

Statement of Requirements

European tender for a Full Mission
bridge simulator for STC Group
according to the public procedure

1 General

Tenderer will add product information (and additional descriptions if necessary) for the bridge simulators to be installed. This information must show that the requirements have been met.

This document should be included by Tenderer as appendix 4 -Functional System Description/Scope of delivery- allowing Contracting Authority to check the match with this Appendix, Statement of Requirements, paying particular attention to sections 6 and 7 of this document. If this does not match, this can be reason to exclude the Tenderer from the opportunity to win this tender.

The information provided in Appendix 4 shall include at least:

- Detailed description of the functionality of the offered simulator;
- Type of equipment and number delivered per classroom setup;
- All software and the number of licences delivered;
- Required power and data connections per classroom setup;
- Specifications for power and data connections per classroom setup;
- Dimensions of individual classroom setups.

A1	Tenderer agrees that they give explicit acceptance of the entirety of this schedule of requirements and other appendices (including the agreements and conditions) and that the tenderer automatically and explicitly states that it will comply with the conditions and requirements listed for the contract in the descriptive document and accompanying appendix (or appendices).
A2	Tenderer warrants that it can provide the services/products as described in the tender documents during the term of the (framework) agreement in the type and quality as requested in this tender.
A3	Tenderer guarantees that no child labor has been performed in the production of any of the services provided or in the materials and resources/products supplied for these services.

2 Administration

B1	Tenderer will receive a purchase order number for every contract. For each purchase order, Tenderer shall send a separate invoice stating the purchase order number.
B2	All invoices for the services provided must contain the following information at a minimum: • Invoice date; • Reference to the name and date of the (framework) agreement; • Customer purchase order number; • The following text (in Dutch) must appear for reference on quotations and invoices for delivery: <t.b.d.> • The delivery address of the service(s)/products; • The amount due excluding VAT; • The amount due including VAT; • The VAT amount.
B3	Tenderer shall digitally send the invoices to facturen@stc-r.nl
B4	For additional invoices and credit notes, the same rules apply as for invoices. Credit notes must also include the date, number and final amount of the invoice to which the credit note refers.
B5	The invoice shall be billed at maximum 40% in advance and minimum 30% after the successful completion of each individual site acceptance tests (SATs); the remaining part may be invoiced halfway after delivery.
B6	If the invoice is not in accordance with the provisions of requirements B1 to B5, Customer will not accept this invoice and will return it to Tenderer; should this occur, Tenderer will send a new invoice with an adjusted date to the Customer.

3 Delivery and personnel

C1	The work necessary for the full mission bridge simulators will take place at the date(s) and time(s) previously agreed to with Customer.
C2	Tenderer guarantees that their employees, or third parties engaged by them, will exercise confidentiality and secrecy in the performance of the work regarding all that is made known to them in the performance of the work.
C3	Tenderer will instruct any personnel they employ in this matter about health, safety and the environment.
C4	During the performance of the work, Tenderer's personnel must wear clothing that is clearly identifiable and uniformly representative of the contracting company.
C5	Personnel must adhere to any house rules applicable in the relevant building.
C6	Personnel must identify themselves to obtain access to Customers' premises.
C7	The costs of using paid parking facilities, including exemptions, are not to accrue to Customer. All other accommodation costs are also at Tenderer's expense.

4 Communication and SLA

D1	Tenderer will provide a permanent contact person for Customer throughout the duration of the agreement. In addition, Tenderer will provide permanent substitutes in the event of absence. Tenderer's contact person is to be reachable by phone between 8:30 a.m. and 5:00 p.m. (local Dutch time) on working days, and will respond to email within one (1) working day.
D2	The contact persons and personnel supplied by Tenderer and deployed on the Customers' project must have a mastery of either Dutch or English in both oral and written form.
D3	Tenderer will evaluate their services with Customer upon request. For this purpose, Tenderer will manage the scheduling and processing of the discussion in a report to be submitted to Customer within five (5) working days. In addition, Tenderer will ensure that the relevant management reports are digitally available prior to the evaluation.
D4	Such a management report is to consist of the following components at a minimum: • overview of the tasks performed; • overview of complaints and the manner of their handling.

