

**MARINE DEPARTMENT**

**"Supply, Installation, Commissioning, Training and Integration of 360 Degree Horizontal Field of View (HFOV) Full Mission Bridge Simulator with 05 years Comprehensive Annual Maintenance Contract at Deendayal Port, Kandla"**

Pre-bid Queries & its clarifications

**Pre-bid Meeting 02/07/2026**

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
1	6 & 13	NIT, Clause no.10 (b) of Section-I	<p><b>Similar works means</b> Design, Supply, installation and commissioning of Full Mission Ship Handling Simulator (FMSHS) featuring a minimum horizontal field of view (FOV) of 360 degrees integrated with a mathematical model supporting at-least 6 degrees of freedom (6DOF) for vessel dynamics.</p>	<p>'Similar works' means Design, Supply, installation and commissioning of Full Mission Ship Handling Simulator (FMSHS) featuring a minimum horizontal field of view (FOV) of 360 degrees integrated with a mathematical model supporting at-least <b>6 degrees of freedom (6DOF)</b> for vessel dynamics. Please clarify if prior experience of FMSHS integrated with 6DOF motion Platform is mandatory? Since Motion Platform is not a mandatory requirement in this tender, request if 6DOF Motion criteria can be relaxed.</p>	Tender condition prevails.
2	27	Clause No. 10 of Section-II	<p><b>Key Features:</b> Simulator shall include 50 Own Ship models, developed specifically for Deendayal Port, Kandla</p>	<p>The document requires the simulator to include 50 Own Ship models in total. For the remaining 25 models (beyond the port-specific ones), does DPA have a preferred list of vessel types/sizes to be included, or should the bidder propose a reasonable selection?</p>	The remaining list of ship models will be provided to successful bidder during commencement of work.
3	30	Clause no.11 of Section-II	<p><b>11.Ship Model Characteristics : The Bidder must be a manufacturer of marine ship engines</b>, with proven experience in engine manufacturing, commissioning, retrofitting, and propulsion system integration. This ensures in depth knowledge of:....</p>	<p>The document states: "The Bidder must be a manufacturer of marine ship engines... proven experience in engine manufacturing, commissioning, retrofitting, and propulsion system integration." Since <b>this is a bridge simulator procurement (software/hardware)</b>, not a physical engine purchase: request DPA to accept bidders who are OEMs of simulation software &amp; HMI with in-house hydrodynamic</p>	Tender condition prevails.
4	34	Clause no.13 E (b) 4. of Section-II	<p>13. Environmental Simulation b) Simulation Software:- The trainee station/ Bridge should comprise the following Simulated Software modules including: - 4. Navi Sailor 4000 ECDIS Module</p>	<p>The tender document specifies: "The Bidder shall be the Original Equipment Manufacturer (OEM) of a real Electronic Chart Display and Information System (ECDIS) used onboard seagoing vessels." At the same time, the technical specification explicitly references the "Navi Sailor 4000 ECDIS Module," which is a brand of a specific OEM. We request that DPA allows bidders to propose another OEM ECDIS solution capable of meeting the stated functional requirements.</p>	Bidder is allowed to use some more options viz. Kongsberg & Furono which is compitable with Navi Sailor 4000. These option may be utilized wherever the Navi Sailor 4000 is mentioned in the tender.

