be rejected.

3.11 Documents to accompany the technical Proposal.

As stated in the above clause 3.10 the tenderer shall submit the details in the prescribed formats enclosed with this tender. **(Section 7, 8)** .The tenderer may use additional sheets if required for the forms prescribed.

However the following are only indicative and tenderers are advised to submit all other documents relevant to the tender Clauses.

1. Detailed technical specifications giving make, type and details of equipments.
2. List of deviations from the technical specifications
3. Project planning (with Bar Chart) clearly indicating the tentative dates of all major stages of up-gradation/renewal, supply of material and total project completion.
4. List of spares required for 5 years period.
5. Detail activity chart of upgrading of the system
- 8 Profile & Organizational Structure of the firm.
- 9 Information on economical life of the quoted equipments and also on confirmation of the supply of the required spares and services from the suppliers till completion of the economical life of the equipments (minimum seven years).
- 10 Technical expertise & list of competent persons.
- 11 Details of local office (if any).

3.12 Tender Document (Hard copy):-

Hard copy of the tender document signed on every page and all accompanying documents as per the tender shall be submitted on or before the date and time specified in the 'Notice Inviting Tender' (NIT).

3.13 Tenderer's Qualification and Past Experience

The tenderer shall furnish complete details regarding the similar works carried out/on hand by the tenderer with documentary evidences in the prescribed format. Such list along with the contact addresses shall be submitted online and a hard copy along with the Tender.

3.14 Earnest Money

- (a) The tenderer shall furnish as part of tender along with Technical Proposal an Earnest Money Deposit (EMD) for an amount as specified in the 'Notice Inviting Tender' by demand draft (DD) issued by any Nationalized / Scheduled Bank payable Cochin or In the form of Bank Guarantee issued by any Nationalized / Scheduled Bank only and en-cashable at Cochin.

The Earnest Money Deposit of unsuccessful tenderers without interest will be returned after finalizing the Tender, placement of the order and after submission of Bank Guarantee by the successful tenderer.

- (b) The earnest money may be forfeited:
- i. If a tenderer withdraws his tender during the period of tender validity
 - ii. In the case of successful tenderer, if he fails to enter into contract agreement, or furnish the necessary performance guarantee (BG).
- (c) No interest will be payable by the Employer on the Earnest Money Deposit (EMD).
- (d) Earnest money deposit will also be returned in case tender is cancelled.
- (e) In case of foreign bidders, who do not have registered office in India should clearly indicate to whom the EMD amount should be refunded. Necessary authorization letter in that effect should be enclosed with the technical bid.

3.15 Validity of the tender

The tenderer shall hold the offer valid for a period of 120 days from the date of opening of 'Techno-Commercial' bid of the Tender. However, CoPT may request the tenderers to extend the validity of their tenders beyond 120 days on mutual consent. In case any tenderer refuse to extend the validity of his tender then his tender will not be considered for further evaluation and their EMD will be returned.

3.16 Signing of Tender

The tenderer shall prepare one set of his Tender (all Volumes), duly completed and signed, along with the set of Drawings and other documents mentioned hereinafter. The Tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorised to sign on behalf of the Tenderer with signature and company seal affixed. Then it shall be scanned and upload in the e tender portal for submission. However the Power of Attorney (in original) authorizing the signatory/s of the Tender and other document required to prove the MQC of the bidder shall be submitted in hard copy along with submission of tender fees EMD.

If the tender is made by an individual it shall be signed by his full name and his address shall be given. In the event of the tender being submitted by a registered partnership firm, it must be signed individually by each partner thereof or it must be signed by person holding a proper power-of- attorney authorising him to do so and to bind the partner in all matters pertaining to the contract including the arbitration clause, such power-of-attorney to be attached with the tender which must disclose that the firm is duly registered under Indian Partnership Act. If the tender is made by a Limited Company it shall be signed by a duly authorised person who shall produce with the tender satisfactory evidence of the authorisation. In the case of a Limited Company the tender should be accompanied by the Memorandum and Articles of Association of the Company.

3.17 Withdrawal or Modifications

Any withdrawal or modifications are permitted only in ON LINE till last date and time of submission of the Tender, that means the tender cannot be withdrawn or modified after the last date and time of submission and in case the Tenderer modifies or withdraws his tender after the last date and time of submission of tender, the tender shall liable to be cancelled and EMD shall be forfeited.

3.18 Opening of Tenders

The Deputy Conservator or his duly authorized officer will open the tenders in the presence of intending bidders who may be present at the time in person or through their authorized representative. The technical bids of the tenders received will be opened first.

Technical Bid: Technical Bid shall be opened online in the office of the Deputy Conservator, Cochin Port Trust at 1530 Hours on the last date fixed for submission of the Tenders. Submission of EMD and Cost of document are verified initially. In case the earnest money and cost of tender document are not deposited or are not in order, the tender will not be opened further and hard copy submitted will be returned.

To assist in the examination, evaluation and comparison of tenders, Employer may ask tenderer, individually for clarification of their tender. The request for clarification and the response shall be sent in writing by post / email, but no change in price or substance of the tender shall be sought, offered or permitted.

3.19 Determination of Responsiveness and Techno Commercial Evaluation:

The determination of responsiveness of tenderers will be based on, the Tenderer's financial, technical capabilities, Tenderer's experience in VTMS, current litigation and past performances. These will be based on the examination of the documentary evidences provided by the Tenderer as per the relevant tender clauses in his bid.

Prior to detailed evaluation of Tenders, Cochin Port Trust will determine whether each tender,

- i. Meets the minimum eligibility criteria as defined in tender.
- ii. Has been properly signed by an authorized signatory (accredited representative) holding Power of Attorney in his favour. The Power of Attorney shall inter-alia include a provision to bind the Bidder to settlement of disputes clause;
- iii. Is accompanied by the required EMD and;
- iv. Is responsive to the requirements of the bidding documents.

A responsive tender is one which conforms to all the terms, conditions and specification of the tender documents, without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality or performance of the works; which limits in any substantial way, the Employer's rights or the Tenderer's obligations under the Contract; or whose rectification would affect unfairly the competitive position of other Tenderers presenting responsive tender.

The tender which does not satisfy the pre-qualification criteria shall summarily be rejected and shall not be considered for further evaluation. The Port will scrutinize

the tenders to determine whether the tender is substantially responsive to the requirements of the tender condition. For the purpose of this clause, a substantially responsive tender is one which inter- alia confirms to all the terms & conditions of the tender documents without any deviation or reservation.

If any Tender contains any deviation from the tender documents and /or if the same does not contain EMD in the manner prescribed in the Tender documents, then that Tender will be rejected and the tenderer will be informed accordingly. The Price Bids of such tenderers submitted by non responsive tenderers in e- mode will not be opened.

In the event of a tender being rejected, the earnest money paid with such unaccepted tender shall be refunded to the tenderer.

3.20 Price Bid Opening:

Price Part of only those tenderers shall be opened on-line who are determined as having submitted substantially responsive bids and are ascertained to be qualified to satisfactorily perform the Contract. Such tenderers shall be intimated about the date and time for opening of Price Part by the Employer. A negative determination shall be notified ON LINE by the Employer through e tender portal and the price bid uploaded by them shall not be opened.

The Employer will open the Price Bid on-line at the specified time and date in the presence of tenderers / designated representatives who choose to attend, at the time, date, and location stipulated in the intimation for opening of price bid. The tenderers' representatives who are present shall sign a register evidencing their attendance.

The tenderers' names, the tender Prices or any discounts, and any such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. The prices and details as may be read out during the bid opening and recorded in the Tender Opening Statement would not be construed to determine the relative ranking amongst the tenderers, or the successful tenderer, and would not confer any right or claim whatsoever on any tenderer. The successful tenderer (also referred to as the L1 tenderer) shall be determined after complete evaluation.

3.21 Process to be confidential

After the opening of tender, information relating to the examination, clarification, evaluation and comparison of tenders and recommendation, concerning the award of contract shall not be disclosed to tenderers or any other persons. Any efforts by the tenderers to influence the process of examination, clarification, evaluation and comparison of tenders and decisions concerning award of contract may result in rejection of the tenderers bid.

3.22 'Evaluation' and 'Comparison' of Tenders

The Employer will evaluate and compare only the 'Price Bids' determined to be responsive in accordance with tender condition.

Price quoted in foreign currency will be converted into Indian Rupees based on the TT selling rate of State Bank of India as on the due date of submission of Tender. Comparison will be done based on the Indian Rupee equivalent of the quoted price.

The Bidders are required to quote for all the items of the BOQ for the price bid to be considered.

In respect of taxes, duties and other levies indicated by the tenderer in the tender, which are reimbursable in line with the provisions of the Tender Documents, the applicable rate and amount thereof shall be ascertained by the Employer. The rate and amount so ascertained by the Employer shall prevail.

3.23 'Cost' Evaluation

The total cost shall be evaluated taking into consideration the prices quoted in Section-A, B, C, D and E of BOQ excluding Custom Duties & GST which shall be paid by CoPT. **It may be noted that the lowest cost of an individual items shall not be considered/or compared for evaluation purpose.**

The price bids of the tenders shall be evaluated as below

- (1) The Foreign Currencies shall be converted in to Indian Rupees (INR) based on the 'TT' selling rates of SBI on the date of date of submission of Tender. (This exchange rate is only for the purpose of comparison/evaluation of the bids.)
- (2) Custom Duty will be paid by CoPT as applicable to the relevant custom code (applicable for VTMS installation in Ports). Any change in the duty structure will be taken in to consideration.

(3) The prices in Indian Rupees shall be taken exclusive of GST, delivery at site. However GST as applicable shall be reimbursed as per prevailing rates.

(4) The AMC Cost will be calculated by NPV (Net Present Value) at a discounted rate of 6%.

3.24 Award of Contract

'CoPT' will ascertain itself that the tenderer can execute the contract satisfactorily as per the technical standards set by CoPT.

The contract will be awarded to the successful tenderer whose tender is determined to be lowest (by taking total cost of Section - A, B, C, D and E taken to gather excluding duties & GST) and determined to be qualified to satisfactorily perform the contract. However, the employer does not bind himself to accept the lowest or any other tender and has the right to reject any tender without assigning any reasons. No representation whatsoever will be entertained on this account.

3.25 Income- Tax and Placement of Work Orders

Income tax as applicable will be deducted from the bills at source. Separate Work Orders will be placed for supply of items, work/service portion, and for Maintenance (AMC) contract.

Note: The Tenderers are advised to consult the Tax consultant at Cochin prior to submitting of their Tenders on applicability of taxes.

3.26 Integrity pact

It is a specific requirement for considering the bid that the tenderer should sign and submit and 'integrity pact' between the tenderer and 'Cochin Port Trust' along with the bid in a separate envelope super scribed "Integrity Pact" in cover – 1. Bids not accompanied by a duly signed integrity pact shall be liable for rejection. Draft pact to be signed is enclosed at Appendix.

3.27 Disqualification of the tenderer

Any tenderer or any of the members in the joint venture/consortium is found to be banned or blacklisted by Ministry of Shipping GoI, is not eligible to participate in the tender and may be disqualified at any stage in the future if found blacklisted.

SECTION 4

GENERAL CONDITIONS OF CONTRACT

4 Definitions and Interpretation

4.1 General

In the contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them, except where the context otherwise requires

a)

(i) "Employer" means the Board of Trustees of Cochin Port Trust or their successors and assigns, acting through its Chairman or any other officer so nominated by the Board.

(ii) "Engineer" means the Deputy Conservator (DC) of the Cochin Port Trust.

(iii) "Financial Advisor and chief Accounts Officer" (hereinafter stated FA & CAO) means the Financial Advisor & Chief Accounts Officer of the Cochin Port Trust or his successor in office

(iv) "Advisory/Consulting Engineer" means an agency/organization/person appointed by the Board for Project Engineering and designs and executing the entire project.

(v) "Contractor" means the person, firm, or a company whose tender has been accepted by the employer and the legal successors in titled such person, but not (except with the consent of the Employer) any assignee of such person.

(vi) "Sub Contractor" means any person named in the contract as a Sub contractor for a part of the Works or any person to whom a part of the work has been subcontracted with the consent of the Engineer and the legal successors in title to such persons, but not any assignee of any such person.

b)

(i) "Contract" means Special and General conditions, the Specifications, the drawings, the bill of quantities, the Tender, the letter of acceptance, the contract agreement and such further documents as may be expressly incorporated in the Letter of Acceptance or contract/agreement.

- (ii) "Specification" means the specification of the works included in the contract and any modification thereof or addition thereto made or submitted by the Contractor and approved by the Engineer.
 - (iii) "Drawings" means all drawings, calculations and technical information of like nature provided by the Engineer to the Contractor under the contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the contractor.
 - (iv) "Bill of Quantities" means the priced and completed bill of quantities forming part of the Tender.
 - (v) "Tender" means the contractor's priced offer to the Employer for the execution and completion of the work and the remedying of any defects therein all accordance with the provision of the contract, as accepted by the Letter of Acceptance.
 - (vi) "Letter of Acceptance" means the formal acceptance by the Employer of the Tender.
 - (vii) "Contract/Agreement" means the contract/agreement referred in the tender.
 - (viii) "Appendix to Tender" means the appendix comprised in the form of Tender annexed to these conditions.
- c)
- (i) "Commencement Date" means the date upon which the work order is issued by CoPT.
 - (ii) "Time of Completion" means the time for completing the execution and passing the Tests on completion of the works or any Section or part thereof as stated in the contract (or as extended time under the Clause of "Commencement and Delays" of this Section) calculated from the commencement date.
- d)
- (i) "Tests on Completion" means the tests specified in the contract or otherwise agreed by the Engineer and the contractor which are to be made by the contractor before the works or any section or part thereof are taken over by the Employer. Test will ensure that the work is completed in all respect and operational.