5 Commercial

E1	Prices and rates offered by Tenderer must be set exclusive of VAT and inclusive of other taxes and/or levies. Prices must be set in euros. Rates quoted by Tenderer must be all-inclusive rates including all additional costs such as shipping and packing costs, overhead costs, administration costs, travel costs and accommodation costs.
E2	Other costs outside of rates specified will not be accepted during the duration of the contract. Costs involved in insuring against liability must also be discounted in the all-inclusive rates.
E3	Rates quoted for maintenance are fixed for at least the first two (2) years after the commencement date (fixed contract period). Subsequently, the quoted rates may be adjusted once each year, on 1 January, and for the first time on 1 January 2024, on the basis of the the CBS service price index ('CBS dienstenprijsindex (DPI)').
E4	Rates quoted for the delivery of the optional simulator in Stellendam are fixed for at least the first (1) year after the commencement date (fixed contract period). Subsequently, the quoted rates may be adjusted once each year, on 1 January, and for the first time on 1 January 2023, on the basis of the the CBS producer price index for branch C Industry ('CBS producentenprijsindex (PPI) – Bedrijfstak C Industrie').
E5	If Tenderer wishes to adjust the prices to any of the listed indexes under E3 or E4, it shall submit a written proposal with a substantiation to Customer no later than four (4) weeks before the price increase is implemented. When Customer establishes that the proposal corresponds to the aforementioned indexing, it shall give written approval for the rate adjustment so that it will apply to the next contract period.
E6	The price sheet may not be modified and must be fully completed and signed.

6. Simulator setup

The simulator setup must include delivery and installation of all required hardware and software to ensure fully functional systems that comply with the minimal requirements as listed in the following tables for:

- General functionality;
- Functionality for Instructor workstations;
- Functionality for Full Mission bridges
 - General
 - Class-A bridge setup
 - Class-B bridge setup
- Functionality for Fishing

6.1 General functionality

F1	Delivered simulator setup will be suitable for educational purposes.
F2	All equipment supplied will be suitable for the Dutch market, suitable for use within an educational environment, and must comply with all Dutch regulations, legal requirements, and standards.
F3	Tenderer will provide Customer with all manuals required for proper operation and first-line maintenance to Customer.
F4	The delivered simulator software must comply to and cover all individual (standard) requirements applicable to a Class A (NAV) bridge operations simulator as stated in the DNV Standard for Maritime simulator systems (DNV-ST-0033) Edition June 2021 or more recent.
F5	Minimum of 10 Areas, including at least: • Part of the North Sea • Rotterdam port; • Two additional Dutch ports; • Dover Strait/English Channel; • Singapore Strait.
F6	Minimum of 10 Own ships, including at least: • Only conventional propulsion with both 1 and 2 propellers; • The presence of bow and/or stern thrusters; • The bridge located fore and/or aft; • Different lengths; • A conventional Tug; • Fishery vessels.
F7	Minimum of 20 Target ships or objects.
F8	Additional Search and rescue (SAR) targets to practice responding to emergencies and to distress signals, such as a SART and a lifeboat, life raft or Man Overboard (MOB) as listed in DNV-ST-0033 in Table 3-5, item 3.1.3.

6.2 Instructor workstations

G1	The delivered instructor workstation must comply to the requirements for 'Facilities for the instructors' as set by the Netherlands Shipping Inspectorate (NSI) in the Guideline for Maritime simulators.
G2	In case more than one simulator is connected to a single instructor station: Functionality to create (exercise) setups - configurable by instructors - allowing: • All student workstations acting in the same exercise can be at the same location in the area without seeing each other ('separate' ownships); • All student workstations acting in the same exercise can interact with each other in the area.
G3	A CCTV system to allow to both visually monitor the actions of students and to follow the conversations taking place in the simulator room(s) during the exercise.
G4	The possibility to debrief an exercise after it has been run.
G5	The possibility to save exercises conducted by students for examination purposes.
G6	The possibility to control individual lights, shapes and sound signals of targets, according to "rules of the road".
G7	The possibility to control/activate own ship (engine) and environmental sounds from the instructor.
G8	The delivery of a set of speakers with the possibility to plug in a separate headset.
G9	The possibility to connect to and project the instructor screen on a separate smartboard or projector, provided by Customer.