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
5	34	Clause no.13 E (b) 5 & 6 of Section-II	<p>13. Environmental Simulation</p> <p>b) Simulation Software:- The trainee station/ Bridge should comprise the following Simulated Software modules including: -</p> <p>5. Navi Radar 4000 Module</p> <p>6. Radar/Arpa Simulation Module</p>	<p>(a) Is the Radar/ARPA simulation expected to be the bidder's proprietary simulation (if they are a simulator OEM), or</p> <p>(b) Must it be a real shipborne radar OEM's software? If the latter, will DPA accept a licensed integration from a third party radar OEM (e.g., Furuno, JRC, Sperry)?</p>	<p>a) Please see the reply to the query at sr. no. 4.</p> <p>b) Yes, the software should be of OEM for radar.</p>
6	43	Clause no.14.3.2 of Section-II	<p><b>14.3.2</b> The contractor has to maintain the equipment during the warrantee as well as CAMC period. If any defect found during such period DPA will inform the contractor and the contractor has to take remedial action and rectify the defect within 3 days from the notification by DPA. Otherwise, a penalty of Rs. 20,000/- (Rupees Twenty Thousand only) per day per instance will be imposed on contractor till functioning of equipment and acceptance. Contractor has to pay the penalty amount to DPA otherwise the same will be adjusted against the retention money.</p>	<p>The document mandates a 3-day response window for rectifying defects during warranty/CAMC, with a penalty of Rs. 20,000/day. Kindly clarify: (a) Is the 3-day period calendar days or working days?</p> <p>(b) Is the period counted from the time of notification (email/phone) or from receipt of written formal intimation?</p> <p>(c) Given that some spare parts may require international shipping, will DPA consider a reasonable grace period for logistics for critical spares not stocked locally?</p>	<p>03 working days from the date of intimation by DPA without any grace period. This applicable to clause no. 14.3.3. of Section-II also.</p>
7	42	Clause no.14.1.2 of Section-II	<p><b>14.1.2</b> The Supplier shall be paid 70% or remaining contract (in case the supplier opted for advance) and 100 % (in case the supplier not opted for advance) value against Supply, Installation, Commissioning, Acceptance Testing, Training of 5 working days and putting in to operation of Simulators at designated place specified by DPA against the invoice subject to compliance and conformity, in full, with tender terms and conditions. DPA will, after verification, Certification &amp; approval from the member of the International Association of Classification Societies (IACS) make payment within Thirty days after the date of receipt of the claim, complete and correct in all respects together with necessary supporting document from the supplier.</p>	<p>The final payment is subject to certification &amp; approval from an IACS member (appointed by DPA). Kindly clarify:</p> <p>(a) Who bears the cost of hiring the IACS member for certification?</p> <p>(b) Will the IACS member be appointed before the bid submission so we know the specific classification society, or will DPA appoint them after the award?</p>	<p>a) Please refer clause no. 7 of Section - II and clause no. 14.1.2. The IACS cost will be beared by DPA.</p> <p>B) The appointment of IACS will be done during commencement of work as and when required.</p>

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
8	18, 41	Clause no.25.2 & Clause no.13 (H) Table of Section-II	<p><b>25.2</b> The prices shall be quoted inclusive of all Taxes [excluding GST], Duties, salary and wages of staff, repair and maintenance cost, insurance and other incidentals etc. and should remain firm till completion of work. <b>Fuel will be supplied by DPA free of cost.</b></p> <p><b>1.111</b> Power &amp; LAN Arrangements (Deendayal Port, Kandla Scope)</p>	<p>The document states: "Fuel will be supplied by DPA free of cost" and "Power &amp; LAN Arrangements (Deendayal Port, Kandla Scope)". Kindly clarify:</p> <p>(a) Does "Power Arrangements" include providing the required electrical load capacity (e.g., 3-phase, specific KVA) up to the simulator room, or does the bidder need to install distribution boards/cabling from the main panel?</p> <p>(b) What is the specified KVA load available at the proposed installation site?</p> <p>(c) Is HVAC/Air-conditioning to keep the room at 0–55°C (as per Ambient Conditions, Page 36) included in DPA's scope or the supplier's scope?</p>	<p>The word "Fuel will be supplied by DAP free of cost" may please be treat as deleted.</p> <p>a) The electric connection upto a common point for equipment further distribution is under scope of contractor. The electricity consumption cost will be bear by DPA.</p> <p>b) There is sufficient capacity available with Port. However, the requirement should be furnished by the bidder.</p> <p>c) The sucessful bidder has to take care of sytem so that the HVAC/AC as per requirement should also be provided by contractor.</p>
9	1	Name of work	"Supply, Installation, Commissioning, Training and Integration of 360 Degree Horizontal Field of View (HFOV) Full Mission Bridge Simulator with 05 years Comprehensive Annual Maintenance Contract at Deendayal Port, Kandla"	The tender document includes "Integration of 360 Degree Horizontal Field of View." Clarify if the required integration includes interfacing with existing DPA systems/simulators or purely internal integration between the simulator modules (Radar, ECDIS, Conning, etc.)?	This is new standalone system first of its kind in DPA.
10	41	Clause no.13 (H) Table of Section-II	<p><b>1.111</b> Power &amp; LAN Arrangements (Deendayal Port, Kandla Scope)</p> <p><b>1.113</b> Installation &amp; Consumable</p>	<p><b>Item 1.111:</b> "Power &amp; LAN Arrangements (Deendayal Port, Kandla Scope)".</p> <p><b>Item 1.113:</b> "Installation &amp; Consumable" (Supplier Scope). Please provide a clear line of responsibilities (who provides: LAN cables, power cables, conduits, patch panels, network switches, UPS batteries for long runtime?).</p>	The power upto common point will be provided by DPA further please refere clause no. 4 (c.) of Section-II, remaining requirement for functioning of system should be provided by contractor.