- (ii) "Taking-Over Certificate" means a certificate issued in pursuant to the relevant clause.
- e) "Contract Price" means the sum stated in the letter of acceptance as payable to the contractor for the execution and completion of the works and the remedying of any defects therein in accordance with the provision of the Contract.
- f)
 - (i) "Works" means the Permanent works and the Temporary works or either of them as appropriate.
 - (ii) "Permanent Works" means the permanent works to be executed in accordance with the contract.
 - (iii) "Temporary Works" means all temporary works of every kind required in or about the execution and completion of the works and the remedying of any defects therein.
 - (iv) "Plant" means machinery/apparatus and the life intended to form or forming part of the permanent works.
 - (v) "Contractor's Equipment" means all appliances or things of whatsoever nature (other than Temporary Works) required for the execution and completion of the works and remedying of any defects therein, but does not include plant, materials or other things intended to form or forming part of the permanent works.
 - (vi) "Section" means a part of the works specifically identified in the Contract as a section.
 - (vii) "Site" means the places provided by the Employer where the works are to be executed and any other places as may be specifically designated in the contract as forming part of the Site.
- g)
 - (i) "Cost" means all expenditure properly incurred or to be incurred, whether on or off the site, including overheads and other charges properly allowable thereto but does not include any allowance for profit.
 - (ii) "Day" means 0600 hours to 0600 hours on the following day.
 - (iii) "Foreign Currency" means a currency of a country other than Indian Rupee which is quoted in the 'BOQ'.

4.1.1 Interpretation

Words imparting persons or parties shall include firms and corporations and any organization having legal capacity.

4.2 Assignment and Subcontracting**4.2.1 Assignment of Contract**

The Contractor shall not, without the prior consent of the Employer, assign the Contract or any part thereof, any benefit or interest therein or there under.

4.2.2 Sub Contracting

The Contractor shall not subcontract the whole of the works, except where otherwise provided by the contract. Any such consent shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractors, his agents, servant's workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents, servants, or workmen.

4.3 Contract Documents**4.3.1 Language/s and Law**

The contract documents shall be in English language.

The Law of India shall apply to the contract and the contract shall be construed according to the said law. No suit or other proceeding relating to the contract shall be filed or taken by the contractor in any court of Law except in Cochin.

4.3.2 Priority Contract Documents

The several documents forming the contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue the instructions to the contractor and in such an event, unless otherwise provided in the contract, the priority of the documents forming the contract shall be as follows:

1. The Contract/Agreement.
2. The Letter of Acceptance.
3. The Tender.
4. Special Conditions of Contract.
5. General Conditions of Contract.
6. The Priced Bill of quantities.
7. The Specifications.

8. The Drawings (if any).

4.3.3 Disruption of Progress

The contractor shall give notice to the Engineer whenever planning or execution of the works is likely to be delayed or disrupted. The notice shall include details of reasons for delay which will obstruct the progress of the works.

4.4 General Obligations

4.4.1 Contractor's General Responsibilities

The contractor shall with due care and diligence, design (to the extent provided for by the contract) execute and complete the works and remedy and defects therein in accordance with the provisions of the contract. The contractor shall provide superintendence, manpower, labour, materials plant, contractors equipments and all other things, whether of a temporary or permanent nature, required in or for such design, execution, completion and remedying of any defects so far as the necessary for providing the same is specified in or reasonably to be inferred from the contract.

4.4.2 Site Operations and Methods of Construction.

The contractor shall take full responsibility for the adequacy, stability and safety of all site operations and methods of construction.

4.4.3 Contract Agreement

The contractor shall enter into and execute the 'contract agreement' together with detailed specifications, with such modifications as may be necessary, to be prepared and completed at the cost of the Contractor, in the form annexed to these conditions (annexure 2.1) within 20 days from the date issue of confirmed order or in the extended date if any. The agreement shall be executed only on furnishing necessary security deposit **of 10% of the project cost** in the form of approved Bank Guarantee.

4.4.4 Performance Security

The contractor shall provide a Bank Guarantee en-cashable and enforceable at Cochin from a Scheduled or Nationalized Bank in India as security for the due performance of the contract within 30 days of issue of firm work order or at an extended date (if any) for a sum of **10% of the Project Cost excluding the cost of AMC and valid for two years**. The performance Bank Guarantee (BG) shall as per the format Annexed to the tender (Annexure 2.2). The Bank Guarantee (BG) shall be subject to the approval of the Employer. The cost of complying with the requirements of this clause shall be borne by the Contractor. After completion of warranty period the contractor should also furnish a Bank Guarantee for **10% of the AMC cost for Maintenance contract** and shall be valid for 5(five) years till

completion of Maintenance contract. The original 10% BG furnished for project cost will be released only on receipt of 10% BG of Maintenance (AMC) cost or a BG for 10% cost of the AMC for each year valid for 15 months. The BG furnished on each year shall be renewed yearly for the respective year's cost prior to expiry of previous BG.

4.4.5 Claim under Performance Security

Prior to making a claim (en-cashing) under the performance security the Employer will notify the contractor stating the nature of the default in respect of which the claim is to be made.

4.5 Inspection of Site

4.5.1 General The contractor shall be deemed to have inspected and examined the site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his Tender as to:

- a) The form and nature thereof, including the sub-surface conditions
- b) The hydrological and climatic conditions
- c) The extent and nature of work and materials necessary for the execution and completion of the works and the remedying of any defects therein, and
- d) The means of access to the site and the accommodation he may require and in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.

The contractor shall visit the site before attending the pre-bid meeting and get conversant of site condition at his own cost. No claim on this account will be considered. The contractor(s) is (are) also advised to take actual measurements of the works to be carried out at site.

4.5.2 Program / Bar Chart to be Submitted

The contractor shall, within 15 days after the date of receipt of the work order submit to the Engineer for his consent a program/Bar chart for the execution of the work.

4.5.3 Revised Program

If at any time, it appears to the Engineer that the actual progress of the works does not conform to the program/bar chart to which consent has been given, the Contractor shall produce a revised program/bar chart showing the modifications to

such program is necessary to ensure completion of the works within the time for completion.

4.6 Safety, Security and Protection of the Environment

The contractor shall, throughout the execution and completion of the works and the remedying of any defects therein:

- a) Have full regard for the safety of all persons entitled to be upon the site and keep the site (so far as the same is under his control) and the works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger of such persons, and
- b) Provide and maintain at his own cost all lights, guards, warning signs, when and where necessary or required by the Engineer or for the protection of the works or for the safety and convenience of the public or others, and
- c) Take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or others causes arising as a consequence of his methods of operation.

4.7 Care of Works

The contractor shall take full responsibility for the care of the work and materials and plant for incorporation therein from the commencement date until the date of issue of the taking over. However, the contractor shall be fully liable and responsible for the safe custody of all the equipments /accessories supplied during the one year warranty period and thereafter during the 'AMC' period of 5 years till these equipments and other accessories are handed over back to CoPT.

4.8 Responsibility to Rectify Loss or Damage

If any loss or damage happens to the works, or any part thereof, or materials or plant (including damages due to lighting), for incorporation therein, during the period for which the contractor is responsible for the care thereof, from any cause whatsoever, the Contractor shall, at his own cost, rectify such loss or damages so that the works conform in every respect with the provisions of the contract to the satisfaction of the Engineer. The contractor shall also be liable for any loss or damage to the works occasioned by him for the purpose of complying with his obligations under Clause 4.23.

4.9 Damage to Persons and Property

The contractor shall, except if and so far as the contract provides otherwise indemnify the Employer against all losses and claims in respect of:

- a) Death of or injury to any person or
- b) Loss of or damage to any property (other than the works)

4.10 Third Party Insurance

The contractor shall, without limiting his or the Employer's obligations and responsibilities, insure in the joint names of the Contractor and Employer, against liabilities for death of or injury to any person (other than as provided in clause 4.11 and 4.12 loss of damage to any property).

4.11 Accident or Injury to Workmen

The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other persons in the employment of the Contractor or any sub contractor, other than death or injury resulting from any act of default of the Employer. The contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof on in relation thereto including third party claims.

4.12 Insurance against Accident to Workmen

The contractor shall insure against such liability and shall continue such insurance during the whole of the time that any persons are employed by him or by his sub-contractors on the works.

4.13 Contractor to Keep Site Clear

During the execution of the works the contractor shall keep the site reasonably free from all unnecessary obstruction and shall store or dispose of any contractor's equipment and surplus materials and clear away and remove from the site any wreckage, rubbish or temporary works no longer required.

4.14 Clearance of Site on Completion of Work

Upon the issue of 'Taking-Over Certificate' the Contractor shall clear away and remove all his Equipments, surplus materials, rubbish and **Temporary works of every kind from the site.**

4.15 Commencement and Delays

4.15.1 Commencement of Works

The Contractor shall commence the work within 15 days from the date of executing an Agreement. **The commencement date for the purpose of 'Time of Completion' under Clause 4.16, shall be the date of issue of work order by CoPT, as defined under Sub-Clause 4.1(c)(i) herein.**

4.16 Time of Completion

The entire works should be completed, **within 6(six) months** from the date of issue of firm 'Work Order' or such extended time as may be allowed under Clause 4.17.1

4.17 Extension of Time

4.17.1 Extension of Time for Completion

In the event of

- a) The amount or nature of extra or additional works, or
- b) Any cause of delay referred to in these conditions, or
- c) Exceptionally adverse climatic conditions, or
- d) Any delay, impediment or prevention by the Employer, or
- e) Other special circumstances which may occur, other than through a default or breach of contract by the contractor or for which he is responsible.
- f) Any delay in grant of the licenses by the Ministry of communication, dept of Telecommunication (WPC) & DGFT.

Being such a fairly to entitle the contractor to an extension of the Time for completion of the works, the Engineer shall, after due consultation with the Employer and contractor, determine the amount of such extension and shall notify the contractor accordingly, with a copy to the Employer.

4.17.2 Rate of Progress

If for any reason, which does not entitle the contractor to an extension of time, the rate of progress of the works or any Section is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall also notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on

locally recognized days of rest, he shall be entitled to seek the consent of the Engineer so to do.

4.18 Liquidated Damages/Penalty

4.18.1 (A) Liquidated Damages for the delay in completion of Project.

If the Contractor fails to comply with the 'Time for Completion' in accordance with clause 4.16 & 4.17 for the whole of the works, within the relevant time prescribed by relevant Clauses then the Contractor shall pay to the Employer **0.5% of contract price (project cost) per week as liquidated damages** for such default and not as a penalty for every week or part of a week which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the Works, **subject to the maximum limit of 10% (ten percent) of contract price (project cost)**. The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.

(B)Penalty for Non- Performance of 'Maintenance' during warranty period and thereafter for the next 5 years and 6 years of existing equipments as per AMC contract agreement.

The contractor shall maintain the entire VTMS system mentioned in this tender during the warranty period of one year and thereafter for the next five (5) years on 24 x 7 basis as per the relevant tender clauses. In addition the contractor has to maintain the existing equipment mentioned in BOQ for 6 (six) years. Failure to do so will entail penalties as follows:

- i. The minimum level of operation required of the system is with one Radar display with A.I.S. on at least one Operator Console along with one operational VHF. Failure to maintain the VTMS with the above minimum requirement will entail nonpayment of AMC charges and a penalty equal to the rate of the AMC calculated on a pro rata daily basis for the entire period.
- ii. In the event of a breakdown of some of the equipment of the VTMS but the system is able to be operated on the minimum level of operations as described in (i) above the breakdown must be rectified within seven days. Failure to do so will result in nonpayment of the AMC charges on a pro rata daily basis for the period that the system is not fully operational beyond the seven day period.

- iii. A register to record time, date and nature of the fault in the VTMS will be maintained by the tenderer. After rectification of the fault / breakdown the tenderer's technician shall enter the date and time of the rectification and obtain the signature of the representative of the Port's Officer / Official.
- iv. In case of the failure of the tenderer to attend to the breakdown as per the requirement of the Port, the work will be entrusted to any other agency, at the sole discretion of the port and the charges incurred towards the work will be recovered from the Tenderer.

4.18.2 Taking-Over Certificate

When the entire of the works have been completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the contractor shall furnish to the Engineer an undertaking that they would finish with due expedition any outstanding work during the Defects Liability Period. Such undertaking shall be deemed to be a request by the contractor for the Engineer to issue a 'Taking-Over certificate' in respect of the works. The Engineer shall, within reasonable time of the date of delivery of such letter, issue a '**Taking-Over Certificate**', stating the date on which, in his opinion, the works were completed in accordance with the Contract. The contractor shall be entitled to receive such Taking-Over Certificate within reasonable period of completion to the satisfaction of the Engineer, of the works so specified and remedying any defects so notified.

4.19 Defects Liability

4.19.1 Defects Liability Period

The expression "Defects Liability Period" shall mean the defects liability period of 12 months calculated from the date of issue of '**Taking Over Certificate**' only after successful completion of work and acceptance by the Engineer in accordance with relevant clause and in relation to the Defects Liability Period .

4.20 Alterations, Additions and Omissions

4.20.1 Variations

The Engineer shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do any of the following:

- a) Increase or decrease the quantity of any work included in the Contract.
- b) Omit any such work,

- c) Change the character or quality or kind any such work,
- d) Execute additional works of any kind necessary for the completion of the works.

No such variation shall in any way vitiate or invalidate the Contract, by the effect, if any, of all such variations shall be valued in accordance with Clause 4.21 Provided that where the issue of an instruction to vary the works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the contractor.

4.20.2 Instructions for Variations

The contractor shall not make any such variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

4.21 Cost of Variations

4.21.1 Valuation of Variations

All variations referred to in Clause 4.20 and any additions to the Contract Price which are required to be determined in accordance with Clause 4.20.1 (for the purposes of this Clause referred to as "varied work"), shall be valued at the rates and prices set out in the Contract if, in the Opinion of the Engineer, the same shall be applicable. If the Contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable, failing which, after due consultation with the contractor, suitable prices shall be agreed upon between the Engineer and the contractor. In the event of disagreement the Engineer shall fix such rates or prices as are, in his opinion, appropriate and shall notify the Contractor accordingly with a copy to the Employer. While fixing such rates, the Engineer shall take into account the actual cost of labour, plant and materials, transportation, fabrication if any, and in addition 15% towards supervision, overheads and contractor's profit.

