GRONINGEN SEAPORTS

Annex 04

	score
NO SUPPORT	0
THIRD-PARTY	1
DEVELOPMENT	2
PARTIAL SUPPORT	4
FULL SUPPORT	5

		max score
ESSENTIAL	These requirements have to be met, or tenderers will be excluded	0
REQUIRED	These requirements are highly valued and scored: 0-5 x 2	500
DESIRABLE	These requirements are benificial and scored 0-5 x 1	55
	total score	555

Tenderers who are not able to deliver this/these item(s) wil be excluded

ITEM	CATEGORY	SUB-CATEGORY	REQUIREMENT	DESCRIPTION	WEIGHTING	
1	**CORE**	**CYBER**	**CATEGORY OBJECTIVE**	**The system and its supporting processes must, at minimum, meet the relevant information security and data protection requirements outlined in this section. The supplier should provide assurance that the system and its supporting processes meet that requirement.**		
1.1	CORE	CYBER	Authentication	System administrative access will be non standard account names (no root or administrator accounts). All accounts should have passwords with a minimum length of 10 characters and support TOTP multi-factor authentication	ESSENTIAL	
1.2	CORE	CYBER	Backup	The system will be easily recoverable, with detailed backup and recovery procedures documented. Common recovery scenarios will be detailed and covered with a focus on recovery to another site detailed. The customer's preferred solution is Veeam.	ESSENTIAL	
1.3	CORE	CYBER	Base builds	The system components (servers, workstations etc.) should all be built from a secure/hardened baseline, such as those provided by the Center of Internet Security (CIS) or equivalent. System hardening best practices, such as disabling unneeded services, are applied.	ESSENTIAL	
1.4	CORE	CYBER	Cyber incidents	The supplier should be able to commit to supporting any investigations into any cyber related security issues or incidents.	REQUIRED	1
1.5	CORE	CYBER	Cyber Standards Assurance	The supplier should provide assurance that the systems they use meet high levels of information security and data protection with evidence of their compliance with supporting standards: ISO 27001, ISO 27002, ISO 27002, GDPR, NIS2, Havenbeveiligingsweg	REQUIRED	1
1.6	CORE	CYBER	Compliance	Supplier will at all times satisfy the Information Security Policy & Standards of Groningen Seaports. The Information Security Policy & Standards will be dispatched on request. Supplier must ensure that its suppliers likewise satisfy the Information Security Policy & Standards of Groningen Seaports. If Supplier cannot or can only partially satisfy the Information Security Policy & Standards of Groningen Seaports, Supplier must inform Groningen Seaports of this in writing. Supplier will ensure that the deviations are corrected within a reasonable period to be agreed in consultation.	REQUIRED	1
1.7	CORE	CYBER	Logging and monitoring	The supplier's systems should be designed to integrate into an enhanced system monitoring and security operations centre (SOC) via common log capture means, such as SYSLOG or SNMP.	REQUIRED	1
1.8	CORE	CYBER	Event management	Critical and important system events should be logged and reportable. To include, but not limited to, system integrity status, user logon and logoff events, user acess events, administrative access events, unauthorised user access attempts, configuration changes, abnormal behaviour etc.	REQUIRED	1
1.9		CYBER	Event management	The functionality to send a selection of events, based on a configurable filter, to a pager (SMS) and email should be available.	REQUIRED	1
1.10	CORE	CYBER	Patching and upgrading	The systems, and the infrastructure and operating systems on which they operate, will be designed to be easily patched and upgraded without significant cost. Patches must include all latest security updates.	ESSENTIAL	
1.11	CORE	CYBER	Patching and upgrading	At least once a year, the supplier provides evidence that the system is up-to-date in regard to security patching, upgrades and that no medium risk (or higher) security vulnerabilities are present in the system.	ESSENTIAL	
1.12	CORE	CYBER	Patching and upgrading	Security patches and updates are installed and enabled within three months after becoming available.	ESSENTIAL	
1.13	CORE	CYBER	Remote access	The supplier should be able to commit to carrying out support from a bastion server or jump box. Direct access into the network from the support VPN will be restricted down to least access possible.	REQUIRED	1