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
11	23	Clause No. 3 of Section-II	<p><b>Integrated Hardware &amp; Instruments:</b> The simulator must feature a hybrid interface that integrates actual marine-grade hardware with the virtual environment. <b>Navigational Instruments:</b> Must include functional, physical versions of a GPS, AIS (Class B), Echo sounder, Compass, and VHF radio.</p>	<p>We acknowledge this requirement. However, our simulator is designed with fully emulated GPS, AIS, Echo Sounder, Compass, and VHF Radio functionalities that are fully integrated into the simulation environment and comply with DNV Class A certification requirements. These emulated systems are based on standard Commercial COTS architecture and provide the required operational functionality for training and assessment purposes. In view of the above, we respectfully request the DPA to kindly confirm whether the requirement for "functional, physical versions" of the navigational instruments may be considered compliant if provided as fully emulated simulated equipment, while meeting the applicable DNV Class A simulator standards.</p>	<p>The DPA will accept fully emulated, software-driven versions running on dedicated, high-resolution touchscreen displays for the following instruments: GPS, AIS, Echo Sounder, Speed Log, and Wind/Environment Indicators. These emulations must match the exact graphical user interface (GUI) and operational sub-menus of real marine equipment and must be fully compliant with DNV Class A simulator standards. The VHF Radio, Propulsion &amp; Steering controls &amp; other emergency controls are the mandatory hardwares and such items to be provided.</p>
12	23	Clause No. 3 of Section-II	<p><b>Dual Bridge Controls:</b> The console must be equipped with interchangeable, independent control setups featuring a steering wheel, steering lever, engine telegraph, and thruster/joystick controls.</p>	<p>We acknowledge the above requirement. Our simulator is equipped with a steering wheel, steering lever, engine telegraph, and thruster/joystick controls that accurately replicate, or closely emulate, the functionality and operational characteristics of the corresponding equipment based on the applicable ship type. In this regard, we respectfully request the DPA to kindly clarify whether a standard simulator console incorporating all the specified control functions, without the need for physically interchangeable hardware control modules, would be considered acceptable, provided that it fully meets the required operational, training, and performance objectives of the simulator.</p>	<p>The tender condition prevails.</p>
13	23	Clause No. 3 of Section-II	<p><b>Sensor Interfacing:</b> A dedicated software bridge must be provided to integrate external equipment such as Anemometers and Inclometers.</p>	<p>We respectfully acknowledge the stated requirement. In this regard, we kindly request the DPA to confirm whether an equivalent simulator solution utilizing integrated software-based interfaces for sensors such as anemometers and inclinometers, in lieu of dedicated external physical equipment, would be considered acceptable, provided that it delivers the required functionality, operational performance, and full compliance with the tender specifications.</p>	<p>The tender condition prevails.</p>