4.21.2 Power of Engineer to Fix Rates

Provided that if the nature of amount to any varied work relative to the nature or amount of the whole of the works or to any part thereof, is such that, in the opinion of the Engineer, the rates or price contained in the Contract for any item of the Works is, by reason of such varied work, rendered inappropriate or inapplicable, then, after due consultation with the contractor, a suitable rate or price shall be

agreed upon between the Engineer and the contractor. In the event of disagreement the Engineer shall fix such other rate or price as is, in his opinion, appropriate and shall notify the contractor accordingly. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates.

4.22 Customs Clearance

The contractor shall arrange Customs clearance of all the equipments dispatched through **LC (Letter of Credit)**. Only Custom duty will be paid / reimbursed by CoPT as per demand note of Custom Dept. All other expenses connected with clearance shall be borne by the contractor. The Cochin Port Trust will assist the contractor in speedy clearance of the custom formalities.

4.23 Nominated Sub-Contractor/Representative

The prime bidder who has purchased the tender document in his name can appoint only one authorized sub-contractor/agent or representative for execution of project in India. The Sub- contractor/representative shall have experience in the execution of 'VTMS' project and should have adequate trained man power for maintaining the system. However, the entire responsibility of the project lies with the prime bidder only. The Contractor should furnish all the particulars of their authorized Sub-contractor/Representative in their bid documents.

4.24 Terms of Payment

The employer will pay to the contractor for supply of equipments related to electronics, mechanical/ electrical/ structural and works related to installation/ commissioning of VTMS equipments, as follows.

1. 80% of the cost of the each equipment/item based on the documentary evidences after receipt and acceptance by the employer.
2. 20% of the balance cost of the each equipment/item after successful installation, testing, commissioning and acceptance of the total upgraded 'VTMS' system along with 100% cost of installation, commissioning and service charges.

The employer will pay to the contractor as follows for the civil works

100% payment for Civil/Electrical/structural works shall be paid on satisfactory completion of the works.

The employer will pay to the contractor as follows for the AMC.

(a) The charges for comprehensive ' Annual Maintenance' of the system for the next 5 years (five) after warranty period of one year shall be paid **on pro-rata basis** every

month against submission of bills subject to satisfactory certificate issued by the Engineer-In-Charge and after deducting Income Tax and other deductions, if any. The charges are inclusive of spares.

(b) The charges for comprehensive 'Annual Maintenance' of existing equipments mentioned in BOQ of the contract for 6 years (six) from date of commissioning shall be paid **on pro-rata basis** every month against submission of bills subject to satisfactory certificate issued by the Engineer-In-Charge and after deducting Income Tax and other deductions, if any. The charges are inclusive of spares

4.25 Currency Mode of Payment and other payments

All payments to the Contractor shall be made as follows:

a) The payment towards 'Foreign Exchange component' of the order/Agreement shall be paid through 'Letter of Credit' at the prevailing exchange rates. **Any variation in exchange rates at the time of release of payment will be borne by CoPT.**

b) The payment towards INR component of the order/Agreement shall be paid in Indian rupees only by crossed cheques payable at Cochin or through electronic mode of transfer or as per CoPT rules & regulations. In case the foreign bidder/firm does not have their registered office in India then payment of INR portion of the contract shall be paid to their authorized Indian counterpart on furnishing necessary affidavit to that effect.

c) The charges towards opening of 'Letter of Credit' in SBI, Cochin shall be borne by CoPT.

d) Bank charges outside India shall be borne by contractor.

e) All incidental expenses excluding custom duty on import components shall be borne by contractor. This includes payments towards customs house agents/ shipping agents and transportation of equipments to the site, etc.

4.26 Defects Liability Certificate

The Contract shall not be considered as completed until a ' Defects Liability Certificate' shall have been signed by the Engineer with a copy to the contractor, stating the date on which the contractor shall have completed his obligations to execute and complete the works and remedy any defects therein to the Engineer's satisfaction. Failure to remedy any defects arising during the defect liability period by the contractor will result in encashment of Performance Security by the Employer in accordance to conditions of the contract.

4.27 Settlement of Disputes

4.27.1 Engineer's decision

If a dispute of any kind whatsoever arises between the Employer and contractor in connection with, or arising out of, the Contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other part. Such reference shall state that it is made pursuant to this Clause. Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the works with all due diligence and the contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided, in an amicable settlement or an arbitral award.

If either the Employer or the Contractor be dissatisfied with any decision of the Engineer, give notice to the other party, with a copy for information to the Engineer, of his intention to commence arbitration, as to the matter in dispute. Such notice shall Establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to Sub-Clause 4.27.4no arbitration in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the contractor and no notice of intention to commence arbitration as to such dispute has been given by either the Employer or the contractor, the said decision shall become final and binding upon the Employer and the contractor.

4.27.2 Amicable Settlement

Where notice of intention to commence arbitration as to a dispute has been given in accordance with Sub-Clause, arbitration of such dispute shall not be commenced unless an attempt has first been made by the parties to settle such dispute amicably. Provided that, unless the parties otherwise agree, arbitration may be commenced whether or not any attempt at amicable settlement thereof has been made.

4.27.3 Arbitration

Any dispute in respect of which:

- a) the decision, if any, of the Engineer has not become final and binding pursuant to sub clause 4.27.1 and

- b) amicable settlement has not been reached within the period stated in Sub-Clause 4.27.2,

shall be finally settled under the Provisions of Indian Arbitration and Conciliation Act, 1996 by three arbitrators one by each party and an umpire by the said arbitrators appointed under such Act. The said arbitrator/s and Umpire shall have full power to open up, review and revise any decision, opinion, instruction, determination, certificate or valuation of the Engineer related to the Dispute.

Neither party shall be limited in the proceedings before such arbitrator/s to the evidence or arguments put before the Engineer for the purpose of obtaining his said decision pursuant to Sub-Clause No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator/s on an matter whatsoever relevant to the dispute.

Arbitration may be commenced prior to or after completion of the works provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

The location of the Arbitration shall be **at Cochin**.

4.27.4 Failure to Comply with Engineer's decision

Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in sub-Clause 4.27.3 and the related decision has become final and binding, either party may, if the other party fails to comply with such decision, and without prejudice to any other rights it may have, refer the failure to arbitration in accordance with Sub-Clause. The provisions of Sub-clause shall not apply to any such reference.

4.28 NOTICES

4.28.1 Notice to Contractor

All certificates, notices or instructions to be given to the contractor under the terms of the Contract shall be sent by post / courier, fax or email to or such other address as the Contractor shall nominate for that purpose.

4.28.2 Notice to Employer and Engineer

Any notice to be given to the Employer or to the Engineer under the terms of the contract shall be submitted to the office of the Deputy Conservator, CoPT.

4.28.3 Change of Address

Either party may change a nominated address to another address in the country where the works are being executed by prior notice to the other party, with a copy to the Engineer and the engineer may do so by prior notice to both parties.

4.29 Taxes

- (i) The rate shall be the quoted **exclusive Custom Duty and GST** which are payable/reimbursable at actual by CoPT against documentary proof. The Custom Duty will be paid directly to the customs as per assessment carried out through custom house Agent.
- (ii) **GST** as applicable on the applicable items of the BOQ shall be reimbursed by CoPT. However the GST as applicable shall be indicated in the column provided in BOQ.
- (iii) **Income Tax** as applicable shall be deducted at source. Lower Income Tax Rate (TDS) would be applicable if such certificate is produced from I.T. Department.
- (iv) **Contractor shall obtain PAN, TIN, GST registration number and should be produced prior to submission of first invoice to CoPT.**

4.30 Contract Agreement

The Contract Agreement shall be binding upon the successors in the interest of the CoPT and the Contractor hereto.

4.31 Insurance of equipments

The contractor has to insure the equipments against all risks of transit damages and any other damages until handing over and commissioning of the system **and up to completion of warranty period**. Subsequently the CoPT shall insure the equipments and same will be renewed every year.

SECTION 5

5 SPECIAL CONDITIONS OF CONTRACT

5.1.1 Contractor's Working Area

The Contractor will be allocated a suitable working area free of ground rent near the site for the construction of his offices, stores for assembly of his equipment. The Contractor may, at his own expense and subject to the Engineer's approval, construct offices, and stores in the area allocated to him and remove the same as per the orders of the Engineer, on completion of the Contract or earlier.

5.1.2 Water Supply and Electric power

Water and Electric supply to the extent required for the works will be provided by CoPT free of cost.

5.1.3 Communication Facilities

The contractor shall make his own arrangement for communication at his own cost.

5.2 Designs and Drawing

5.2.1 General

The drawings/sketches (if any) enclosed in the document are only for information and guidelines. The contractor shall make all general arrangement and design drawings to suit his equipments and submit the same for comments to the consultant/engineer. The contractor shall be liable for executing the work at the quoted rates even if there are any changes in the design as specified by the Engineer.

5.2.2 Design Drawings

The Contractor shall submit progressively for the Engineer's comments copies each of detailed design data and drawings, in respect of individual items of work prior to the starting of those works manufacture of these items. The scope of these drawings etc., shall include but not be limited to the following:

- a. General arrangement of the following system
 - Radar system
 - Computer system
 - UPS system
 - Emergency Power System
- b. System description drawings
- c. Functions of all sub systems in configuration
- d. Functions of all equipments in the configuration
- e. Specification/catalogue of all standard brought-out items

- f. Installation and testing of all the equipments in the systems mentioned above.

5.2.3 Mistakes in Information

The Contractor shall be responsible for any discrepancies, errors or omissions in the drawings and information supplied by him, whether they have been commented by the Engineer/Consultant or not. The decision of engineer on any discrepancies, errors or omissions observed in the tender document will be final and binding on the contractor. After opening the price bid no complaints/or clarifications will be entertained,

5.2.4 Metric Units

Metric units shall be adopted for all designs, drawings, and specifications.

5.2.5 Symbols

Regarding electrical circuit component symbols the Contractor is free to adopt his standards. However, drawings shall possess legends explaining clearly the symbols adopted.

5.3 Manuals

The Contractor shall supply two copies of equipments/ installation, operation and inspection/ maintenance manuals.

5.4 Progress Report

The Contractor shall submit, a monthly Progress Report covering all activities related to this Contract to the Employer and the Engineer.

SECTION – 6

SYSTEM SPECIFICATIONS

6 General

The Up-graded “Vessel Traffic Management system (VTMS)” shall have Radar system, AIS (Automatic Identification system), and communication links enabling operators to manage vessel traffic and support Port & Harbour resources. The system shall optimize the following aspects:

- a) Improvement in Safety of Vessel Traffic by supervision of the entrance area, the anchorage area, main route to CoPT and identification of vessels leaving a waiting area.
- b) Providing information to Vessels during bad weather conditions regarding traffic situation.
- c) Regulates maritime traffic flow.
- d) Improvement in the planning of berth, anchoring area occupancy and traffic.
- e) Communication media to prevent accidental stranding, collisions, trenching of sub-sea pipelines.
- f) All channels, pipelines, guard zones, anchoring zones are graphically displayed superimposed on the radar picture along with vessels details.

6.1 The Scope of Work

System Design Concept

The equipment shall be of Commercial-Off-The-Shelf (COTS)/latest version or better standards available at the time of contract execution/delivery. All non-COTS items must be clearly documented in the proposal, stating the extent of any development required the extent of any custom fabrication, the expected reliability of such non-COTS items and other similar non-COTS considerations.

The proposed system configuration includes the following,

Sensors:-

- c) 2 X-Band Radars dual Tx Rx 25 Kw down mast configuration dual polarization (H/C) 12'SWG antenna System with all relevant accessories.
- d) AIS Base System.

Servers:-.

- a) VTS Servers (dual redundant)

- b) VTS DB Servers (dual redundant)
- c) Time Servers (dual redundant)

Port Control station:-

- a) 2 x Operator console with VHF communication. (24" dual LCD monitors)
- b) 1x Supervisor console with VHF communication (24"dual LCD monitors).
- c) Other necessary ancillaries and sensors required for satisfactory operation.

Remote Monitoring Terminals:-

- a) 4 nos. display Remote Monitoring display units (slave mode) –Port Administrative buildings. (24" dual LCD monitors)

Other equipments:-

- a) Voice recording and replay system.
- b) Communication Link (Microwave Link-Optional).
- c) UPS System.
- d) LAN System Hardware
- e) Radar display recording and replay system.

The contractor shall bear complete responsibility of procurement/ development of all the above equipment/sub-items. He shall be totally responsible for installation, commissioning and testing of the complete system including the interfacing of all the equipments. All details should be enclosed in the technical bid. The materials used for the execution of work shall be of highest standard. The Engineer or his representative's decision as to the quality of material and workmanship will be final and binding on the contractor.

6.1.1 Integration

The 'VTMS' is a complex system having number of different hardware and software modules. It is, therefore essential that the total concept or the system be arrived at including the hardware and software modules at an early stage.

6.1.2 Installation

The radar and data processing systems are the main components of the 'VTMS' wherein maximum data storage and processing is preformed. The tenderer shall clearly specify the type and format of input signal required from the other systems (if

they are not under his scope of supply). Minimum clearances as per relevant rules shall be maintained during installation of the equipments and the cables, in order to avoid signal interference between various power and instrumentation system. The earthing of the equipments shall be as per the relevant rules and equipment manufacture's recommendations. Suitable lightning arrestors and surge protectors shall be provided.

6.1.3 Maintenance of the system

The system shall be designed for maximum ease of servicing. Built in test facility shall be provided and replacement of any faulty component shall not take more than half hour.

The tenderer has to provide details of the maintenance setup during warranty period of one year and thereafter for a period of 5 years after warranty and other existing equipments for 6 years. There should be adequate trained manpower available for maintenance of the system on 24x7 basis and stock of essential spares. All such details are to be provided in their technical bid proposal.