6.3 Full Mission bridges

The functionality required for a full mission bridge can be divided into general items that are always required and into requirements to the requested specific setups, being either a Class A or Class B simulator.

6.3.1 General

The following requirements are true for any bridge setup, independent of it being a Class A or Class B setup.

ID	Description	Remark
H1	The connection to and interfaces for two (2) separate ECDIS systems from third parties (supplied by Customer). This should include both sensor/NMEA data as well as IAS.	Implementation of DNV-ST-0033, Table 3-3, item 1.1.13
H1a	Customer will supply the computers and a KVM-switch for these ECDIS; Tenderer will supply a single (1) monitor that is the same as used for RADAR and other screens.	-
H2	Controls for propulsion plant operations, including engine telegraph and thrusters. There shall be controls for at least two (2) propellers and both bow and stern thrusters.	Additional to DNV-ST-0033, Table 3-3, item 1.1.2
H3	No full GMDSS suite is to be delivered as part of the solution.	Exemption to DNV-ST-0033, Table 3-3, item 1.1.10
H3a	Two (2) VHF radio's instead of one (1) with at least one (1) physical handset.	Additional to DNV-ST-0033, Table 3-3, item 1.1.11 Implementation of NSI Guideline for Maritime simulators, Table 4.3, item I
H4	Fire detection panel with different zones, fire alarm and general alarm buttons.	Additional to DNV-ST-0033, Table 3-3, item 1.1.19 Implementation of NSI Guideline for Maritime simulators, Table 4.3, item P
H5	Engine alarm panel.	-
H6	Control of Day symbols.	-
H7	Navtex instrument.	-
H8	A screen to the rear of the bridge showing a visual view towards the stern of a vessel.	Additional to DNV-ST-0033, Table 3-5, items 3.1.9 and/or 3.1.11

H9	Two (2) independently operable radar/ARPA displays	Additional to DNV-ST-0033, Table 3-3, item 1.1.9
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6.3.2 Class A setup

The following requirements are true for a Class A setup only.

ID	Description	Remark
I1	Full Mission bridge configurations complying to Bridge Operations Class A requirements as described in DNV Standard 33 (DNV-ST-0033) with exceptions or additions as listed below.	-
I2	No full GMDSS suite is to be delivered as part of the solution.	Exemption to DNV-ST-0033, Table 3-3, item 1.1.10

6.3.3 Class B setup

The following requirements are true for a Class B setup only.

ID	Description	Remark
J1	Full Mission bridge configurations complying to Bridge Operations Class B requirements as described in DNV Standard 33 (DNV-ST-0033) with exceptions or additions as listed below.	-
J2	Controls of propulsion plant for mooring operations. By any method, it shall be possible to observe the ship's side and the dock during operation of such controls.	Additional implementation of DNV-ST-0033, Table 3-3, item 1.1.4
J3	Controls of auxiliary machinery. There shall be controls for at least two auxiliary engines, including electric power supply control.	Additional implementation of DNV-ST-0033, Table 3-3, item 1.1.5
J4	No full GMDSS suite is to be delivered as part of the solution.	Exemption to DNV-ST-0033, Table 3-3, item 1.1.10
J5	The simulator shall provide capabilities for realistically conduct anchoring operations by any method.	Additional implementation of DNV-ST-0033, Table 3-4, item 2.1.13
J6	The simulator shall provide capabilities for realistically simulate the function of mooring.	Additional implementation of DNV-ST-0033, Table 3-4, item 2.1.14
J7	The visual system shall replicate movements of own ship according to 6 degrees of freedom.	Additional implementation of DNV-ST-0033, Table 3-5, item 3.1.6

J8	It shall be possible to use binocular systems for observations.	Additional implementation of DNV-ST-0033, Table 3-5, item 3.1.8
J9	The visual system shall show mooring and towing lines with sufficient realism in accordance with the forces effecting the tension.	Additional implementation of DNV-ST-0033, Table 3-5, item 3.1.14
J10	The visual system shall provide a realistic set of flue gas emission and waving flag effect in accordance with ships power output, speed and weather conditions.	Additional implementation of DNV-ST-0033, Table 3-5, item 3.1.16
J11	The simulator shall be capable of providing environmental sound according to conditions simulated.	Additional implementation of DNV-ST-0033, Table 3-5, item 3.1.17