1.14	CORE	CYBER	Remote access authentication	The supplier should be able to commit to utilising the customer supplied secure VPN with named accounts and be able to support the customer's multi-factor authentication solution, which requires each named account to be associated with a mobile telephone number.	REQUIRED	1
1.15	CORE	CYBER	Remote access devices	The supplier should be able to commit to carrying out support over a customer supplied secure VPN. VPN access will be subject to client security checks such as IP-whitelisting.	REQUIRED	1
1.16	CORE	CYBER	Audit	Groningen Seaports is entitled to perform an audit twice yearly on the provided system and/or services which are delivered. Groningen Seaports ensures seven days before the start of the intended audit that it informs Supplier that an audit has been planned. For this audit, Supplier shall make available all documentation, as well all supply supplementary data which are necessary for the performance of the audit. Groningen Seaports is entitled to have the audits performed (partially) by independent experts. Every investigation as referred to in this article is of a confidential character and is confined to that which is important for the check or audit. The expenses of the check or audit are payable by Groningen Seaports, unless the check or audit shows that the expenses should reasonably be payable by Supplier.	REQUIRED	1
2	**CORE**	**SYSTEM DESIGN**	**CATEGORY OBJECTIVE**	**The complexity of the customer's site means that a certain amount of the interconnecting infrastructure will be in place for the supplier to utilise. Additionally, the customer expects the supplier to use best-of-breed hardware and ensure specifications are suitable for now and the future.**		
2.1	CORE	SYSTEM DESIGN	Documentation	The system should be well documented, with detailed network diagrams, data flows with individual system and server role documentation provided. The importance of data sources within the system should be documented and classified, with relevant access to data limited and documented.	REQUIRED	1
2.2	CORE	SYSTEM DESIGN	Availability	The system is suited to provide a high availability: is continuously available. Unavailability of the system are very seldom events (once per year) and lasts a short time (order of magnitude is seconds). The supplier takes appropriorate measures (like redundancy) that result in a system that is capable of operating in this high availability environment. De supplier provides evidence that the system is capable to provide a high level of availability.	REQUIRED	1
2.3	CORE	SYSTEM DESIGN	Networking	The supplier will be expected to utilise the dedicated fiber-optic network infrastructure, that is available on-site, to interconnect the components of the system. A VPN connection is provided by the customer to allow remote access for management purposes.	ESSENTIAL	
2.4	CORE	SYSTEM DESIGN	Resilience	The system should be designed so as to remain operational at all times without interruption.	ESSENTIAL	
2.5	CORE	SYSTEM DESIGN	Resilience	The system provides failover capabilities between sites where loss of building access requires VTS to be run from a backup centre;	ESSENTIAL	
2.6	CORE	SYSTEM DESIGN	Resilience	The system has no single point of failure within system design.	ESSENTIAL	
2.7	CORE	SYSTEM DESIGN	Resilience	The system provides seamless failover between servers where one develops a fault or needs to be updated or upgraded.	ESSENTIAL	
2.8	CORE	SYSTEM DESIGN	Workstations	The system provider will confirm their ability to support multiple workstations, currently arranged as follows:	ESSENTIAL	
2.9	CORE	SYSTEM DESIGN	Workstations	Workstation specification: - 2 workstations in the HCC Delfzijl - 1 workstation Delfzijl for backup, maintance, traning and replay - 2 workstations in the back-up HCC Eemshaven	ESSENTIAL	
2.10	CORE	SYSTEM DESIGN	Workstations	The system includes 4 workstations for supporting the live operation and 1 additional workstations supporting adhoc duties, training, emergency coordination etc.	ESSENTIAL	
2.16	CORE	SYSTEM DESIGN	IALA Compliance	The system should support compliance in accordance with IALA Standard S1040 ams S1010, most specifically IALA Recommendation R0128 (V-128) Operational and Technical Performance of VTS Systems, and Guideline 1111 Preparation of Operational and Technical Performance Requirements for VTS Systems. System availability follows IALA Guideline G1035	REQUIRED	1
2.17	CORE	SYSTEM DESIGN	User interface	The system interface will employ common user experience best practices, offering a high standard of usability and intuitivity, applying consistency of use across all functions. The customer may execute user-acceptance testing to validate the system interface.	DESIRABLE	
2.18	CORE	SUPPORT	Change management	The system interface will employ common user experience best practices, offering a high standard of usability and intuitivity, applying consistency of use across all functions. The customer may execute user-acceptance testing to validate the system interface.	REQUIRED	1
2.19	CORE	AUTHENTICATION	Multi-factor authentication	The system should support multi-factor authentication for all accounts. Accountmanagement allows to configure MFA as mandatory for all accounts.	REQUIRED	1
3	**VTS**	**HARDWARE & INTEGRATION**	**CATEGORY OBJECTIVE**	**The customer has a significant amount of existing hardware and a number of existing systems that the system will need to interface with.**		