6.1.4 Testing & Acceptance

A detailed testing procedure for entire 'VTMS' equipments shall be enclosed in the technical bid. The procedure shall form the part of 'Contract Agreement' to be signed by the tenderer and Cochin Port Trust. FAT and SAT by employer is not mandatory. However, the contractor has to ensure FAT of all equipments at manufacturers place at his cost prior to dispatch to India and enclose the 'Testing Certificate' along with dispatch documents. Final payment will be released only after testing & acceptance of the entire system at CoPT & satisfactory working. Acceptance shall be as per format of SAT.

6.1.5 Planning

The tenderer in his proposal shall enclose a '**Bar Chart**' for the total project. The plan shall contain the proposal from the date of start and scheduled date of completion and various important phases of the project such as system design, test at factory, installation at site, acceptance tests, maintenance during warranty period & comprehensive maintenance (AMC) for further period of 5 years inclusive of spares and other equipments for 6 years as prescribed in BOQ.

6.1.6 Power

The tenderer shall provide complete details of the power requirements for the system proposed. Equipments powered from AC source shall be suitable for 50 ± 1 Hz power supply.

6.1.7 Future Up- Gradation of the System

The successful tenderer shall provide all the revised versions of software, PROM, EPROM during the warranty as well as the AMC period.

The tenderer shall clearly indicate the number of years that the system will be supported by the supplier.

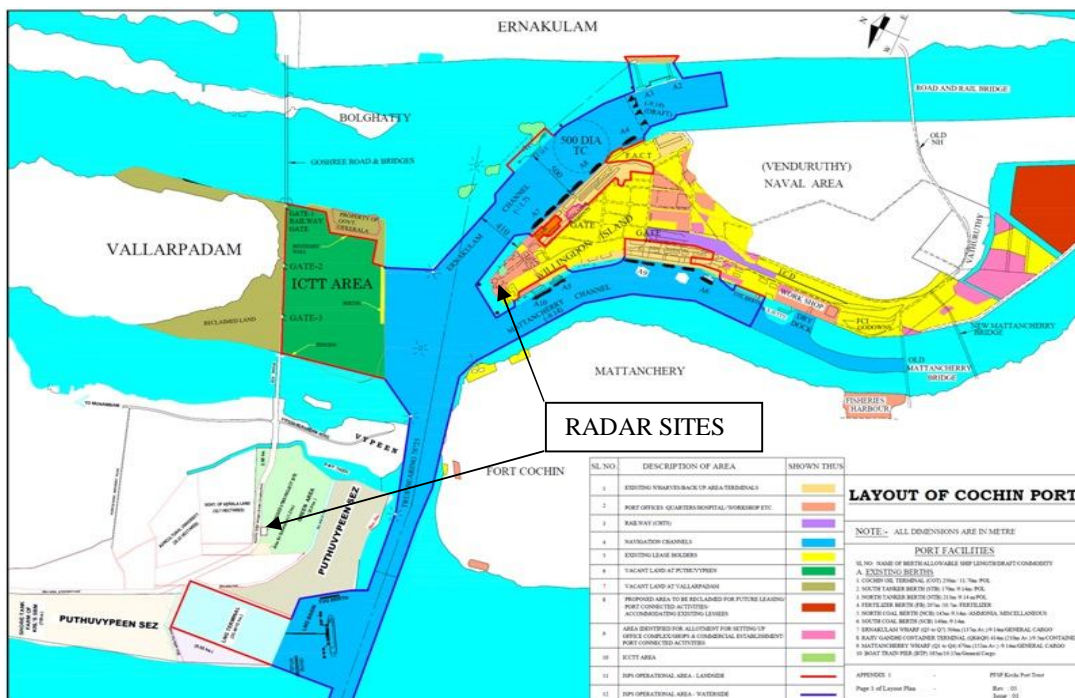
6.1.8 Provision to Extend 'Read-On Facility to other agencies

The tenderer shall make provision in their system to enable the VTMS feed to be given to other Government Agencies as well as the National VTS program if required. Format for the NVTs is IVEF (Inter VTMS Exchange Format)

6.2 VTMS Configuration

6.2.1 General

The layout of the port along with the location of the existing Radars & tower -



The present proposed system consists of 2 No of 'X' band radars with dual polarisation (H/C) to cover the range of 22 Nautical miles. One radar antenna with motor shall be mounted on the existing 45 meters. High galvanised M.S. lattice steel Tower and other will be on the top of the Administrative building.

6.2.2 **Performance Requirement**

The VTMS system shall work satisfactorily under the conditions as specified below:

Environmental Conditions

(a) **Current.**

Normal 0.2 to 3.0 Knots.

Rainy Season 3.5 to 5.5 Knots.

(b) **Rain fall** 25 to 35 mm/hr.

Wind 3 to 1125 km/hr

(c) **Wave height.** 2 M.

(d) **Temperature** 28° to 36°C.

The equipment exposed to outside weather shall function satisfactorily up to an ambient temperature of 45 °C.

The equipment in closed spaces shall function satisfactorily up to an ambient temperature of 14 °C.

(e) Humidity 90% for indoor equipment and 100% for outdoor equipment.

(f) Electrical Power supply 50 HZ, 415V, 3phase or 1 phase.

The System shall be capable of sustaining peak surges, tolerance level for surges

6.2.3 **Target Types**

The system will have the following target types as defined in Table 5.1 of the IALA Recommendations V-128 Ed 3.0 for "Standard Requirements".

Range

The radar video processing system shall ensure all targets of interest are reliably detected and processed. The PPSMB radar processing system shall meet the target detection and tracking requirements.

The following are the target types that are required to be detected by the radar shall be capable of detecting small and high speed vessels under normal and adverse weather conditions.

The radar shall be capable of detecting up to maximum range of 22NM and minimum range of 0.25 NM

(Note: The detecting ranges mentioned above may be taken as guidelines only. The tenderer shall furnish the calculations of detection using CARPET 2.0 with reference to the RCS.)

6.2.4 Target Discrimination

The target discrimination shall be as defined in Table 5.2 of the IALA Recommendations V-128 Ed 3.0 for "Standard Requirements".

S. No.	Description	Display	Tracking
1	In short range (<5 nm coverage - include waterways, harbours etc)	25 m	40 m
2	Long range applications (up to 20 nm coverage - littoral waters, offshore etc)	75 m	100 m
3	Angle between targets as seen from the X band radar	1.2°	1.3°
4	Or distance in meters, whichever is the greater	25m	40m
5	Corresponding 3 dB antenna horizontal beam width for X Band	≤ 0.7°	≤ 0.7°

6.2.5 Tracking Performance

The tracking performance of the system shall be as defined in Table 5.3 of the IALA Recommendations V-128 Ed 3.0 for "Standard Requirements".

6.2.6 System Availability

The System Availability shall be as detailed in 4.18.1 (B) failing which penal clause as per 4.18.1 (B) i & ii shall apply.

6.3 TECHNICAL SPECIFICATIONS

6.3.1 Radar Sensor System

The existing 18' & 12' X- band radars are more than 10 years old and are outlived their economical life. Hence Port decided to replace these radars with 12' X- band radar at both the radar site.

The proposed X- band radar systems shall be of 'state-of-the- art' designed for both flexibility and superior performance in dual redundant complying with the latest

IALA and IMO requirements for Vessel Traffic Service purposes. The offered radar sensors are especially designed for VTMS and Water Surveillance purposes. The system is able to withstand the severe marine weather conditions prevailing in the area. There is a dedicated Microwave link is already provided for high speed IP connection between two radar locations. It covers an adequate distance .However the Tenderers are required to check the functionality part. If needed the link has to be replaced with an adequate capacity. In the BOQ, a provision is made for this as an optional item.

Radar sensors will fully comply with type of radar sensor in accordance to Rec. IALA V-128 for target performance tracking, discrimination accuracy and reliability.

Radar Sensors consists of the following principal parts.

- Slotted Waveguide Array Antenna 12'Horizontal and circular polarisation, Dual transceiver-Dual redundant 25 kW .

Proposed Radar system will provide;

- Control and monitoring accessibility (locally and remotely) of Radar transceivers and antennas on operators console, Radar display and in the equipment room.

Adjustment and control function are the following:

1. Selection of X- band Radar transceivers.
2. Function of antenna starting and stopping
3. Function of breaking circuit for antenna and resetting.
4. Selection of the pulse.
5. Selection of the pulse repetition frequency.
6. Function of transceiver adjustability
7. Blank sector of transceiver on/off.

The Radars shall give an excellent coverage of the complete harbour area along with approach and sea area up to 22 nm range. The transmitting/receiving antennas shall be of slotted wave guide type. However the supplier may suggest suitable antennas for performing its various functions as per specifications mentioned in the tender.

The 'RADAR' antennae shall have high gain with narrow azimuth beam width. The proposed shall have switchable horizontal & circular polarization. The circular polarization intended to be used in heavy rain prevailing in Cochin.

In order to increase the availability, the RADAR configuration shall have two transceivers working in hot standby mode with switching facility is proposed. It is possible to control most of the Radar parameters such as PRF, pulse, pulse width, power, clutter etc from the control centre. The detailed specifications of the RADAR system is as below –

Antennae size ≥ 12 feet (slotted wave guide array)

Polarisation: horizontal, circular (H/C) polarization

Antennae gain: ≥ 32.5 dBi (*Nett antenna gain.*)

Maximum Operational wind speed – up to 100 knots

Horizontal beam width - $\leq 0.65^\circ$

Vertical beam width $\sim 25^\circ$

Transceiver configuration: Dual, hot standby;

Transceiver peak power: 25 Kw;

Rotation frequency: 9410 ± 30 MHz

Side lobes within 10° - -26dB

Side lobes outside 10° -30dB

Overall Noise Figure: ≤ 3.5 dB;

Tuning: Manual & AFC;

Motor: 3 phase, 1.1 Kw

Rotation Rate: 22 or 33 RPM.

Radar shall have the provision to operate in the environmental module indicated in clause no 6.2.2.

However, please note that the above specifications are only indicative and may vary according to the model and design of different makes. Tenderers should furnish the correct specifications of their quoted make & model of Radar.

One radar shall be installed on the top of Admin. Building & the other on 45 Mtr high lattice Steel Tower at Puthuvypeen SEZ site. These locations can give good coverage of approach channel, sea area up to 22 nautical miles.

The system shall have facility for tracking the targets by following options.

Up to 3 NM by using short pulse.

Up to 6 NM by using medium pulse.

Beyond 6 NM by using long pulse

Complete technical specifications of all the major components/equipments for the radar system (example antenna, transmitter, and receiver) shall be submitted along with the tender.

6.3.2 AIS System

The Automatic Identification Station (AIS), for enhancing safety of navigation in the open sea and coastal waters through the automatic exchange of navigational static and voyage information, as well as safety related information between the ships and coastal stations.

Automatic Identification Station (AIS) is a maritime VHF- based transponder system that provides high –speed automated communication from ship-to-ship and ship-to-shore of vessel voyage and safety related data.

Standards Compliance

The AIS Base Station shall comply with international standards and shall be approved in accordance with the standards of the European Marine Equipment Directives. It shall be fully compliant with the following.

IEC62320-1, IEC61993-2, IEC60945, IEC60950, IEC61162-2, ETS301489-1, ITU-1371-1.2, ITU-R.M.825-3

Main Technical Features

The AIS base station shall have the following technical features.

- Automatic identification of ships IMO numbers, MMSI, call sign and name.
- Reception of messages on coordinates, course, speed over the ground, heading, GNSS antenna position on the ship, ship length, width, and draft via AIS radio link from other ships, and output of this information to be presented on the AIS VTS displays.
- Reception of data on the rate of turn, ship type, port of destination and time of arrival in this port, route plan, presence of dangerous cargo.
- Reception of static and dynamic data and binary messages.
- Reception and transmission of Safety Related text messages.
- SOTDMA (Self -Organising Time Division Multiple Access) protocol (IMO) approved.
- Reception of differential GNSS (GPS) corrections from the GNSS reference station or radio beacon data link and their transmission via AIS channel.

- Transmitting vessel tracking data from radar tracking system to mobile AIS units via AIS VHF data links.

Technical Specifications

GNSS Specifications

GNSS receiver---12 Channel, differential.

GNSS antenna---Patch antenna with built –in 30dB preamplifier.

Transmitter Specification

Number of Transmitters--- 1.

Power Output..... 12.5 W or 2.0 W selectable.

Frequency range.... 156.....162.025 MHz.

Antenna impedance... 50 Ohm.

Frequency stability..... <±2.5 ppm.

TDMA Receivers

Number of receivers... 2.

Sensitivity... (PER)<10% at -107 dB (25kHz).

Frequency range.... 155.3....162.5 MHz.

Channel spacing.... 12.5 or 25 kHz.

Channel selection.... Channel numbers as in ITU –R M. 1084-4.

Modulation... GMSK.

Data rate.... 9600 bits/s.

Interfaces.

Ethernet TCP\IP..... 1X RJ45.

RS 232 or RS 422.... 5X DB9.

VHF Rx\Tx Antenna.... 1X or 2X PL259.

GNSS Antenna.... 1XTNC

1PPS.... BNS.

Interface Port Specification.

Main..... RS 232 IEC 61993-2.

AUX.... RS 232 IEC 61993-2.

RTCM.... RS232\RS422RTCM PAPER 11-98\SC 104-STD.
(OR Compatible).

Sensor.... RS422

Digital.....	I\O 3X Digital inputs (open drain ,up to 50 VDC, 150mA) .
Display.....	RS232.
Ethernet....	Ethernet 10 Base T.

General Data

Mains Input Power:.....	110 to 240 Volts AC, 50 Hz
Backup Input Power:.....	24 VDC
Operating temp.....	+15C to 55C
Environmental.....	IEC 60945 Protected Environment.

6.3.3 VHF System.

Port is already using 3(three) VHF Sets of ICOM make are in working condition. The tenderers are required to interface the sets with new system.

