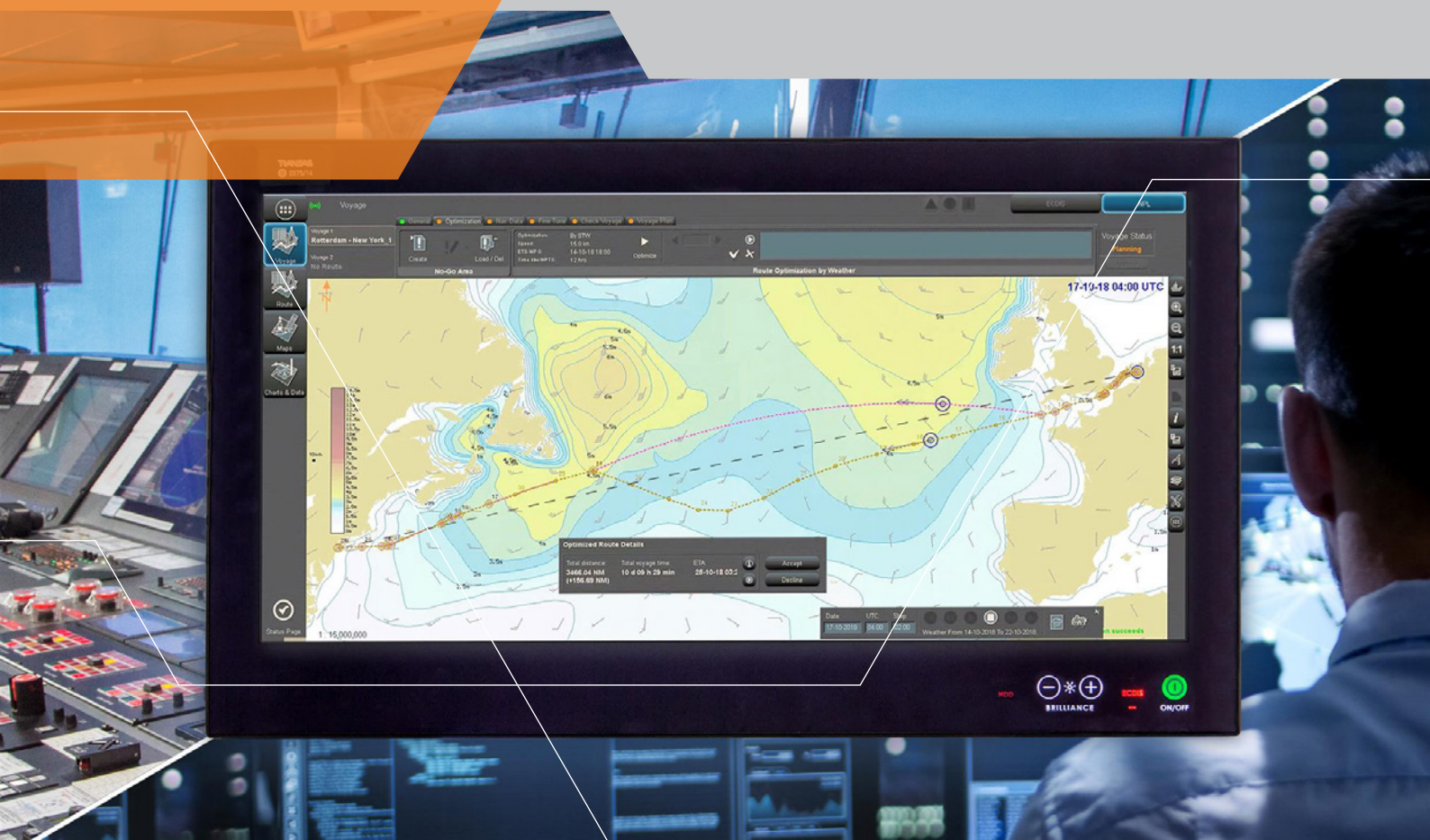


Wärtsilä Navi-Planner

Integrated solution
for route planning,
optimization and monitoring



Wärtsilä Navi-Planner – integrated solution for all aspects of route planning, optimization and monitoring.

The Wärtsilä Navi-Planner is a safe, type-approved, cyber-secure system that addresses complete routing needs in one service.

It improves safety and provides fleet operators with situational awareness. And most importantly, it reduces the crew's workload so that they can focus on other important tasks at hand.