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
14	24	Clause No. 4 (a) of Section-II	(a) The supplier shall impart training to respected department persons at DPA on operation of the Simulators. The training shall be imparted in a phased manner without disrupting the working of the Port DPA. The training will be conducted as and when software/hardware upgraded or any other parameters altered by the Manufacturer/Supplier. Periodical refresher training may need to be imparted.	We respectfully acknowledge the stated requirement and confirm that training shall be imparted whenever any software or hardware upgrades are implemented, in accordance with the tender provisions. With due respect, we kindly request the DPA to clarify the scope and duration of proposed refresher training.	The tender condition prevails.
15	42	Clause No. 14 (14.1.1 & 14.1.2) of Section-II	<p><b>(Payment Terms) 14.1.1:</b> If the supplier requests for advance, the request should be submitted in writing within 15 working days from the date of Work Order, <b>the request will be considered up to a maximum of 30% of the quoted price of simulator (Excluding CAMC) against the submission of irrevocable Bank Guarantee..</b></p> <p><b>14.1.2: The Supplier shall be paid 70% or remaining contract</b> (in case the supplier opted for advance) and 100 % (in case the supplier not opted for advance) value against Supply, Installation, Commissioning, Acceptance Testing, Training of 5 working days and putting in to operation of Simulators at designated place specified by DPA against the invoice subject to compliance and conformity, in full, with tender terms and conditions. DPA will, after verification, Certification &amp; approval from the member of the International Association of Classification Societies (IACS) make payment within Thirty days after the date of receipt of the claim, complete and correct in all respects together with necessary supporting document from the supplier.</p>	We respectfully acknowledge the stated Payment Terms. Considering the significant upfront investment required for procurement of COTS and hardware, we kindly request DPA to consider the below payment terms:  • 40% advance payment against submission of a Bank Guarantee.  • 30% payment upon procurement and shipment of COTS software and other hardware equipment.  • 30% balance payment upon successful installation, commissioning, acceptance testing, training, and handover of the simulator.	<p style="text-align: right;"><i>Handwritten note:</i> Tender condition prevails.</p>
16	—	General / Infrastructure	Furniture requirements.	Kindly confirm Furniture including instructor Table and instructor chair is under DPA scope.	Port will give only infrastructure and electricity connection upto common point, rest is under contractor's scope.

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
17	44, 30	Clause no.19 (1) & Clause no.11 of of Section-II	<p><b>19. Eligibility Criteria:</b> The Bidder shall be the Original Manufacturer (OEM) of a real Electronic Equipment Chart Display and Information System (ECDIS) used onboard seagoing vessels. The ECDIS equipment manufactured by the Bidder must be type-approved and widely accepted and installed on operational ships in the maritime industry.</p> <p><b>11.Ship Model Characteristics :</b> The Bidder must be a manufacturer of marine ship engines, with proven experience in engine manufacturing, commissioning, retrofitting, and propulsion system integration. This ensures in depth knowledge of:.....</p>	<p>As we are participating as authorized partners of Wärtsilä (the OEM), we request DPA to confirm that the technical credentials, manufacturing experience, and type approvals of our Principal/OEM will be fully considered to meet these eligibility criteria, provided a valid Manufacturer's Authorization Form (MAF) is submitted.</p>	<p>The bidder may use the work experience of OEM, but the remaining Pre-Qualification Criteria (PQC) and other requirement of tender should be fulfilled by the bidder alongwith submission of necessary manufacturer's authorization letter from OEM in favor of bidder.</p> <p>Either Authorized dealer 'or' OEM itself can bid, but both cannot bid simultaneously for the tender. The bidder should have legally enforceable undertaking jointly executed by himself and OEM of the simulators for satisfactory build, operate and maintain including all obligations as per technical, otherwise bid will be rejected.</p> <p>The remaining tender conditions are unaltered.</p>
18	6	NIT	Joint Venture: Not Allowed	<p>Since Joint Ventures are not allowed, please confirm that a "Sole Bidder" (authorized partner) can rely on the technical experience and "Similar Work" completion certificates of their Principal/OEM for qualification purposes.</p>	<p>Joint Venture not allowed. For work experience please refer clarification at sr. no. 17.</p>

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
19	42	Clause No. 14 (14.1.2) of Section-II	<b>14.1.2:</b> The Supplier shall be paid 70% or remaining contract (in case the supplier opted for advance) and 100 % (in case the supplier not opted for advance) value against Supply, Installation, Commissioning, Acceptance Testing, Training of 5 working days and putting in to operation of Simulators at designated place specified by DPA against the invoice subject to compliance and conformity, in full, with tender terms and conditions. <b>DPA will, after verification, Certification &amp; approval from the member of the International Association of Classification Societies (IACS) make payment</b> within Thirty days after the date of receipt of the claim, complete and correct in all respects together with necessary supporting document from the supplier.	IACS certification can be a time-consuming process. To ensure cash flow, we request that 90% of the payment be released upon successful Installation and Commissioning (SAT), and the remaining 10% be released upon submission of the IACS certificate.	Tender condition prevails.
20	42	Clause No. 14 (14.3.2) of Section-II	<b>14.3.2</b> The contractor has to maintain the equipment during the warrantee as well as CAMC 43 period. If any defect found during such period DPA will inform the contractor and the contractor has to take remedial action and rectify the defect within 3 days from the notification by DPA. Otherwise, a penalty of Rs. 20,000/- (Rupees Twenty Thousand only) per day per instance will be imposed on contractor till functioning of equipment and acceptance. Contractor has to pay the penalty amount to DPA otherwise the same will be adjusted against the retention money.	A 3-day window for specialized maritime hardware is extremely tight, especially if parts need to be imported. We request DPA to increase this "Grace Period" to 10 working days for hardware-related failures, while maintaining 3 days for software-only issues.	Tender condition prevails.
21	26	Clause no.8 of Section-II	<b>8. Functional Requirements:</b> The 360° HFOV Full Mission Bridge Simulator shall be utilized for training Pilots and officers of Deendayal Port, Kandla, in the following operations:.....	Can we offer other world class harbours, except Kandla as it will take development time?	Tender condition prevails.
22	27	Clause no.10 of Section-II	<b>10. Own Ship Models:</b> The simulator shall include realistic vessel models with accurate hydrodynamic and manoeuvring characteristics, capable of simulating:	Can we propose ship models in range of dimensions of requested ship models. We confirm that the Type of Ship will be the same for example A Bulk Carrier will behave like a Bulk carrier and A Car Carrier will behave like a Car Carrier, likewise for other models too. Stringent Mode dimensions may suit only one supplier.	Tender condition prevails.