6.4 Radar Data Processing System

This is the first part of the tracking system where in tracker generate tracks for all the objects observed by the radar. A high performance radar processor installed at the radar station shall extract the targets. The processor shall have the feature for automatic clutter control, noise reduction, radar interference, etc. The processor shall be capable of tracking at least 2000 targets -1000 moving and 1000 stationary targets (buoys.etc).It shall be capable of detecting targets moving at 50 knots and turning at the rate of 0 to 5 degrees per second.

6.5 Display Processor

This unit shall be located at 'VTMS' centre and one of the main functions of the system is to present the VTS Traffic Image consisting of synthetic radar video, fused/integrated Tracks, Electronic Navigation Chart data along with other related information from the sensors.

The fused/integrated traffic overview output from the multi-tracker shall be one of the inputs to the display processor. The other input shall be from the 'VTMS' computer system regarding the administrative data of the vessel. One of the main functions of the display processor shall be of maintaining a continuous link between the VTS database and the targets extracted by the tracking system. The data specific to a target shall be displayed on the terminal whenever the same is selected / clicked by the operator. Initially, the operator identifies the tracked target with the relevant

vessel data. The system from that point maintains the link. In the event when no initial data is available, the same can be manually entered from the console. The display processor displays the synthetic radar picture along with fused/integrated Tracks on the Electronic Navigation Charts. The operating console shall have the facility to turn ON or OFF the radar image on the screen. The data along with video shall be stored on-line continuously for a period of at least 30 days in accordance with IALA VTS Recommendations. The system shall have the facility for updating the Electronic Navigation Charts. There should be tools to add user layers on the chart.

6.6 ENC Charts

- (i) The electronic navigation charts (ENC) are the base elements for forming graphic presentation of navigational area of interest where the targets are displayed as movable objects on fixed background. Additional information for objects of navigational importance such as navigational buoys, lighthouses shall be displayed on the chart.
- (ii) The electronic charts shall comply with database standards of latest 'International Hydrographic Organization' and IMO regulations. ENC's (Electronic Navigational Charts) generated by the Indian Hydrographic office are now available in S-63format and same may be used as the electronic chart for CoPT system.

The VTMS chart covers the entire area of interest and may be combination of one or more of electronic charts. Following information shall be available on the VTMS chart:

- Auto/Manual/No tracking zone
- Radar sites
- Routes, etc.
- Light House, Buoys, etc.
- Harbour limits
- Reporting points
- Anchorages and Berths
- Wrecks
- Danger Zone

- Shore Lines
- Alignment Line
- Approach channel
- Turning Circle
- User defined Layers

The modified charts with user layers shall be started at a separate file without overwriting on the original chart. WGS – 84 co-ordinate systems shall be used for presenting the targets and other physical objects. It shall be possible for the 'VTMS' system to use ENC charts to provide grounding predictions. It shall be possible to edit and change the S52 schemes and create customized schemes.

It shall be possible to group ECDIS chart object into custom defined overlay group.

6.7 Mode of Operation

The system as minimum shall have following modes of operation

- (a) Traffic Mode

The system will be normally operated in this mode.

- (b) Maintenance Mode

This mode is intended mainly for preventive maintenance and for trouble shooting of hardware and software modules off line diagnostics shall be available in this mode.

6.8 Zones

The complete area of coverage shall be divided into two basic zones.

1. Tracking Zone
2. Blank Zone (No tracking)

It shall be possible to define auto acquisition zone in each tracking zone. The system shall have the facility for making and monitoring the following zones as minimum.

1. Anchorage Zones
2. Restricted Zones
3. Reporting Zones

The system shall have the feature of generating alarms automatically whenever the target crosses the zones limits.

6.9 Targets

The targets are broadly classified in to three types.

1. Tracked Targets – Here the accuracy of information is dependent on the radar processor and position fixing transponder, radar antenna, transceiver, tracker'

fusion/integration processor, and position fixing transponder. The processor shall not use any form of "radar map" or "radar matrix". The processor must measure the Quality of Service (QoS) from all available tracking sources and use the QoS dynamically to calculate the vessel's position, course over ground and speed over ground. The system must be able to handle at least 2,000 tracked targets.

2. Simulated Targets - The position, direction, etc. of the target depend upon the system from the target future set by the operator. The difference between the two types of targets is that the actual route of the target depends on the actual movement of the vessel; whereas the movement of the simulated target from to point on an assigned route follows exactly path and speed limits set. The system must be able to handle at least 100 simulated targets.
3. Fixed targets - These are Navigation Aids (Nav Aids) such as buoys etc, in area of coverage. The system must be able to handle at least 500 Nav Aids.
4. After Glow - The system shall have the feature for adjusting the afterglow of the tracked targets and the radar image the intensity of the glow and time duration shall be adjustable from the operator's console.

Radar image and afterglow shall be displayed with no less that 16colour levels representing the radar video levels and ages of afterglow

6.10 Tracks

Each target once tracked by the System shall be assigned a unique track number and symbol. The system shall broadly classify the tracks into following groups.

1. Initial tracks: These tracks are those, which are identified by the system and shall be tabled with a specific type of symbol and colour code for easy identification.
2. Confirmed Tracks: The initial tracks once confirmed by the operator become confirmed tracks. They shall be labelled with specific type of symbol and colour code.
3. Parked track: Tracks may be "parked" once they are along-side or anchored. Parked tracks maintain their continuous link to the future MIS Database so that once they are "un-parked" the administrative data remains.
4. Lost track: Tracks may be lost completely when the vessel leaves the port area or temporarily when the target is not visible to the radar due to obstruction. The system shall retain the symbol for such target and enter a Dead Reckoning (DR)

mode for a specified time. The DR mode shall take into account the track's assigned route including changes in the vessel's vector (course and speed). If the radar video is not re-acquired, the Track will fade out. It shall be possible to define zones where lost tracks are retained and zones where lost tracks are automatically dropped / suppressed.

6.11 Identifier, History and Labels

Identifier: - Each target once tracked by the system either manually or by auto is labelled with unique identifier.

History: - It shall be possible to display the past positions of the target (to be displayed as a trail behind the target). The supplier shall specify clearly the number of past positions the system can display.

Labels: - It shall be possible to customize the labels to show various information related to the target. Further it should be possible to align the label with respect to the target in any one of 12 sectors. It shall be possible to hide label for de-cluttering purposes. Target Tooltip label shall be visible on hovering. The following shall be available as part of label to be selected by the operator:

- Call sign
- Ship name
- National language name
- MMSI number
- length
- width
- draught
- orientation
- course (COG & Heading)
- speed
- ETA of destination
- ETA of next waypoint
- Distance to next waypoint
- destination
- special attention symbol

- identity unconfirmed symbol
- pilot on board
- dangerous cargo
- ship type
- cargo type
- Port of registration
- Gross tonnage
- Air draught
- route name
- name of next waypoint
- Navigational status
- Rate of turn
- Lat/long position
- free text
- track id
- Identity unconfirmed indication

6.12 Display System

6.12.1 Console

This is one of the principle elements of interface between the operator and the system. Most of the commands required for the system operation are entered through the console.

The design of the console and the processing software shall be of the 'state-of -the-art' technology combining the features of presentation and control. The system shall be designed to enable the operator to perform most of the operations without taking his eyes off the screen.

Maximum use of icons should be made to make operation as user-friendly as possible. Suppliers shall describe the icons they have available.

A system with **two operating consoles** and **one maintenance console** is proposed. Each console shall have two LED 24" monitors for the VTS Traffic Image. Such configuration would be advantageous when operator intents to zoom a particular area of interest on one monitor while on the other monitor have the overall view of

VTMS coverage area. All vessels and crafts in the port shall be depicted clearly on the 24" full screen monitor along with the chart with a provision to zoom a particular area.

Frequently used functions shall be made available in toolbars and shortcut menu (right click). The console shall be equipped with telephone facility for normal shore to centre communication and VHF system for centre to ship communication.

It shall be possible to perform the following operations from the console.

- Scaling and shifting of the centre
- Zooming any part of the area
- Select a predefined view (Bookmark)
- Highlighting any vessel of interest
- Switching Labels on/off for all or individual targets
- Manual acquisition of targets
- Transfer of targets from lost targets to simulated targets and vice versa
- Selection of danger zones
- Vessels information
- Designation a route to target
- Control of Range and bearing line
- Radar control functions like switching, PRF/Polarization, pulse width etc.
- Rx/Tx selection for particular radar
- Off centering
- Track History
- Alarm zone ON/OFF
- Replay
- Symbols and Label selection
- Edit default settings
- Edit charts

The synthetic radar image integrated with Electronic Navigation Chart (ENC) shall be displayed on a high-resolution 24" Colour monitors. The process of linking a vessel data stored in the VTS Database system with relevant object on the 'VTMS' chart is

termed as identification. Once identified the system from that point onwards keeps track of the object till the track is lost or manually deleted.

It shall have a feature for selecting particular Radar for viewing its radar video. The system shall have the facility of transferring the information of tracked targets to simulated targets in case the tracked target is lost when the system is able to recapture the lost target; it shall be possible to transfer the information from the simulated target to tracked target.

The system shall give the following information for each target

- Identifier
- Speed over ground
- Course over ground and Heading
- Call sign
- Flag
- Range and bearing with respect to any operator selected reference point such as the VTMS centre or any of the radars.

6.12.2 Alarm System.

The system shall have automatic detection and Track alarm facility for all the following:

Alarm	Description	Requires
Lost Track	A previous track is lost – no tracking unit or transponder system is tracking it.	
New Track	A new track is detected.	
Illegal Anchoring	The speed of a track indicates its intention to anchor in an anchorage area; the ship type is not defined as legal for that area.	Warning area
Legal Anchoring	The speed of a track indicates its intention to anchor in an anchorage area; the ship type is among those defined as legal for that area.	Warning area
Channel Contravention	An assigned track is moving in the wrong direction in a two-way channel.	Track assignment and warning area
Channel Course Deviation	An assigned track is deviating from the allowed course in that element of the channel.	Track assignment and warning area
Channel Crossing	A track not assigned to the navigation channel is predicted to cross the navigation channel within a defined time limit.	Warning area

Channel Encounter	The minimum allowed distance between two tracks, one of which is assigned to the navigation channel, has been violated.	Track assignment and warning area
Channel Exit	A track assigned to a navigation channel is leaving the channel.	Track assignment and warning area
Alarm	Description	Requires
Channel Max Starboard Deviation	The minimum allowed distance to starboard of a track assigned to the navigation channel has been exceeded.	Track assignment and warning area
Channel Min Border Distance	A track assigned to the navigation channel is too close to a channel border.	Track assignment and warning area
Channel Speed High	An assigned track is exceeding the maximum allowed speed in that element of the channel.	Track Assignment and warning area
Channel Speed Low	An assigned track has a speed lower than the minimum speed limit in that element of the channel.	Track assignment and warning area
Channel Unauthorized Entry	A track of the wrong ship type, size, length, and/or unassigned to the navigation channel has entered the channel.	Track assignment and warning area
Collision Prediction	A potential collision between two tracks, one of them with a Collision Survey assignment, is predicted, based on specified CPA and TCPA limits.	Track assignment
Domain Intruder	A second track is inside the domain area of an assigned track.	Track assignment
Dragging Anchor	An anchored track is moving away from its anchored position, exceeding the assigned dragging radius. (The dredging and dragging survey is stopped when the warning is acknowledged.)	Track assignment
Dredging Anchor	An anchored track is moving away from its anchored position, exceeding the assigned dredging radius. (The dredging and dragging survey continues when the warning is acknowledged.)	Track assignment
Grounding Prediction	A potential grounding of a watched track in a specified grounding area is predicted, within a predefined time limit. (Pot. grounding is predicted when the depth of the grounding area is less than the total of the vessel draught and keel clearance. If draught and/or keel clearance are not defined, default values are used.)	Track assignment and warning area
Alarm	Description	Requires
Leaving Anchorage	A track is leaving its assigned anchoring area.	Track assignment and warning area

Leaving Berth	A berthed track is moving away from its berth position, exceeding the assigned berth radius.	Track assignment
Approach <Multipurpose Area>	A track is detected approaching a multipurpose area, being predicted to enter within the time limit defined for that area. The configured warning name of the area is used in the warning text.	Warning area
Course Change <Multipurpose Area>	An track is deviating from the allowed course change in the multipurpose area.	Warning area
Enter <Multipurpose Area>	A track is entering a multipurpose area configured with an Entering attribute. The warning text includes the configured warning name of the area.	Warning area
High Accel. / High Decel. Multipurpose Area	A track within a multipurpose area exceeds the maximum speed of acceleration or deceleration defined for that area. The warning text includes the configured warning name of the area.	Warning area
High Density <Multipurpose Area>	The maximum number of tracks of a specified vessel type inside the area has been exceeded or is predicted to be exceeded within a specified timeframe.	Warning area
Inside <Multipurpose Area>	A track is within a multipurpose area configured with an Inside attribute. The warning text includes the configured warning name of the area.	Warning area
Leave <Multipurpose Area>	A track is leaving a multipurpose area configured with a Leaving attribute. The warning text includes the configured warning name of the area.	Warning area
Outside <Multipurpose Area>	A track is outside a multipurpose area configured with an Outside attribute. The warning text includes the configured warning name of the area.	Warning area
Speed High <Multipurpose Area>	A track within a multipurpose area exceeds the maximum speed defined for that area. The warning text includes the configured warning name of the area.	Warning area
Speed Low <Multipurpose Area>	The speed of a track within a multipurpose area has fallen below the lowest speed defined for that area. The warning text includes the configured warning name of the area.	Warning area
Prohibited Anchoring	The speed of a track indicates its intention to anchor in a prohibited anchorage area.	Warning area
Alarm	Description	Requires
Reporting Area Enter	An assigned track has entered a reporting area.	Track assignment and warning area
Reporting Line Crossing	A track is crossing a reporting line configured with an alarm attribute.	Warning area
Speed High	The speed of an assigned track exceeds the specified speed limit.	Track assignment

Speed Low	The speed of an assigned track has fallen below the lowest speed defined.	Track assignment
Striking Prediction	A track is predicted to strike a fixed object (such as an offshore platform).	Warning object
Turning Circle Deviation	A track is leaving its assigned turning circle, not making a 150–180° turn.	Track assignment

The system shall have automatic detection and System alarm facility also for all the following:

1. System component such as radar processor lost connection
2. Power loss, etc.

An audiovisual indicating system for the alarm shall be provided at operator console.