6.4 Functionality for Fishing

The following requirements are true for any optional additional Fishing functionality

ID	Description	Remark
K1	The model shall realistically simulate own ship hydrodynamics when fishing equipment is being used.	General functionality
K2	The effects of fishing is visible in fuel consumption of the vessel.	
K3	The seabed is modelled in high detail allowing for the conducting of realistic fishing operations with equipment on or near the bottom.	General functionality
K4	Different fishing methods can be trained. These may include: • Pelagic trawl; • Beam trawl/'boomkor'; • Flyshoot; • Twinrig/ double bottom trawl.	General functionality
K5	Additional Own ships, covering at least the Fishing vessels being simulated.	General functionality
K6	It is possible for an instructor to add shoals of fish in an exercise .	Instructor functionality
K7	It is possible for an instructor to add obstacles on which nets may get caught.	Instructor functionality

K8	Fuel consumption indication.	Bridge functionality
K9	Equipment is available on which students can find fish.	Bridge functionality
K10	Equipment is available on which students can control and monitor fishing gear and winches, including the display of line tension, payout and speed.	Bridge functionality
K11	A display to observe the fishing gear in both top and side views during the catching operations. The shoals of fish and the bottom, with obstacles, shall also be displayed.	Bridge functionality
K12	Students can set the correct navigation lights and day symbols related to the fishing operation.	Bridge functionality
K13	The visual system shall include all relevant visual effects, such as: • Fishing gear, including wires and chains; • Pay out of fishing equipment; • Doors in water; • Hauling in fishing equipment.	Bridge functionality

7. Installation

L1	Tenderer is responsible for the proper technical and functional installation of the bridge simulators so that they operate in accordance with the required functionalities.
L2	Tenderer's personnel will provide clean and separated packaging material to the Customer after installation. Customer will later dispose of this.
L3	Tenderer's personnel shall not make any changes to the technical installations, furniture, or rooms without consultation with and approval by Customer.
L4	Customer is responsible for the installation of the required power and data connections. For this, Tenderer must supply to Customer the relevant required information well in advance and after sufficient consultation.
L5	Customer is responsible for the presence of any necessary furniture.

8. Acceptance and handover of classrooms

M1	At each separate location, a Site Acceptance Test (SAT) will be conducted after a complete installation of the simulator(s). Each SAT will be conducted in the presence of authorized representatives from both Tenderer and Customer.
M2	A SAT shall include at least: verification of the delivery of all hardware and software components and documentation; tests of correct system operations at the individual level through the use of clear procedures; and documentation of the status of all test and checks and a possible list of discrepancies.
M3	Tenderer is responsible for preparing SAT procedures and documentation and will present this for approval to Customer. Only after approval of the procedure and documentation by Customer can it be used to conduct the SAT.
M4	A SAT is successfully completed only if all tests have only positive results or if any remaining discrepancies are minor - i.e. they do not influence correct and normal day-to-day operations. Tenderer will make sure any remaining discrepancies are resolved in accordance with the contract and in close collaboration with Customer.
M5	After successful completion of a SAT at location, the simulator(s) at this location is handed over to Customer.

9. Training course

N1	Tenderer will provide a single hands-on training course to Customers' employees to ensure the trainees are able of properly operating the delivered simulators and its instructor functionality.
N2	The training course will cover all software and hardware modules delivered by Tenderer.
N3	The training course will be conducted at the location in Katwijk with a maximum of eight (8) trainees.
N4	The training course will have a duration of at least five (5) days.
N5	The training course will be provided only by qualified and certified instructors.
N6	Tenderer will provide all required course material, such as course manuals, handouts, presentations and other supporting documents. These will also be made available in digital format at the end of the course and shall be in either Dutch or English.
N7	After successful completion of the training course, trainees will be issued with a certificate stating they are capable of operating the simulator properly.
N8	Customer's employees taking part in the training course will be experienced seafarers. Most will also have experience in working on Fishery vessels.

