E-NAVIGATION

NAVELINK

Kongsberg Norcontrol will publish your services on Navelink, a digital platform for the exchange of maritime information ship to shore.

Through Navelink, we achieve three important assurances: Security, Discoverability, and Interoperability.

- Security: Navelink's ID Registry ensures only known and trusted actors can access the platform
- Discoverabilty: With Navelink's Service Registry, the bridge team can look up and subscribe to the services that are available on their route.
- Interoperabilty: Services use the latest S-100 standards, ensuring vendor neutrality. Navelink users communicate with each other regardless of their technology provider.

Enabling the maritime digitalization revolution

The maritime domain is amidst a digitalization revolution. The number of ships enabled to consume e-navigation services increases steadily, while VTS services that once relied on a variety of communications strategies, primarily VHF radio, but also fax and phone, can now be provided digitally as e-navigation services. When delivered in a harmonized manner, using the latest standards, and published on a digital platform to ensure interoperability, these services will improve safety in the maritime environment, as well as increase efficiency in operations by reducing administrative burden.

At the forefront of maritime technology development, Kongsberg provides all three sides of the IMO e-navigation coin; ship systems, shore-based infrastructure and communications technology. As the leading developer of shore-based e-navigation technologies, we aim to improve safety in the maritime environment and increase overall efficiency in operations.

Kongsberg Norcontrol enables VTS and coastal authorities to become e-navigation maritime service providers by offering off-the-shelf and customized solutions, as well as the platform and applications through which to deliver. We help port and coastal authorities to realize the benefits that digitalized maritime services can bring to operations, be it delivering critical safety information directly to bridge systems, providing ships the means to report automatically and electronically, or planning a port arrival that is coordinated with berth availability and arrival service providers.

We deliver safer navigation, efficient operations and cleaner oceans.
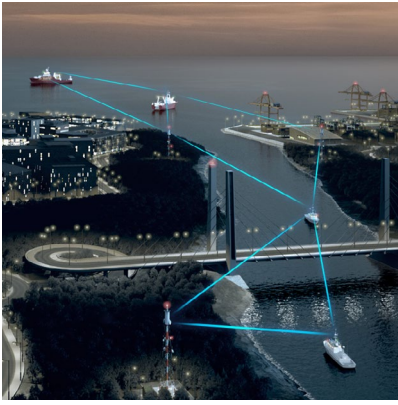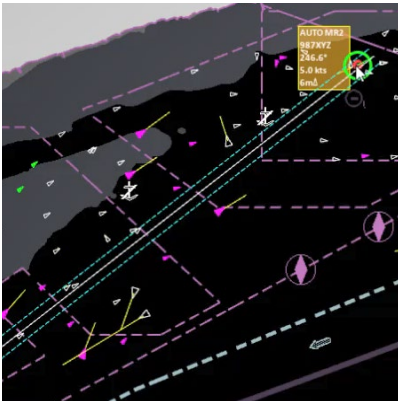
Route Sharing

The Kongsberg Norcontrol VTS system enables authorities receive and send routes to ships in the RTZ/S-421 format. In addition, our system allows operators to:

• Create a template for commonly used route to a specific destination
• Assign and send a route template to a ship
• Draw and send an ad hoc route to a ship

This functionality for route sharing is fundamental to all other e-navigation services.

Navigational Warnings

The Kongsberg Norcontrol VTS system can enable authorites to provide a navigational warning service by sharing predicted clost quarters situations, predicted areas of congestion, restricted area notifications and several other alerts with ships subscribing to a Navigational Warning service. These alerts and information are represented graphically for ease of understanding and can be accompanied by text.
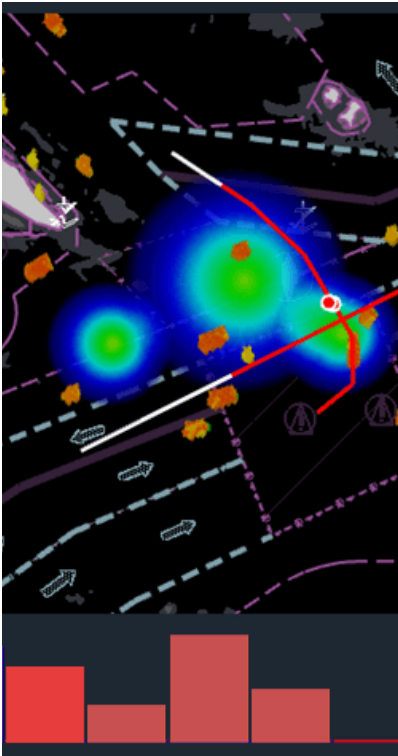
VTS Information & Maritime Safety Information

When traffic situations arise that the VTS needs to promulgate, such as a vessel not under command, dredging and diving operations or other hazards to navigation, the VTS system can publish these as draw objects — combinations of colored polygons, text and shapes — which can be sent to ships subscribing to a VTS Information service. This information is presented in graphical form, which reduces the risk of misunderstanding and uses the S-124 format, meaning the same functionality for creating and promulgating VTS information data can also be used as the basis of a Maritime Safety Information service.

C-Scope shows & hides routes by hovering the mouse over the track

Automated Mandatory Ship Reporting – Solution 2

For authorities responsible for Mandatory Ship Reporting Systems (MRS/SRS), Kongsberg Norcontrol's Solution 2 Receive service enables participating ships to report automatically and electronically, freeing VTS operators from the need to manually input MRS/SRS reports. Reports are presented in the C-Scope Management Information System and can be integrated with a Maritime Single Window solution, if available.

Collaborative Just-in-Time Arrival

Research has shown that while ports are very good at planning, the execution phase of a ship's arrival is challenging if a berth or service provider is suddenly unavailable. The Kongsberg Just-in-Time Arrival service gives arrival service providers and the VTS a means to collaborate their activities through a single solution. Using an innovative combination of route sharing, progressive web technology and deep integration between the C-Scope Management Information System and the C-Scope Operator Client, service providers can state their readiness, start/stop their service and view the progress of the arrival on a tablet, laptop or smart device, all in real time. This ensures that when a vessel is assigned an arrival slot and time, all service providers share situational awareness and know each other status, thus better ensuring the arrival is truly Just-in-Time.

Traffic hotspots can be displayed along with navigational warnings in the operator client