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3.1	VTS	HARDWARE & INTEGRATION	Antenne integration	The system manufacturer can confirm their ability to integrate with the following Antennes: - RS 7 type CHL 22ft scanner with horizontal polarization - RS 4 Type CHL 22ft scanner with horizontal polarization The turning untis of these antennes must be replaced	DESIRABLE		1
3.2	VTS	HARDWARE & INTEGRATION	AIS integration	The system manufacturer can confirm their ability to integrate with the following AIS base stations: - Delfzijl: Kongsberg AIS BS 610 - Eemshaven: Kongsberg AIS BS 610	DESIRABLE		1
3.3	VTS	HARDWARE & INTEGRATION	VHF integration	The system manufacturer can confirm their ability to integrate with the existing VHF system for an integrated playback solution VHF system: Omnitronis RediTALK-Flex 3 VHF channels	ESSENTIAL		
3.4	VTS	HARDWARE & INTEGRATION	Met/Hydro integration	The system manufacturer will confirm their ability to integrate with the existing meteorological and hydrological system. The data of the sensors are availbe as a serial message	REQUIRED	1	
3.5	VTS	HARDWARE & INTEGRATION	PCoIP	The system manufacturer will confirm their ability to supply hardware designed to support PC over IP (PCoIP) so as to: ◦ Allow for the operational workstations to be kept centrally in the server room(s); ◦ Allow PCoIP terminal devices in the operational centre to connect to any of the operational workstation. The PCoIP hardware will: ◦ Support a minimum of 2 monitors (each with a chart displayed and compatible with overlaying RADAR data); ◦ Enable control over USB access. ◦ Include server card and client cards from the same manufacturer.	ESSENTIAL		
4	**VTS**	**ADMINISTRATION**	**CATEGORY OBJECTIVE**	**The system will provide functionality that allows a superuser to manage the display, including updating the ECDIS, adding custom information to the chart, managing reporting lines and acquisition, managing users and accessing offline recordings.**			
4.1	VTS	ADMINISTRATION	Custom layers	The system will allow an administrator to create custom overlays for the ECDIS chart, where objects such as buoys or warnings can be placed.	REQUIRED	1	
4.2	VTS	ADMINISTRATION	Virtual AToNs	The system will support the creation and administration of virtual aids to navigation.	REQUIRED	1	
4.3	VTS	ADMINISTRATION	ECDIS updating	The system will allow an administrator to manage ECDIS charts from a web portal, including being able to see the active version on each operator station, upload new ECDIS charts, and deploy a new or previous version to individual operator stations.	REQUIRED	1	
4.4	VTS	ADMINISTRATION	Reporting lines	The system will support the creation of reporting lines on a chart	DESIRABLE		
4.5	VTS	ADMINISTRATION	Automatic acquisition	The system will allow an administrator to create a polygon area on a chart that, when entered by a return on the radar overlay, will automatically acquire the return as a target.	ESSENTIAL		
4.6	VTS	ADMINISTRATION	Radar blanking	The system will allow an administrator to create a polygon area on a chart that defines an area for which no radar overlay should be shown.	ESSENTIAL		
4.7	VTS	ADMINISTRATION	Radar track control	The system will allow an administrator to create a polygon area on a chart that defines an area for which specific radars sites should track radar returns, or for the system to manage the intended functionality automatically.	REQUIRED	1	
4.8	VTS	ADMINISTRATION	Chart lines	The system will allow an administrator to create multi-point lines on a chart that provide additional information, such as channel lanes and centre lines.	REQUIRED	1	
4.9	VTS	ADMINISTRATION	Offline recordings	The system will allow an administrator to retrieve a generated offline recording from a web portal.	REQUIRED	1	
5	**VTS**	**CHARTING**	**CATEGORY OBJECTIVE**	**The system will allow the operator to customise the chart so it only shows information relevant to them at that point in time.**			
5.1	VTS	CHARTING	Displaying ECDIS	The system will be able to utilise ECDIS charts and conform to the standards the format imposes and support any applied encryption.	ESSENTIAL		
5.2	VTS	CHARTING	ECDIS colouring	The system will allow an operator to adjust the colouring of the ECDIS chart. Quick setting to nightmode	REQUIRED	1	