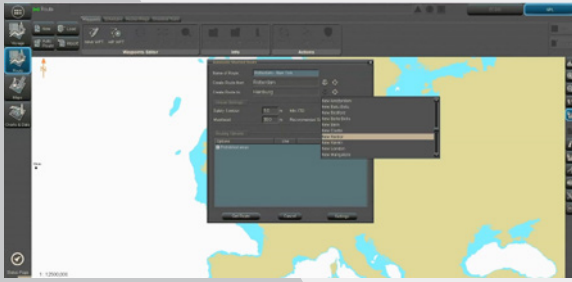
With the new Voyage Planning tool we combine the advantages of the Connected ECDIS and automated data delivery in a simple and fast way. It follows a clear step-by-step approach to route planning (from port to port), optimizes the route using weather data and AI, downloads the navigational data, fine tunes the route on the waypoint and leg level, whilst keeping the master in full control of the planning. The best way to appreciate the value is to ask for a demo.

- Automatic shortest navigation route calculation based on the specific ship's dimensions, hydrodynamics, 3D global bathymetry, navigation info, and restricted area and customer defined add-on parameters. It is also applicable for rivers and channels.
- Collaborative platform providing the Fleet Operator and Officer onboard with the capability to efficiently create and amend the planned route, along with fleet route database storage and benchmarking.
- Real-time route performance monitoring and anomaly detection for the Fleet Operator.
- ECDIS integration: route exchange, delivery of chart and digital services ordered by the route.
- Safety check and Voyage plan documentation. Voyage Plan templates and forms are based on user needs.



Why choose Wärtsilä Navi-Planner

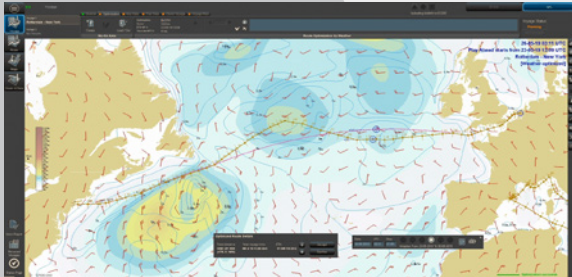
- Addresses complete routing needs in one service.
- Streamlines the process by making navigational data accessible with a single click of a button.
- Up to 5–7 % savings in fuel.
- Automated fastest and safest route generation and update on the basis of one of the world's largest navigational databases.
- Route optimisation throughout a voyage by taking into account metocean data, traffic patterns, and weather updates.
- Built-in performance optimization based on a ship's individual characteristics.
- Improves safety and fleet operator's situational awareness.
- Reduces bridge crew workload and strongly lowers human error.



1 Route planning

Start the planning by creating a new route using Advanced Intelligent Routing (AIR) service.

The new Voyage Planning tool will assist you with an initial route planning from port to port within seconds.



2 Route optimization

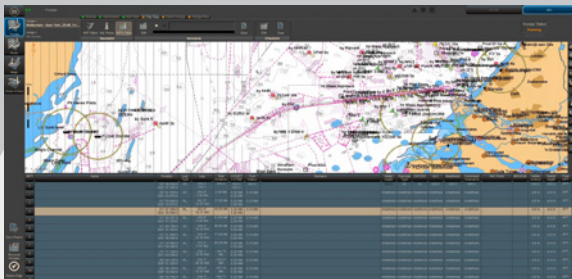
Let the new Wärtisilä Navi-Planner optimize a vessel's route throughout a voyage according to a variety of metocean data, as well as traffic patterns and weather updates applying AI technologies.

Using one of the world's largest navigational databases, a safe and efficient route is prepared by our smart technology and available for the Captain's finalization onboard.



3 Navigational data

Get all the required charts, publications and updates with a click of a button, installed and synchronized to the Wärtisilä Navi-Sailor ECDIS.



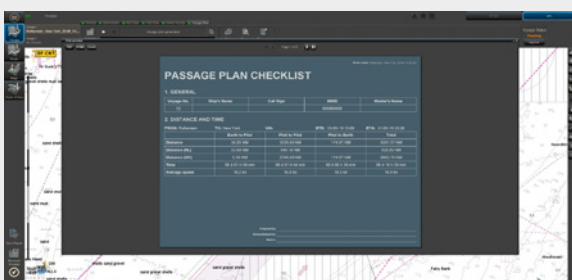
4 Fine tune and adjust

Now that you have all the charts, publications, and updates, don't forget to adjust your route for navigational hazards and traffic separation schemes.



5 Check route

Run the safety route check and let Wärtisilä Navi-Planner point out any potential danger along the route. Go through the notifications one by one – it couldn't be simpler.