Sr. No.	Page no.	Clause No.	Tender Clause	Pre-bid Queries	Pre-bid clarifications
23	33	Clause no.13 E (a) 3. of Section-II	3) A type approved ECDIS with 24" Display, The Bidder shall be Manufacturer of Electronic Chart Display and Information Systems (ECDIS) compliant with the latest IHO S-100 data framework. The ECDIS used in the 34 simulator shall be the Bidders own product to ensure seamless integration, update support, and cyber-secure data handling. Also, in future when S-100 requirement is officially released, the bidder must upgrade its ECDIS system integrated with the installed simulation system suite.	The S-100 compliance is optional as of now as per IHO and Mandatory by Jan 2029. Our K-SIM NAV and K-Bridge product lines, the long-term navigation roadmap is aligned with the IHO S-100 framework and IMO mandated implementation timelines. Therefore please allow us to Supply Our Standard ECDIS.  Note that we are actual OEMs for ECDIS	Accepted. the supplied simulator platform (e.g., K-Sim NAV) should be structurally forward-compatible with the S-100 framework (including S-101 ENCs and S-102 bathymetry data). And it should be as per the IMO and IHO standards.
24	34	Clause no.13 E (a) 11 of Section-II	Pilot Pro Unit including the hardware (11' Apple iPad Air)	Pilot pro is required for real operations more than the Training on Simulators. For the Purpose of Navigational Training of the Crew, Pilot pro is more than necessary increasing the cost and complexity while not fully realising the purpose of the project, therefore we request to make this optional.	Tender condition prevails.
25	37	Clause no.13 (H) Table of Section-II	1.49 RCIB Kit 1.50 LF-70R RG +-100 soldering, with cables 1.51 LF-70L RG +-100 soldering, with cables 1.57 NUC PC 1.98 NUC PC 1.101 RCIB Kit 1.65 Navi-Sailor 4000 Module 1.66 PC -Navisailor 1.71 Visualization Channel 6000 Module 1.103 Visualization Channel 6000 Module	We have our own standard server and best in class hardware which serves the purpose of Maintaining a healthy system with latest hardware as necessary, please allow us to offer that. Also please elaborate 1.49, 1.50, 1.51, 1.57, 1.98, 1.101. Note that we have our list of hardware which supports CAMC for our system and the ultimate objective of the hardware should be to upkeep the system rather than component level exact supply which maybe more of less depending on the supplier. Clause 1.65, 1.66 is again a Brand specific offering putting us at disadvantage, please allow us to offer our own. Clause 1.71, 1.103 - please elaborate.	Elaborated as under : RCIB Kit-The Remote Control Interface Board (an electronic PCB) LF-70R & LF-70L-(Right & Left Lever Controls)- for port engine/propeller NUC PC (Next Unit of Computing)-A very small, compact, mini-computer 1.65 & 1.66- Pls refer reply to query No 1 1.71 & 1.103-a software scope, hardware scope & Interfacing. Tender conditions prevails.

H.M.  
K.S.

*Handwritten signature*

*Handwritten signature*  
Sr. Dy. CAO

*Handwritten signature*  
Traffic Manager

*Handwritten signature*  
Deputy Conservator