10. Warranty

O1	The delivered simulators all have a lifetime warranty on software of at least five (5) years.
O2	The delivered simulators all have a lifetime warranty on non-simulator-specific hardware of at least one (1) year.
O3	Tenderer warrants that parts or equivalent replacement parts (simulator-specific hardware) for the simulators will be available for at least ten (10) years after the delivery date.
O4	If a simulator is replaced under warranty, the replacement simulator must have the same or better specifications.
O5	Tenderer will ensure warranty registration and support from the manufacturer, and will deal with warranty issues on behalf of Customer (make use of the warranty, deliver replacement equipment/parts).
O6	In the event of repair (under warranty), only original parts supplied by the manufacturer with at least the same quality and service life are to be used. After repair, the agreed warranty period for the entire product will remain unchanged.
O7	The costs of warranty processing, advice, and spare parts specifically for simulator hardware (both in and out of warranty periods) are included in the all-inclusive maintenance rate (assuming all damage occurs in course of normal use).

11. Maintenance contract

P1	Tenderer will replace malfunctioning parts or deliver spare parts for any simulator-specific hardware that is not covered by Customer's responsibility. Simulator-specific hardware includes hardware that is specifically manufactured for/by the Tenderer and its specific simulator system.
P2	Tenderer will provide simulator software update releases on at least a yearly basis. After an update, the functionality of the simulator shall be the same or better when compared to the functionality before the update.
P3	The time and place of execution of maintenance or updates will always be conferred with and agreed upon by Customer before it takes place. Normal operations may not be influenced or hindered by these activities.
P4	Tenderer will work in cooperation with and assist the ICT department of Customer in implementing a remote connection to each individual simulator setup if such a remote connection is required.
P5	First-line maintenance of the simulators will be performed by Customer employees. Tenderer will be contacted if Customer employees cannot resolve the initial issue. This first-line maintenance will consist only of standard fault-finding in computer hardware or faulty (cable) connections. All other issues will be communicated with and be the responsibility of Tenderer.
P6	Tenderer must have a Dutch or English-language support desk that is available on weekdays from 8:00 a.m. to 5:00 p.m. (Netherlands time) for authorized employees of the contracting authority. The support desk must be reachable by telephone and e-mail.
P7	If authorized employees of the Customer contact the support desk, the correct person will either be on the line within ten (10) minutes or will return the call when the question is answerable, i.e., by an employee with substantive knowledge of the matter who can assist the contracting authority.
P8	The support desk is to take incidents (events that are not part of the standard operation of a service and that cause or can cause an interruption or reduction of the quality of the service) and request information about them, register them, initiate action to deal with the incidents, make inquiries into the incidents, and monitor the processing time of their handling.
P9	Customer will determine the classification of an incident. Tenderer may assume that incident reports are classified in accordance with the agreements made on this matter and as included in table 1. Tenderer may always advise the person making the report concerning the proper classification thereof.

P10	Tenderer shall respond to incident reports with the response and repair times as stated in table 1. Priority 1 (critical) and priority 2 (medium) incidents are to be regarded as clock hours (irrespective of whether or not they occur during office hours); priority 3 incidents (low classification) are to be considered office hours. Repair time applies to software-related problems. In the event of problems with hardware, an appropriate response time will be agreed to in accordance with Tenderer.
P11	Prior to shipment, Tenderer will coordinate the shipment of replacement or spare parts for simulator-specific hardware Customer to ensure that the shipment arrives at the correct location. Furthermore, each shipment shall contain a shipping note and clear replacement instructions.

Table 1

Priority	Classification	Impact	Response time (working hours)	Repair time (working hours)
1	Critical (high)	The incident disrupts the principal business processes of Customer, or has the potential to disrupt the primary business process.	95% < 2 hour	80% < 4 hour 95% < 6 hour
2	Medium	The incident disrupts part of the functionality.	95% < 4 hour	80% < 8 hour 95% < 12 hour
3	Low	The incident does not interfere with the functional application of the simulator.	To be agreed	To be agreed