5.3	VTS	CHARTING	ECDIS layers	The system will allow an operator to adjust, in detail, the layers visible on the ECDIS chart.	REQUIRED	1
5.4	VTS	CHARTING	Buoy information	The system will allow an operator to be able to easily see the characteristics of the buoy, e.g by hovering over.	REQUIRED	1
5.5	VTS	CHARTING	ECDIS version	The system will allow an operator to view the version of the ECDIS chart currently installed.	DESIRABLE	
5.6	VTS	CHARTING	Chart text/icons	The system will allow an operator (system user), groups or roles, depending on permissions, to add text and icons to the chart.	REQUIRED	1
5.7	VTS	CHARTING	Custom views	The system will allow an operator to customise the visibility of the various types of map elements and the notification of the various types of alerts.	REQUIRED	1
5.8	VTS	CHARTING	Bearing and length lines	The system will allow an operator to draw a line on the chart between two points and show bearing and distance.	ESSENTIAL	
6	**VTS**	**DISPLAY**	**CATEGORY OBJECTIVE**	**The system will overlay the chart with key information, providing an integrated traffic picture with supporting environmental parameters.**		
6.1	VTS	DISPLAY	Radar return	The system will allow an operator to overlay a radar display onto a chart.	ESSENTIAL	
6.2	VTS	DISPLAY	Radar return customisation	The system will allow an operator to select which colour the radar returns on vessels are displayed in, including green, as a minimum.	REQUIRED	1
6.3	VTS	DISPLAY	Displaying multi-radar returns	The system will allow an operator to display radar from a number of sites simultaneously.	ESSENTIAL	
6.4	VTS	DISPLAY	Associating radars to views	The system will allow an operator to select the radar site to be utilised for coverage of a given view.	REQUIRED	1
6.5	VTS	DISPLAY	Floating windows	The system will allow an operator to view a part of the chart, and its associated tracks and radar overlay, in a floating window above the main chart. It will be possible to display at least 3 floating windows on a single screen.	REQUIRED	1
6.6	VTS	DISPLAY	Moving around	The system will allow operators to pan and zoom the charts using intuitive on-screen controls.	DESIRABLE	
6.7	VTS	DISPLAY	Preset views	The system will allow an operator to predefine and store a configured view of the chart (pan and zoom) which can then be retrieved for viewing as desired. Multiple pre-configured views will be supported.	DESIRABLE	
6.8	VTS	DISPLAY	Saved user state	The system will store the current state of the display (including selected views) against the current operator's login, so that when they next access the system it is already customised to their preference.	REQUIRED	1
6.9	VTS	DISPLAY	Met/Hydro	The system will allow operators to display metrological and hydrographical inputs, including current and historic data for up to 24 hours. This information will be displayed in an appropriate graphical format, e.g. appropriate graphs and wind rose.	DESIRABLE	
6.10	VTS	DISPLAY	Saved user state	The system will allow an operator to store the current state of the display against a profile. It will be possible to select a profile at logon to support accessing the system under a variety of roles.	DESIRABLE	
6.11	VTS	DISPLAY	Displays	Each operator workstation will support up to 2 VTS displays, all displaying all available elements.	REQUIRED	1
6.12	VTS	DISPLAY	Units of Measurement	The system will allow an operator to choose which unit of measurement (feet, metres, nautical mile, kilometre etc.) for display throughout the system.	ESSENTIAL	
6.13	VTS	DISPLAY	Manual Radar tuning	The system will support manual tuning of the radar , including the ability to create profiles of common settings.	REQUIRED	1
7	**VTS**	**TRACKING**	**CATEGORY OBJECTIVE**	**The system's primary function is the tracking of vessels, which it must do with maximum precision utilising the sensor information available.**		
7.1	VTS	TRACKING	Tracking radar returns	The system will allow an operator to acquire a return on the radar overlay as a target and, once acquired, follow the target and identify it using a track box.	ESSENTIAL	
7.2	VTS	TRACKING	Tracking small vessels	The system will allow an operator to reliably track smaller vessels such as yachts, which may not be generating an AIS output.	ESSENTIAL	

