To No: IM&EE/MOF/FOF/ET/AI&ML /
DT: 15-05-2025

Sir

Sub:- Expression of Interest for "Automatic identification of cargo and weighment by volumetric analysis using latest AI & ML tools for all cargo loaded trucks while entering in port gates –Reg.

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VISAKHAPATNAM PORT AUTHORITY invites Expression of Interest (EOI) from "Automatic identification of cargo and weighment by volumetric analysis using latest AI & ML tools for all cargo loaded trucks while entering in port gate". Interested Parties / Vendors who meet the prequalification criteria may furnish their EOI with all the necessary documents as mentioned in the terms and conditions, scope of work, pre-qualification criteria including cost in a sealed cover along with the covering letter duly signed by an authorized signatory which shall be received up to 3.00 PM Dt **26-05-2025** and shall be opened on the same day at the above address, in presence of interested Bidders. VPA reserves the right to accept or reject any or all the tenders or part thereof without assigning any reason.

The sealed budgetary offer shall be reached to the office of Chief Mechanical Engineer, Visakhapatnam Port Authority, and Visakhapatnam 530035. In this connection the clarification if required the same may be forwarded to email ID cme.rnh.vpt@gov.in (CME); cme.vmv.vpt@gov.in (DCME).

Yours Faithfully,

CHIEF MECHANICAL ENGINEER

Intent of the Expression of interest (EoI)

Visakhapatnam Port has developed gate access control using RFID based (Fast tag) for vehicle Identification, ANPR for number plate recognition while entering into Port entry Gates. In general all these Cargo Vehicles Carry Bulk, Bagged Cargo like Coal, Iron ore, Manganese, Rock phosphate, Bauxite etc., with a truck loaded capacity varying between 20 to 25 Tons.

Gate Access Control System shall provide material permit access In & Out of the Port by
verifying the following essential data

  I.   Agency Name   : The Owner/Cargo Handler / Agency
 II.   Vehicle Number: Based on RFID / Fasttag / ANPR
III.   Date and Time : Gate Access System
 IV.   Type of Cargo   : Manual feeding by the owner / Agency
  V.   Category   : Bulk / Baggage / Liquid – Manual feeding
 VI.   Weight(Approx.) : Tons (Manually feed)
VII.   Approval   : By Port Authority

Out of the above type of Cargo (Coal, Iron ore, Manganese, Bauxite etc.,) weight of the Cargo being manually fed by the Agency before arrival at the gate which is not a transparent and needs to be automation captured by system using latest AI&ML. However presently VPA is identifying or monitoring Cargo using high end video Surveillance camera at the gates Weight is being entered manually approximate value depending upon Truck capacity i.e., 20T, 25 Ton. etc.,

VPA desires to identify the type of Cargo (Name of the Cargo) Example, Coal, Iron ore, Wheat etc., using high definition Video Surveillance on a front end element and weight of Cargo by Volumetric analysis using AI&ML techniques at the backend.

Prospective and interested Parties / System Integrators / OEMs are hereby informed to implement above 02 salient and key functionalities.
  a. Automatic Identification of Cargo loaded in Truck while entering
  b. Weight of Cargo(Approx.) loaded in Truck while entering.

Taking this as a POC - Proof concept case for above said 02 use cases by deploying skill set with competent resources so as to complete POC in a time frame of 02 – 03 Weeks and to submit VPA.

VPA shall provide all kinds of assistance while taking up POC such as a) Samples of Cargo b) Nomenclature of Cargo c) Vehicle details and dimensions capacity d) CCTV Surveillance Camera Fixed & PTZ -01Set (IP based 4MP, day/night – subject to availability) e) NVR and network f) other support needed if any like entry permits.

Experience : All interested and Professional Agencies who are having similar nature of experience in developing AI based solution using Video Surveillance, Video Analytics, AI & ML tools and development of use cases etc., can submit EOI on or before **26th May 2025** in a sealed covers (Cover-I design solution, subject POC Cover-II –Commercials to implement – POC for above 02 use cases) to Chief Mechanical Engineer, Mechanical & Electrical Engineering Department, Administrative Building, Room No.206, Visakhapatnam Port Authority - 530035.

Eligibility: 1. Firm /Agency should have successfully done 1 or 2 similar vedio surveillance based using AI,VA works during last 05 years .

2. Should possess customized AI software or OEM authorized to customize with valid certification by CERT-In or any Govt .body.

Terms and conditions:

1. Time is the essence of POC .
2. Only experienced in similar nature of works are eligible.
3. Time period for POC is 02-03 weeks from date of issuing order.
4. No financial commitment at this stage.
5. Only those short listed based on experience and other credentials will be opened for price evolution.

CHIEF MECHANCICAL ENGINEER

VISAKHAPATNAM PORT AUTHORITY
MECHANICAL & ELECTRICAL ENGINEERING DEPARTMENT

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BILL OF QUANTITY

Sl.No	Description	Unit	Quantity	Amount
1.	Charges for POC –Proof concept case for Job 02 cases deploying skill set with competent resources and to submit VPA . a) . Automatic identification of cargo loaded in Truck while entering. b). Weight of cargo (approx..) loaded in truck while entering. c). Type, class, category of vehicles-clarification identification.	Job	02	

CHIEF MECHANICAL ENGINEER