Automated FAL Reporting:
This is a service that is intended to reduce the workload of the mariner onboard a vessel operation due to changes in the dynamic characteristics of the North Sea Region as it is today.

Vessel Operations Co-ordination Tool (VOCT):
This is a service that increases Search and Rescue capability by distributing the search performance for each more efficient manner. VOCT will distribute routes for search and rescue vessels to each other, maximising the efficiency of the search area.

“The VOCT is a tool to optimise communication and improve situational awareness during Search and Rescue (SAR) operations. It calculates and electronically distributes the search performance for each more efficient manner.

Dynamic Predator:
This allows the movement of a ship to be predicted over a few minutes to react. It defines three useful aspects in shipping areas: Nodes (e.g. ports of call for vessels (ports, harbours etc)).

Inter-VTS Exchange Service:
This is a harmonised means of sharing VTS information between different operators, possibly in different countries, to give broader perspective. Service a greater situational awareness.

Testing this service aims to share/exchange a common verified picture between the VTS centers of adjacent North Sea countries and also transfer the picture to vessels resulting in a more accurate picture of the waterways.

Route Topology Model:
A tool, using a set of pre-defined rules and terms, to help other services (such as Route Suggestion) visualize routes in a certain shipping region or lane.

The architectural design of the ACCSEAS test-bed embraces a Route Topology Model (RTM) for the passage of ships within the NSR, based on predictions from historical data of where ships will stop. It enables specific e-Navigation services of the Maritime Service Portfolio to be targeted at specific shipping locations with the greatest need and potential future standardisation specifictions (a starting point for a product specification).

In ACCSEAS we will:
• Produce a document which describes this concept in stepping points for a product specific description with a view to informing its potential future standardisation.
• Develop a RTM which embraces a projected picture of the North Sea Region as it is today.
• Develop a RTM which embraces a projected picture of the NSR in 2020.
It is a demanding job navigating a vessel and mariners receive a lot of information at one time through various sources. ACCSEAS (Accessibility for Shipping, Efficiency and Advantages of the North Sea) is a research project that believes e-navigation will eventually make mariners jobs easier by taking information from several different systems and platforms and displaying it in an easy to use and integrated way, giving the mariner an effective tool to help them take decisions more quickly and accurately.

The North Sea Region (NSR) hosts some of the busiest shipping lanes in the world. Yet the amount of navigable space available to shipping is set to decrease as more demands are placed on this area of water. Demands are created not only by the growth towards larger vessels, and growing vessel traffic, but also by the expansion of wind farms and oil platforms. Increasing vessel traffic, towards larger vessels, and growing vessel traffic, could be turned on or off on demand. It saves mariners from making complicated manual calculations or navigating difficult areas by sight.

The ACCSEAS Project has published a Baseline and Priorities report. One of the initial tasks for the ACCSEAS project was to create a comprehensive report on the issues affecting maritime traffic in the North Sea Region.

In the past year beneficiaries have worked together to identify the issues and trends relating to North Sea Region maritime traffic routes. The ACCSEAS project developed a prototype package-3 application with the following services:

- **Maritime Exchange Services**: Be visualised as an option on the ECDIS or e-Navigation displays. Such information could be prioritised and effectively portrayed on the ECDIS. Information in an electronic form for quick consultations and decision making.

- **Traffic Services**: It will also allow VTS centres to suggest the most efficient/safe routes to the vessel.

- **Tactical Route Exchange and Route Suggestion**: This service allows mariners to communicate their own intentions to nearby vessels. Traffic added to decreasing sea space could lead to collision or grounding. For example, a vessel may decide to follow a different route to avoid a certain area. This service would provide a ‘route suggestion’ to the ship, as a decision aid for the mariner, to advise potential alternative routings and their benefits.

- **No-Go Area Service**: This service provides the mariner with this information in an electronic form for quick consultation and decision making.

- **Resilient Position Navigation Timing**: A robust service that provides, primarily, the mariner with their position and navigation information. It is crucial for planning safety and efficiency. This service provides the mariner with this information in an electronic form for quick consultation and decision making.

The exchange of this information should lead to better situational awareness for the mariner as they can see the intention of nearby vessels, and take appropriate action if necessary.

Maritime Safety Information and Notice to Mariners: This service provides the mariner with this information in an electronic form for quick consultation and decision making.

- **Harmonisation of Maritime Safety Information (MSI)** and Notice to Mariners (NTM) to provide timely and relevant information to mariners with effective consultation on the ECDIS or e-Navigation displays. Such information could also be prioritised and effectively portrayed on the ECDIS.

- **Watch the ACCSEAS film**: www.accseas.eu/about-accseas