The alarm messages marked with date, time and identification of vessel shall be stored automatically for a period of not less than 30-days.

6.12.3 Data Display Format

The system have different data presentation forms for various parameters viz. time, distance, (meters, km, NM) SPEED (km/hr, knot, m/sec) date, co-ordinates, etc.

6.12.4 Cursor

The system shall support a feature of automatically displaying the following information on positioning the cursor anywhere on the chart.

- 1 Latitude
- 2 Longitude
- 3 Common Tactical Grids (CTG)
- 4 Range
- 5 Bearing

6.12.5 Measurements

The system shall possible to measure the distance and bearing between any two targets on the electronic chart.

6.12.6 Data Security

No essential data shall be lost as a result of equipment failure or result of software malfunctioning. The system shall have sufficient protection against unauthorized logins. The supplier will have to furnish the details on different levels of security.

6.12.7 Chart Windows

It should be possible to split Chart Window into minimum 16 Split Windows. Each Chart Window should be able to display the whole area or just a segment, depending on the range and centre selected for the Chart Window. It should be possible to define and save a set of Views. Each View should have its own scale and area. Each of the defined Views can be accessed from any Chart Window.

6.12.8 Target Centre

It should be possible to set Chart Window centre to a target, so when the target moves it would always stay in the centre of the window.

6.12.9 Workspaces

Each operator should be able to define and save a Workspace. A Work space is one or more Chart Windows and system parameters configured to reflect the Operator's personal preferences. This way, the desired chart windows, locations, ranges, overlays, etc. are available each time the operator logs on to the system.

6.12.10 Tracked Target Assignments

Some Track Alarms are initiated by the target assignment(s) given by the VTS operator having the target inside his responsibility area. The system should provide the following assignments:

- Anchor Watch
- Anchor Area
- Authorize
- Collision Watch
- Domain Watch
- Grounding Watch
- Navigation Channel
- Reporting Area
- Speed Watch
- Type & Size
- Turning Circle

6.12.11 AIS Messaging

The console should enable the VTS operator to send AIS messages to specific vessels using their 'MMSI' number and also broadcast to all ships.

6.13 'VTMS' Computer System

The 'VTMS' computer system is a 'VTMS' data processing system is the core of whole operation, where traffic data helpful for safe navigation and other 'VTMS' function are processed, stored and displayed with the help of hardware and customized software. The 'VTMS' system design shall include redundancy and graceful degradation. The supplier will have to furnish details of graceful degradation features.

The minimum preferred system configuration shall be as given below.

1. 64 bit architecture
2. 2048 MB RAM
3. CACHE MEMORY as per system requirement
4. Disk storage
5. Multimedia disc storage
6. Interface units
7. DAT drives
8. Console
9. High-speed back tape drive systems
10. Operating systems Windows/UNIX/LINUX

The server shall be provided with sufficient storage (on a multimedia), for storing video, audio and data information. The ship data shall be stored initially in central storage device and subsequently shall be transferred to DAT drives.

6.14 LAN

The local area network (LAN) as the name implies is the communication network that covers a relatively small area of coverage. The LAN shall be based on TCP/IP.

A high speed LAN (Minimum 100 Mb/sec) shall be used for connecting the server with graphic substations and the PCs. The loading on the LAN shall not be more than 50%. All the products selected (hardware & software) shall have interfaces compatible with port LAN system.

6.15 VTS Database

The 'VTS' Database should be an application that provides the functions necessary for the efficient management of a port marine and traffic operations. The user interface should be designed to be clear and straightforward to use, so that information can be entered and retrieved without difficulty. Computing expertise should not be needed.

The 'VTS' Database should enable the storing and manual input of marine data including vessel name, flag, call-sign, MMSI number and IMO number. Any of these data fields can be used to search and retrieve data for reporting.

The VTS Database package should include:

- Server running MS SQL Server 2008 or latest and
- Client Software.

The 'VTS' Database shall enable VTS Operators to plan, activate and complete voyages including the following functional areas:

- Application Security
- User Administration
- Base Data Management
- Vessel Administration
- Voyage Management
- Incident Management
- Waste Management
- Historic Data Overview
- Report Generation
- Online Help.

The supplier will have to furnish details of these functional areas.

6.16 Other Systems

6.16.1 Emergency Power System

In view of the importance of the system, it is essential to ensure that continuous power supply is available at the 'VTMS' centre. Two (25 KVA each) D.G. sets (totally enclosed type), one at the Administrative building & the other one at Puthuvypeen radar site have been installed and are in running condition. The starting of the generators will be by dedicated batteries. In the event of failure of the main power supply, the power will be restored within 45 sec.

The contractor shall maintain the DG Sets on day to day basis & maintain a log book for running hours, fuel consumption and other parameters of the DG set and

produce to the Engineer-in-charge of 'VTMS' for inspection. Diesel required for the running the D.G. Sets will be supplied by CoPT free of cost.

6.16.2 Uninterrupted Power Supply Unit (UPS UNIT)

The UPS (Uninterrupted Power System) are to be replaced. The units shall be ON LINE mode. One unit shall be installed in the control room. The UPS in the Puthuvypeen Radar site can be retained. The system shall be designed to meet the following loads for minimum period of 30 minutes in the event of breakdown of main power supply through a separate connection.

- 1 Servers/computers and all its peripheral devices including graphic stations, consoles and PCs, monitors, display units etc.
- 2 Radar equipments and all associated system including recording.
- 3 AIS System.
- 4 VHF, Voice recording system and other communication systems
- 5 Communication Links (Microwave Link).
- 6 LAN System
7. Printers
8. Lighting (minimum).

The Power Supply switch Boards are outdated and needs replacement.

6.16.3 Lightning Protection

Lighting arrestors are to be provided for protecting the equipments, mast, light structures against lightning and protection to be provided against surge voltage.

6.17 Recording and Play Back System

The recording of track information shall be continuous and automatic and on line for a period of at least 30-days and after which it shall be capable of being transferred to an off-line media if required. It shall be possible to check the recorded information authenticity; recording data tampered with should be identified automatically. Each recording shall be stamped with date& time.

The System shall support the following;

- Recording of positions of all tracked targets.
- Recording of radar images
- Recording of AIS Images and Messages

- Recording of alarms
- Selection of a particular tape/volume for playback
- Assigning/modifying volume identification
- Delete/erase recorded volume (through password)
- Standard features of a record/playback system viz fast forward, rewind, pause, volume control, start, stop, slow motion, etc.
- Playback of target track recording (video) along with VHF recording (audio) with data and time stamping should be possible.
- Selection of particular VHF channel for recording.
- When the current volume is full, the system automatically assigns the next empty volume for the recording.
- All above targets, sensor data, radar video and VHF audio recording should be recorded on same media at a time.

The system shall have the feature for recording and playback of telephone conversation to the 'VTMS' centre (four lines).

6.18 Civil and Electrical Works

(i) There are no major civil works proposed. Only painting of MS tower & rusted portion of radar pedestal are proposed.

(ii) Under electrical works it is proposed to replace both the 'Electrical Control panels', as per existing model. A new UPS of 5 KVA capacity is proposed to be installed in the VTMS control room.

6.19 Annual Maintenance (AMC) of VTMS System during Warranty Period of One Year and thereafter for 5 (Five) Years (Regarding Man Power)

- The contractor shall 'Maintain' the entire up-graded system during the warranty period of one year and thereafter for 5 (five) years including spares. The contractor shall also maintain existing equipments i.e. VHF sets, D.G. sets and UPS for a period of 6 years. The equipments shall be made available for use as per clause no. 6.2.6 (i.e., system availability) failing which penalty shall be applicable as per clause 4.18.1.
- The contractor shall deploy a trained Maintenance Engineer/Technician for Maintenance of the system on regular basis.

- In case the contractor wishes to replace the person(s) deployed for 'Maintenance' work, he shall inform to the Deputy Conservator in writing about the same by giving at least 10 days notice along with the detailed resume of the new person proposed to be deployed. The Contractor shall give proper job orientation training to the proposed new person.
- The employee shall be conversant in communicating in English. .
- The contractor shall pay fair wages to his employee as per the prevailing industry standards. He shall also provide accommodation for his employee nearby the port and provide other amenities like food, tea/snacks etc at the site. He shall also provide suitable transportation facility to attend to the duty/ relieve off the duty.
- The contractor is responsible for taking precautionary measures for the safety of lives of his personnel working under him and the responsibility arising due to any mishap during the execution of work, payment of any compensation etc. In the event of any loss or damage being caused to the Contractor's property or person(s) while discharging this contract, the Contractor shall indemnify and keep indemnified Cochin Port Trust against all such losses including 3rd party claims. The Contractor is solely responsible for any injury caused to his employee(s) during maintenance work. The contractor will be required to indemnify CoPT in the event of CoPT being held liable to pay the compensation for injury to any of his workmen under the Employees Compensation Act as amended from time to time.
- The contractor shall solely liable and responsible for complying with all applicable labour laws including Minimum wages Act, Employees Compensation Act, Provident Fund, ESI Act etc for all personnel employed by him under this contract. The Contractor shall comply with Provident Fund (PF), Employees State Insurance (ESI), Employees Compensation Act, Contract Labour Acts and all other applicable Acts and Rules. The contractor shall take Insurance for the staff employed by him for 'AMC' contract against all risks. In the event of default on the part of the contractor to make any statutory payments of the above Acts/rules, Cochin Port Trust shall recover the same from the Contractor's bills immediately next falling due or from his security deposit without prejudice to other rights of Cochin Port Trust under this contract.
- It is expressly understood by Cochin Port Trust and the contractor herein that CoPT shall not in any manner whatsoever be liable for the compliance of any labour law requirements relating to such personnel employed for the contract nor for providing any wages, allowances or benefits.

- The Technician/Maintenance Engineer posted for 'Maintenance' of the VTMS System shall be **permanent/contact employee of the contractor/authorized sub-contractor**. The said employees shall always continue and remain as the Contractor's employee and shall not be construed as the employee of CoPT.
- The Contractor shall ensure that any of his employee (s), deployed in the Port shall not divulge any security related information of the Port, access control systems, locations of security and routines or business of the Port to the third party/unauthorized person/(s) .
- The Maintenance Engineer shall maintain the Log books, Registers, Maintenance record of equipments, and furnish reports to the concerned officer.
- In case the Deputy Conservator complains to the Contractor that he is dissatisfied with the Contractor's representative or with any other employee or personnel provided by the Contractor, the Contractor shall inquire/investigate into the said complaint and take necessary action. The contractor shall remove such person(s) and appoint another duly qualified person(s) in his/their place within a reasonable time,
- Payment for Maintenance contract:-CoPT shall make the payments to the contractor on every month on pro rata basis, on production of satisfactory performance certificate issued by the Deputy Conservator or his representative and after deducting applicable taxes and other deductions, penalty if any.
- The contractor or his employees shall not dismantle or remove any of the equipments or parts from the 'VTMS' center without the written approval of Deputy Conservator or his authorized representative. The contractor also shall give a report in writing to the Deputy Conservator in case of any repairs/rectifications/service has to be carried out on the equipments.
- Any number of breaks down calls also shall have to be attended by the contract or during the Comprehensive Annual Maintenance Contract. The software and charts are to be modified/updated free of cost during the warranty period and during the period of annual maintenance contract. The Contractor at his own cost, shall replace/renew all the spare parts (including magnetron) which may become defective/nonworking during the period contract. **The contractor has to store** essential spares so that there will not be any downtime. The tenderer has to provide details of the setup to take care and maintain the system.

Additional Information is furnished in Form No.8.4

SECTION 7**TENDERERS QUALIFICATION FORMS**

1. The tenderer is required to submit the information as per the enclosed formats.
2. If required additional sheets can be attached to the forms
3. In case any discrepancies are found in the information submitted, the tender is liable to be rejected.

Form 7.1**FORM OF PARTICULARS**

1. Name of the firm and full address :
2. Telephone No. /Fax No/e-mail address :
3. Whether the firm (in case of foreign firm) is having :
registered office in India. If so full address of the office.
4. Constitution of firm whether a limited company, :
partnership or proprietary concern, registered small scale industry, etc.
5. Firms registration No. with concerned authority :
6. Year of constitution/Incorporation of the firm. :
7. Nature of business registered for :
8. Years of experience in VTMS :
9. Name of Bankers (attach Bankers Certificate)
10. Latest Income Tax clearance certificate :
(Attach Photostat copy of Income Tax certificate)
11. (i) Sales Tax Registration No. And Date :
(ii) PAN No. :
(ii) TIN No. :
(iv) GST No. :
12. Total assets value :

13. Total working capital :
14. Details of major contracts awarded in the past :
In terms of volume and financial outlay
(Attach notarized/self attested copies of Contract)
15. Name of Managing Director/Manager /Partners :
16. No. of permanent Managerial staff attach :
statement indicating names, position held,
qualification, total experience, No. of years
engaged in the present positions
17. Any other information

I/We hereby certify that the details furnished as above are true to the best of my/our knowledge. I/We further declare that my/our firm has not been disqualified by any officer/department/undertaking of Government of India or other State Governments.

Place : Signature of Managing Director/

Date : Manager/ Partner, with rubber stamp of the firm

Form No. 7.2**EXPERIENCE RECORD**

1. VTMS supplied in last 7 years (ending 31/10/19)

Sl No.	Client Name & Address .Telephone numbers email-address	PORT	System description	Project starting date	Project Ending date	Contract amount	Remarks

Tenderer's

Signature with date and seal

Note: Copies of FAT, SAT, Order with contract value, Performance Certificate during warranty period issued by the client to be enclosed.