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7.3	VTS	TRACKING	Viewing track information	The system will allow an operator to click on a target and view details to include but not limited to: name, callsign, latitude, longitude, speed and course over ground, draught, ship note, length, width, MMSI, rate of turn, closest point of approach, time to closest point of approach, range and bearing of a target (depending on the availability of such information from the AIS or VTMIS as applicable).	REQUIRED	1
7.4	VTS	TRACKING	Viewing AIS information	The system will allow an operator to view all available AIS information for any AIS-identified target.	REQUIRED	1
7.5	VTS	TRACKING	Naming tracks	The system will allow an operator to enter a short name for a radar target to be displayed with the track box.	REQUIRED	1
7.6	VTS	TRACKING	Controling the positions of names	The system will allow an operator to control the position of the name box against a radar target in order to manage on-screen information in busy areas.	REQUIRED	1
7.7	VTS	TRACKING	Course and speed	The system will draw a solid line from the track box to visualise the course and speed over ground for the time-span specified by the operator.	ESSENTIAL	
7.8	VTS	TRACKING	Ship head	The system will draw a dotted line from the track box to visualise a vessel's heading. the time-span specified by the operator.	REQUIRED	1
7.9	VTS	TRACKING	History	The system will draw a dotted history of the vessel track over a period of time defined by the operator.	REQUIRED	
8	**VTS**	**ALERTING**	**CATEGORY OBJECTIVE**	**The system will provide key alerts to the operator in such a way that is non-intrusive and does not impact the normal operation of the system.**		
8.1	VTS	ALERTING	Attracting attention	The system will, where an alert is high priority and relates to a particular vessel, attract the operator's attention to the associated track box.	DESIRABLE	
8.2	VTS	ALERTING	Alert priorities and methods	The system will support the prioritisation of alerts with a variety of different alerting methods. It will be possible to configure a different style, format and method of alert depending on its severity.	DESIRABLE	
8.3	VTS	ALERTING	Close quarters	The system will raise an alert if two targets are on course to come within a distance of each other as defined by the operator.	REQUIRED	1
8.4	VTS	ALERTING	Dragging anchor	The system will raise an alert if an acquired target moves a set distance from a position (anchor circles, etc), as defined by the operator.	REQUIRED	1
8.5	VTS	ALERTING	Speeding	The system will raise an alert if an acquired target exceeds a configured speed limit for the area.	REQUIRED	1
8.6	VTS	ALERTING	Exempt vessels	The system will support the exemption of nominated vessels from alerts of certain types, e.g. speeding alert for pilot launches.	REQUIRED	1
9	**VTS**	**PLANNING**	**CATEGORY OBJECTIVE**	**The system will provide supporting information to the operator to assist in planning safe passage and adherence to regulations.**		
9.1	VTS	PLANNING	Routes	The system will allow an operator, group or role, depending on permissions, to add multi-point lines on a chart that define a route that a vessel might take.	REQUIRED	1
9.2	VTS	PLANNING	Sailing plans	The system will allow an operartor to create a custom multi-point line (sailing plan) for a particular vessel.	REQUIRED	1
9.3	VTS	PLANNING	ETA	The system will allow an operator to visualise the estimated time of arrival of a selected target at a particular waypoint on a designated route or sailing plan.	REQUIRED	1
10	**VTS**	**REPLAYING**	**CATEGORY OBJECTIVE**	**To meet the customer's investigative powers, the system will record all activity in a way that allows for replay of the data as well as the active display.**		
10.1	VTS	REPLAYING	Recording	The system will record the following raw data and will not be reliant on screen grabs: ◦ radar data ◦ track data ◦ meteorlogical data ◦ hydrographical data ◦ AIS data - VHF	ESSENTIAL	

10.2	VTS	REPLAYING	Playback	The system will allow an administrator to accurately play back raw data, as well as the integrated VHF audio, meteo and hydro for a defined time period within the previous 30 days. The system will allow the administrator to control the display during playback in the same way an operator can control the live display.	ESSENTIAL	
10.3	VTS	REPLAYING	Recording	The system will allow an administrator to playback live screen recordings from the operator within the previous 7 days	REQUIRED	1
10.4	VTS	REPLAYING	Alerting	The system should display any alerts which may have been displayed to be displayed at the same point in the play back.	REQUIRED	1
10.5	VTS	REPLAYING	Audio	The system will allow for the selection of individual VHF audio channels to be heard during play back. The VHF audio (transmission and reception) will be merged during play back.	REQUIRED	1
10.6	VTS	REPLAYING	Storage	The system will support a secondary storage location for the archiving and retrieval of recordings.	ESSENTIAL	
10.7	VTS	REPLAYING	Offline recordings	The system will allow an operator to generate an offline recording of what the operator sees and hears that can be played back in a standard video player.	REQUIRED	1