6 Voyage plan generation

Let the Wärtisilä Navi-Planner collect the data for your voyage, such as Under Keel Clearance, weather and charts, publications, ports, and present this in the passage plan report. Checklists used on the bridge before, during and after the voyage can be implemented as part of the voyage plan.

What if your ECDIS was connected?

Your ECDIS could then:

- Carry out full route planning based on the world's up-to-date navigational charts, giving you a route that is definitely safe to sail.
- Conduct a full route optimization taking into account weather, currents, and vessel-specific power demand and consumption.
- Download and use all needed navigational charts and other data needed for the selected route.
- Prepare an automated voyage plan, while still giving the officers the opportunity to fine tune the route when needed.
- Maintain an optimized route whilst under voyage.
- Share the route/voyage with other stakeholders.
- Support the ECDIS system by our Fleet Operations Support team – remotely.

Connected ECDIS allows secure navigational data delivery, such as ENC, ADP & ENP and weather information to your ship, triggered by the route planning system. Not only is this much safer than downloading from a server and passing to the ECDIS via physical media, it is faster, transparent, managed by the route planning tool, and integrated within the ECDIS itself.

Another big advantage is that you no longer need to worry about charts, pricing and licenses. Within Fleet Operations Solutions the purchase processes of charts, logistics, approvals and budgets are eliminated. The use of charts is embedded within the service. This also includes weather services.





DATA SOURCES

UKHO, NOAA,
MARPOL, SW Updates



DATA ENCRYPTION



VPN



BRIDGE

Q&A

Q We have Transas ECDIS on board and want to use the new Wärtsilä Navi-Planner Tool for enhanced Voyage Planning. What do we need to do?

A The new Wärtsilä Navi-Planner tool operates on MNS35 software version. Most Transas ECDIS today use MNS34. A software change is provided including installation. When the ECDIS hardware is older than ~2 years, an upgrade of the ECDIS hardware is needed. Standard upgrade package including installation is available. Software upgrade and the software maintenance is embedded within the Fleet Operations Solution.

Q What is the difference between 'MNS34' and 'MNS35'? We see these appear on certificates and we get questions from auditors. Is '34' outdated, must I upgrade to '35'?

A MNS stands for Marine Navigation System and is a Transas term to indicate ECDIS from the NaviSailor product line. Version '34' and '35' are software versions. Version 34 is used in most of the Transas ECDIS today, fully type approved. Version 35 is developed to support the Connected ECDIS initiative and is a core (shipboard) element within Fleet Operations Solution. Of course version 35 is also fully type approved. In short: From a type-approval and auditor perspective, both versions comply and there is no requirement to upgrade.

Q Does Fleet Operations Solution use Transas as Chart supplier?

A Yes, this is due to technical, commercial and cyber security reasons. The aim is integration, automation along with a competitive commercial proposition. The Wärtsilä Navi-Planner tool is in a cyber secure environment. All Calculations are done there. When the master finalizes the voyage planning, the delivery of the necessary charts is done by the same server. Next to this automation, Charts are optimized for Transas ECDIS delivery, reducing file size and highly speeds up the chart updating time within the ECDIS. Of course, Transas official charts (S-ENC) comes from the well known suppliers like UKHO.

Q To use Fleet Operations Solution what shipboard communication system do I need?

A VSAT (or LTE in port) solution is highly preferred. Fleet Broadband and/or Iridium on (small) metered plans will work technically but not commercially. Estimates of data usage can be provided. Wärtsilä can provide a complete VSAT solution within Fleet Operations Solution, allowing end to end security of data. But naturally you can use your existing VSAT solution deployed by your provider.

Q We heard about Eniram solutions and Transas Fleet Operations Solution. Does it make sense to integrate?

A Absolutely. Within Fleet Operations Solution we develop Fleet Performance Tools such as Fuel optimization, MRV reporting, Speed profile Analytics, etc. Using the ECDIS as shipboard hardware combined with an easy to use reporting tool, fleet performance tool powered by Eniram is being developed. This will highly enhance Voyage planning and provide better business planning decisions.

Q Will the route plan with the new Wärtsilä Navi-Planner follow IMO guidelines and be accepted by OCIMF*?

A Yes, it will. The Wärtsilä Navi-Planner was created from the point that it should fulfill the IMO Guidelines and the OCIMF* recommendations.

* OCIMF – Oil Companies International Marine Forum

Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets. By emphasising sustainable innovation, total efficiency and data analytics, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers.

[wartsila.com](https://www.wartsila.com)