Form No.7.3**Service Backup**

Sl.No	Location of Service centers in India	Manpower details	Experience in similar work

Tenderer's

Signature with date and seal.

Form No.7.4**Key Project Personnel for the execution of Project**

Sl. No.	Name	Qualification	Experience	Designation	Relevant experience

Tenderer's

Signature with date and seal.

Form No.7.5**Sub Contractor's Data**

Sl.No.	Area to be sub contracted.	Approx value	Name and address of the sub contractor	Previous Experience in similar projects

Tenderer's

Signature with date and seal

Form No.7.6**(i) Financial Data**

Sl.No.	Fields	Year 2015-16	Year 2016-17	Year 2017-18
1.	Total Assets Current Assets			
2.	Total liabilities Current liabilities			
3.	Net worth			

Financial Turn-over

Total Financial Turnover of the firm during the last 3 financial year ending 31-03-2018 or their financial ending month or their Financial year.		
Sl. No.	Year	Amount in Foreign currency (equivalent in INR)
1	2015-16	
2	2016-17	
3	2017-18	
Total		

Average Financial Turnover...../per year.

Note: The tenderer shall submit along with their offer, reports of financial standing, including profit and loss statements, balance sheets and auditor's reports for the past three years.

Tenderer's Signature with date and seal

Form No.7.7**JV/ Consortium - Details of the partner**

Sl.No.	Name and address of the JV/ Consortium partner.	Experience in the field (Year wise)	Value of the work done	Remarks

Tenderer's Signature with date and seal

SECTION 8

TECHNICAL PROPOSAL FORMS

1. The tenderer is required to submit the information as per the enclosed formats.
2. If required additional sheets, literature, drawings etc. can be attached to the forms.

Form 8.1**List of Enclosures**

Sl. No.	Document	Description	Remarks

Tenderer's Signature with date and seal

Form No.8.2

Technical Deviations

Sl. No.	CoPT Requirement (Ref of Tender document)	Tenderer's deviation	Remarks

Tenderer's Signature with date and seal

Form 8.3**DELIVERY SCHEDULE**

Sl. No.	Details	Time period from issue of the work order	Remarks
1.	Testing of equipment at factory by the contractor on behalf of CoPT.		
2.	Shipment of equipments.		
3.	Installation of equipments		
4.	Commissioning, testing and handing over		

Tenderer's Signature with date and seal

Form 8.4**ANNUAL MAINTENANCE (AMC) OF THE SYSTEM**

Additional Information

The contractor shall maintain the entire up-graded 'VTMS' system during warranty period of 1 (one) year and thereafter for the next 5(five) years after the warranty period of one year including spares. The tenderer shall indicate the charges for the same in the BOQ. The contractor also required to maintain the existing equipment such as DG Sets, VHF Sets and UPS system for a period of 6 years as mentioned in BOQ. The contractor shall take into account the period of warranty issued by the OEM of the equipments while quoting the charges for AMC contract.

The maintenance would be on a comprehensive basis which would include spares, labour and software up-gradation etc. as required. The tenderer has to provide a local base for maintenance that would provide trained manpower and stock of essential spares. The tenderer has to ensure that the local setup and adequate stock of spares so that there is no downtime. The tenderer has to provide details of the setup in their technical bid. The tenderer should account for all the expenses such as medical/logistic support/accommodation/insurance and other facilities as required.

NOTE: The tenderers are requested to note the following while quoting for 'Maintenance' (AMC) contract.

Diesel required for day to day running of DG sets will be supplied by the Port free of cost. The contractor has to maintain the batteries in healthy condition & if required to be replaced as when required. Major overhauling of D.G Sets is not covered. Contractor has to maintain a proper log book for each D.G set & get the signatures from the concerned officer/official.

- (a) Telephone charges, royalty/license fees payable to the Ministry of Communication, WPC wing, and electricity charges during AMC contract shall be at Port account.
- (b) Maintenance of light fixture/cables/fans/AC'S/VTMS building & structures are not covered under AMC'
- (c) Housekeeping work at Puthuvypeen radar site shall be arranged by the contractor. The following works are to be carried out on day to day basis.
 - The wild growth/grass cutting should be done once in two months.
 - The surrounding area should be kept clean.
 - Diesel should be filled in the D.G. Set as when required.
 - Water to be supplied as and when required & pumped in the over-head tank.
 - Equipment and D.G Room should be kept clean.
 - Toilet/bathroom should be kept clean.

Insurance

The equipments will be insured by the Cochin Port after the warranty period of one year under standard insurance policy and will be renewed every year.

Tenderer's signature with date

SECTION 9**PRICE PROPOSAL FORMS**

1. The tenderer is required to submit the price proposal on line for the system offered as per enclosed formats in this section.
2. All the items needed for the total functioning of the system as per the technical specification shall be clearly mentioned.
3. The tenderer is required to submit the price for all items, delivery at site.
4. Transportation and transit Insurance cost shall be included in the unit prices.
5. Income Tax as applicable will be deducted at source,
6. Foreign exchange payment will be released through LC as per the prevailing exchange rates at the time of releasing the payment. Any variation in the exchange rate shall be borne by the CoPT. The FE and INR portion of the contract shall remain fixed till completion of the contract.
7. Custom duties on import will be paid by CoPT as per assessment of Customs & directly paid to the department through the custom house agent.
8. GST as applicable will be paid / reimbursed by COPT.
9. All indigenous/local items of the price bid shall be quoted exclusive of GST.

Form No. 9.1

SECTION – A

COCHIN PORT TRUST							
www.tenderwizard.com/COPT							
Tender No :DC/VTMS/2019							
Price Schedule for Import Component of the Tender							
Name of work: "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ".							
Name of the Tenderer							
SI No.	Description	Supply, Installation & Commissioning at Puthuvypin SEZ area.			Supply, Installation & Commissioning at Administrative building		
		Qty	Unit CIF price USD/ EURO	Total amount in USD/ EURO	Qty	Unit CIF price USD/ EURO	Total amount in USD/ EURO
1	Radar System: 'X' Band Radar of 12' dual polarisation, dual transceiver (2x25Kw), Solid State including radar processor	1			1		
2	AIS System: AIS base station with 'SOTDMA' Protocol (IMO) approved with all accessories.	1			0	0	0
3	Data Base System: Dual redundant data base servers along with required software for interface and VTMS software complete with all accessories and interfaces.	1			0	0	0
4	VTMS Software:						
	a. Dual redundant Multi tracking system	1			0	0	0
	b. Dual redundant time servers	1			1		
	c. Record and reply system-Software & related hardware	0	0	0	1		
	d. Operator display units with dual 24" color LCD monitor complete with all required VTMS software and	0	0	0	2		

	hardware						
	e. Maintenance/Supervisor console with dual 24" colour LDC monitor, with required VTMS software and hardware	0	0	0	1		
	f. Remotely operated systems (read on facility) with dual Monitors of 24" LCD Monitors, UPS complete with all accessories. Two of them should have DVD writer facility.	0	0	0	4		
	Total						
	Total of Puthuvypin and Adm Bldg)						
	Total in Words (indicating currency also)					Indicate Euro / USD	
5	Optional: Microwave communication link of adequate capacity complete with all accessories. (link to be established from Puthuvypeen to Adm, building) Aerial distance about 2 Kms.	1			0	0	0
	Amount in words for item #5 (indicating currency)					Indicate Euro / USD	
Note:	<p>1) Prices to be quoted either in USD or Euro on CIF basis.</p> <p>2) The currency (Euro / USD) in which the offer is made should be indicated in the columns provided.</p> <p>3) Custom duty as applicable will be paid by Cochin Port Trust.</p> <p>4) Custom clearance & Transportation and misc expenses will be @ contractors account.</p> <p>5)The Manufacturer/ supplier of the X band Radars should give undertaking that that they will supply all the required spares and provide service back up for not less than 7 years from the date of commissioning.</p> <p>6) The cost of item no. 5 will not be considered for evaluation. If the item is required a separate order will be placed.</p>						
Signature with seal							

Note: AMC Cost will be calculated as per NPV (Net Present Value) @ discounted rate of 6% per annum.

Signature of Tenderer

Form No. 9.2

SECTION – B

COCHIN PORT TRUST									
www.tenderwizard.com/COPT									
Tender No :DC/VTMS/2019									
Price Schedule for Indigenous/Local items of the tender									
Name of work: "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ".									
Name of the Tenderer									
SI No.	Description	Supply, Installation & Commissioning at Puthuvypin SEZ area.				Supply, Installation & Commissioning at Administrative building			
		Qty	Unit Price exclusive of GST in Rs.	Total price exclusive of GST in Rs.	GST @	Qty	Unit Price exclusive of GST in Rs.	Total price exclusive of GST in Rs.	GST @
1	Overhauling of 25 KVA Kirloskar make DG set (Model – E/N RB33plus) inclusive spares (by local authorized dealer) No major overhauling is required.	1				1			
2	5 KVA on line UPS with back up of 20 minutes for the system. Including batteries.	0	0	0	0	1			
3	Replacement of existing Electrical control panel with a new latest version (as per existing capacity)	1				1			

4	Printers: Supply & installation of latest model printers (laser set) A4 size	0	0	0	0	2			
5	Other LAN related items, like switches etc.	1				1			
	Total								
	Grand Total								
	Total in Rs. (Words)								
Note :	1)Prices to be quoted in INR on CIF basis 2) GST will be paid/reimbursed by Port Trust								

Signature with seal

Form No. 9.3

SECTION – C

COCHIN PORT TRUST									
www.tenderwizard.com/COPT									
Tender No :DC/VTMS/2019									
Price Schedule for Services									
Name of work: "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ".									
Name of the Tenderer									
SI No.	Description	Supply, Installation & Commissioning at Puthuvypin SEZ area.				Supply, Installation & Commissioning at Administrative building			
		Qty (Unit)	Unit Price exclusive of GST in Rs.	Total price exclusive of GST in Rs.	GST @	Qty	Unit Price exclusive of GST in Rs.	Total price exclusive of GST in Rs.	GST @
1	Installation and Commissioning of 'X' Band 12' Radars, wave- guide Trans receiver cabin on the steel Tower, Rack, AIS system, Data Base System, Electrical Control panels, etc complete. All works connected with installation & commissioning of VTMS System,	1 Unit				0	0	0	0
2	Installation and Commissioning of 'X' Band 12' Radar, wave- guide Trans receiver ,AIS system, Dual redundant time server, record & replay system operator display systems, Remote Control Units, Rack, Electrical Control panel etc complete. All works connected with installation &	0	0	0	0	1 Unit			

	commissioning of VTMS System,								
3									
a	Dismantling of 18 'X' band , wave guide/Trans receiver cabin installed on the 45 steel Tower, AIS unit with accessories, Hydro/ Met system, CCTV system, Data Base System services, Electrical Control Panel, servers. Cables, Rack, LAN related items etc.	1 Unit				0	0	0	0
b	Dismantling of 12' Radar, wave guide/Trans receiver installed on the short steel structure on Admn building, Navtex Receivers, Inmarsat –C Receiver along with antennas, Time servers, operator Display units, Electrical Control Panel, servers. Cables, LAN related items etc. & other equipments if any.	0	0	0	0	1 Unit			
	NOTE; All the dismantled 'equipment mentioned in SI No. 3 (a)(b) should be listed properly and handed over to the CoPT and to be stored at designated place.								

4	<p>Assistance for getting WPC /DGFT licences for import of 12 'X' Band Radars (Replacement to the existing Radars), Arranging licenses for, AIS for including in the existing licences. All required documentation (on line application) should be done by the contractor. Follow up action at Chennai/New Delhi till issue of licences. (Licence fees payable to WPC wing of the Ministry of communication and DGFT will be reimbursed by CoPT as per actual. The work should be commenced immediately on issue of LOI preferably within a week.</p>	Lumps um							
	Total								
	Grand Total								
	Total in Rs. (Words)								
Signature with seal									

Form No. 9.4

SECTION – D

COCHIN PORT TRUST							
www.tenderwizard.com/COPT							
Tender No :DC/VTMS/2019							
Price Schedule for Works							
Name of work: "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ".							
Name of the Tenderer							
SI No.	Description	Supply, Installation & Commissioning at Puthuvypin SEZ area.			Supply, Installation & Commissioning at Administrative building		
		Qty	Cost exclusive of GST in Rs.	GST @%	Qty	Cost exclusive of GST in Rs.	GST @%
1	Scrapping the rusted portion of 45 mtr steel tower & painting the full tower with Aluminum paint.	1 Unit			0	0	0
2	Scrapping the rusted portion of Radar pedestal fixed on Administrative building & painting with one coat of primer & final coat with enamel paint.	0	0	0	1 Unit		
3	Fabrication & installation of a chamber for installation of wave guide/Transceiver units on 45 mtr steel tower (at about 30 mtr).	1 Unit			0	0	0
4	Replacing the existing damaged cable trays fixed on 45 Mtr steel tower & laying cables properly with fixtures	1 Unit			0	0	0
	Total in Rs.						
	Grand Total						
	Total in Rs. (Words)						
Signature with seal							

Form No. 9.5

SECTION – E

COCHIN PORT TRUST									
www.tenderwizard.com/COPT									
Tender No :DC/VTMS/2019									
Price Schedule for Works									
Name of work: "Up-gradation of existing Vessel Traffic Management System (VTMS) of Cochin Port as per scope of work and Comprehensive Maintenance(AMC) of the System for the next 5 (five) years excluding warranty period of one year and 6 years for existing old equipments as mentioned in the BOQ".									
Name of the Tenderer									
SI No.	Description	Supply, Installation & Commissioning at Puthuvypin SEZ area.				Supply, Installation & Commissioning at Administrative building			
		Amount excluding GST in Rs.	GST @ %	Discounting factor @ 6%	NPV amount in Rs.	Cost exclusive of GST in Rs.	GST @ %	Discounting factor @ 6%	NPV amount in Rs.
1	6 (six) years of comprehensive maintenance of existing equipments inclusive of spares, consumable and Man power. The equipments to be maintained are D.G set, UPS, VHF sets.	TOTAL of 1				TOTAL of 1			
	Rate for 1st Year			0.94				0.94	
	Rate for 2nd Year			0.89				0.89	
	Rate for 3rd Year			0.83				0.83	
	Rate for 4th Year			0.79				0.79	
	Rate for 5th Year			0.74				0.74	
	Rate for 6th Year			0.70				0.70	
2	5 (five) year of comprehensive maintenance	TOTAL of 2				TOTAL of 2			

	for proposed new equipments to be installed after the warranty period of one year, inclusive of spares, consumables and man power etc							
	Rate for 1st Year (Covered under warranty)		0.94				0.94	
	Rate for 2nd Year (1st Year after warranty)		0.89				0.89	
	Rate for 3rd Year (2nd year after warranty)		0.83				0.83	
	Rate for 4th Year (3rd year after warranty)		0.79				0.79	
	Rate for 5th Year (4th year after warranty)		0.74				0.74	
	Rate for the 6th year (5th year after warranty)		0.70				0.70	
3	House Keeping at Puthuvypeen Radar Site. 1. Removal wild growth including grass cutting etc (at least once in two month). 2. Cleaning of equipment Room & D.G Shed & Toilet and bath room on day to day basis. 3. Filling of Diesel in D.G Tank whenever required.	TOTAL of 3			TOTAL of 3			

	(Diesel will be supplied by CoPT). 4. Filling of water in the Sintex Tanks. 5. Surrounding area to be kept clean & tidy.							
	Rate for 1st Year			0.94				0.94
	Rate for 2nd Year			0.89				0.89
	Rate for 3rd Year			0.83				0.83
	Rate for 4th Year			0.79				0.79
	Rate for 5th Year			0.74				0.74
	Rate for 6th Year			0.70				0.70
	Total (of 1 + 2 + 3) in Rs.							
	Grand Total							
	Total in Rs. (Words)							
Signature with seal								
Not e:	AMC Cost will be calculated as per NPV (Net Present Value) @ discounted rate of 6% per Annum							

(Annexure – 2.1)

FORM OF AGREEMENT

Agreement No..... of 2019-20

This agreement made at Cochin this.....Day of.....Two thousand twenty BETWEEN M/s.....(hereinafter called 'The Contractor') which expression shall unless excluded by or repugnant to the context of meaning hereof, be deemed to include the party named and his heirs, executors, administrators, permitted representatives and assigns or successors in office of the one part AND the Board of Trustees of the Port of Cochin, a body corporate under Major Port Trust Act No. 38 of 1963 having office at Willingdon Island, Cochin-682009 represented by its Dy. Conservatorson of..... Aged..... Residing at..... (herein after called the Trustees) which expression shall unless excluded by or repugnant to the context or meaning hereof, be deemed to include their successors and assigns in office of the other part.

WHEREAS The Trustees have accepted a tender submitted by the contractor for the up-grading/renewal of Vessel Traffic Management System of Cochin Port and guarantee efficient performance over a period of twelve calendar months (hereinafter called the "work").

AND WHEREAS the contractor has furnished Two Bank Guarantees one for Project work including warranty period one year for the period of two years and another for maintenance (AMC) of the system of the next five years for

Rs..... (Rupees.....Only) and

Rs.....(Rupees.....Only) respectively

issued byBank vide BG Nos. dated.....as Security Deposit for the due and proper fulfillment of all contract conditions including guarantee period.

NOW THIS AGREEMENT WITNESSTH AS FOLLOWS

1. In this agreement works and expressions shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this agreement viz:
 - a. The said Tender No.....
 - b. The said Price Bid No.....
 - c. The acceptance of contract.....
 - d. The approved specification
 - e. The approved drawings if any.
 - f. The General and Special conditions of contract
 - g. All the correspondences including minutes of meeting by which the contract is added, amended, carried or modified in any way mutual consent.
3. In consideration of payments to be made by the Trustees to the Contractor for the work to be executed, the contractor HEREBY COVENANTS with the Trustees that the contractor shall and will duly provide, execute and complete in all respects the work to the full satisfaction of the Trustees and shall perform all other acts and things in contract mentioned or described or which are to be implied there from or may be reasonably necessary for completion of the work at the said time and in the manner in the contract conditions.
4. In consideration of the due provision, execution and completion of the work to the full satisfaction of the Trustees by the contractor, the Trustees hereby agree to pay to the contractor the respective amounts for the work actually done by the contractor and approved by the Trustees under provisions of the contract at such time and in such manner as provided therein.
5. Any of the counter terms and conditions of the contractor shall not be taken as terms and conditions of this contract/agreement unless the Trustees in writing specifically agreed to it.

IN WITNESS whereof the contractor hereunto set his hand and seal and on behalf of M/s.....and on behalf of the Trustees the Deputy Conservator has set his hand and seal and the Common seal of

the Board of Trustees has been hereunto affixed on the day and the year first written above.

Signed, sealed and delivered by

For and on behalf of the said

M/s.....

AUTHORISED SIGNATORY

In the presence or:

- 1.
- 2.

Signed, sealed and delivered by
For and on behalf of the said Board
of Trustees of the Port of Cochin.

DEPUTY CONSERVATOR

The Common seal of the Board of Trustees
Of the Port of Cochin has been affixed

In the presence of

1.
2.

(Note: The Agreement is to be executed on "Kerala Govt." Stamp Paper of Value 500/-

Annexure 2.2**FORMAT OF BANK GUARANTEE**

(On stamp paper of Value of Rs.100/-)

(For Performance Security)

In consideration of the Board of Trustees of the Cochin Port Trust (hereinafter called "Port Trust") having agreed to exempt _____ (hereinafter called "the said contractor (s)") from the demand, under the terms and conditions of an Agreement dated _____ made between _____ and _____ for _____ (hereinafter called "the said Agreement") of Performance Security Deposit for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. _____ (Rupees _____ only)

We _____ (indicate the name of the bank) (hereinafter referred to as "the Bank") at request of _____ (Contractor) s) do hereby undertake to pay the Port Trust an amount not exceeding Rs. _____ against any loss or damage caused to or suffered or would be caused to or suffered by the Port Trust by reason of any breach committed by the said Contractor(s) of any terms or conditions contained in said Agreement.

We _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Port Trust stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the Port Trust by reason of breach by the said contractors failure to perform the said Agreements. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under the guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Port Trust any money so demanded notwithstanding any dispute or disputes by the Contractor (s) / Supplier (s) in any suit or proceedings pending

before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payments so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s)/supplier (s) shall have no claim against us for making such payment.

We _____(indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Port Trust under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Port Trust certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor (s) and accordingly discharged this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all liability under this guarantee at thereafter provided further that the Bank shall at the request of the Port but at the cost of the contractor renew or extend this guarantee for such period or periods as the Port will require.

We _____(indicate the name of the Bank) further agree with Port Trust that the Port Trust shall have fullest liberty without our consent and without affecting in any manner, our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor (s) from time to time or postpone for any time or from time to time any of the powers exercisable by the Port against the said contractor and to forbear or enforce of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variations, or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the Port Trust or any indulgence by the Port Trust to the said Contractor (s) or by any such matter of things whatsoever which under the law relating to sureties would but for this provision, have effect of so relieving us. This guarantee will not be discharged due to the change in the constitutions of the Bank or the Contractor(s) / Supplier(s).

We _____ lastly undertake not to revoke this guarantee during its currency except with the consent of the Port Trust.

This guarantee shall be valid up to _____ unless extended on demand by Port Trust. Notwithstanding anything mentioned above, our liability against their guarantee is restricted to Rs.....(Rupees -----only) and unless a claim in writing is lodged with us within six months of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated _____ day of _____

For _____

(Indicate the name of the Bank)

Annexure 2.3**PERFORMA OF B.G TOWARDS E.M.D**

(To be submitted on Non-judicial Stamp Paper of appropriate value)

Bank Guarantee No..... Dated.....
 Amount of Guarantee Rs.
 Guarantee Cover Period fromto

THIS DEED OF GUARANTEE executed at.....by (Name of Bank)
 having its Head/Registered Office at _____ and Branch
 at..... (hereinafter called "**the Bank or the Guarantor**") which
 expression shall, unless it be repugnant to the subject or context thereof, include its
 executors, administrators, successors and assigns;

In favour of

The Board of Trustees of Cochin Port Trust (hereinafter called "**the Employer**"), having its
 office at Willingdon Island, Cochin – 682 009, Kerala State, India, which expression shall,
 unless it be repugnant to the subject or context thereof, include its executors,
 administrators, successors and assigns;

WHEREAS M/s.....a Company registered under the provisions of
 (state the law) having its registered office and principal place of business at
(hereinafter called "**the Bidder**", which expression shall,
 unless it be repugnant to the subject or context thereof include its executors administrators,
 successors and assigns) has tendered for "....." in the State of
 Kerala in India; and

WHEREAS in terms of the Bid Ref. No.....dated.....hereinafter referred to as
 "**Bid Document**") the Bidder is required to furnish to the Employer an unconditional and
 irrevocable Bank Guarantee for an amount of Rs. (Rupees only) as
Earnest Money Deposit and the Guarantor has at the request of the Bidder agreed to
 provide such **Earnest Money Deposit** in the form of this Bank Guarantee.

NOW THIS DEED WITNESSETH that in consideration of the premises, the Guarantor hereby
 declares, undertakes and agree as follows:

- a) The Guarantor as primary obligor shall, without demur, pay to the Port Trust an
 amount not exceeding Rs. (Rupees only), within 5
 (five) days of receipt of a written demand from the Employer stating that the
 Earnest Money Deposit has been forfeited in terms of the BID Document. Any
 such demand made on us by the Employer shall be conclusive and absolute as
 regards the forfeiture of the Earnest Money Deposit and the amount due and
 payable under this Guarantee.

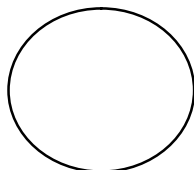
- b) The above payment shall be made by the Guarantor without any reference to the Bidder or any other person and irrespective of whether the claim of the Employer is disputed by the Bidder or not.
- c) This Guarantee shall remain in full force for a period of 148 days from(date)* or for such extended period corresponding to the extension of the validity of the Bid submitted by the Bidder and shall continue to be enforceable until the amount demanded by the Employer under this Guarantee are paid.
- d) In order to give full effect to this Guarantee, the Employer shall be entitled to treat the Guarantor as the principal debtor and the obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Bid Documents or other documents or by extension of time of performance of any obligations by the Bidder or any postponement for any time of the powers exercisable by the Employer against the Bidder or forebear or enforce any of the terms and conditions relating to non-compliance of the Bid Document by the Bidder and we shall not be relieved from our obligations by reason of any variation or extension being granted to the Bidder or forbearance or omission on the part of the Employer or any indulgence by the Employer to the Bidder to give such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving the Guarantor.
- e) This Guarantee shall be unconditional and irrevocable and shall remain in full force and effect until all our obligations under this Guarantee are duly discharged.
- f) The Guarantor has power to issue this Guarantee and the undersigned is duly authorized to execute this Guarantee pursuant to the powers granted to him or her.

IN WITNESS WHEREOF the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.

Signed and Delivered by the aforesaid Guarantor)

Bank by the hand of the Authorized Signatory)
 Mr./Ms.....[name])
 [designation]) _____

Bank's Seal



* Fill in the scheduled date of submission of Bid

AppendixPRE CONTRACT INTEGRITY PACTGeneral

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on _____ day of the month of _____ 20____,

between, on one hand, the Board of Trustees of _____ Port through Shri. _____, (Designation of the Officer), _____ Port Trust (hereinafter called the 'BUYER', which expression shall mean and include unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s. _____ represented by Shri. _____ Chief Executive Officer (hereinafter called the "BIDDER/Seller" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER/Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is _____ Port Trust.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this integrity Pact and agree as follows

Commitments of the BUYER

- 1.1 The BUYER undertaking that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bid, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
 - 1.2 The BUYER will during the pre-contract stage, treat all BIDDERS alike and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
 - 1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

Commitments of the BIDDERS

3. The BIDDER commits itself to take all measure necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following.

- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the buyer, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation contacting and implementation of the contract.
- 3.2 The BIDDER further undertaking that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material benefit or other advantage commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavor to any person in relation to the contract or any other contract with the Government.
- 3.3* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
- 3.4* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
- 3.5* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
- 3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

- 3.13 The BIDDER shall not tend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

4. **Previous Transgression**

4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

4.2 The BIDDER agrees that if it makes incorrect statement on this subject BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. **Earnest Money (Security Deposit)**

5.1 While submitting commercial bid, the BIDDER shall deposit an amount_____ (to be specified in RFP) as Earnest Money/Security Deposit, with the BUYER through any of the following instruments.

- (i) Bank Draft or a Pay Order in favour of _____
- (ii) A confirmed guarantee by an Indian Nationalized or Scheduled Bank promising payment of the guaranteed sum to the BUYER on demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof of payment.
- (iii) Any other mode or through any other instrument (to be specified in RFP).

6. **Sanctions for Violations**

6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (Whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER (s) would continue.
- (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- (iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country

other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

(vi) To cancel all or any other Contracts with BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

(x) Forfeiture or Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7 **Fall Clause**

The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of Indian or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of Indian or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

8. **Independent Monitors**

8.1 The BUYER has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given)

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the BUYER/BIDDER and should the occasion arise, submit proposals for correcting problematic situations.

9. **Facilitation of Investigation**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. **Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

11. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. **Validity**

12.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this pact turn out to be invalid; the remainder of this pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at _____ on

BUYER
Name of the Officer
Designation
Deptt/MINISTRY/PSU
Witness

1. _____
2. _____

BIDDER
CHIEF EXECUTIVE OFFICER

Witness

1. _____
2. _____

* Provision of these clauses would need to be amended / deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers.