CONTROLCENTRE

Teamwork | Capacity utilisation of the port infrastructure is perfectly coordinated.

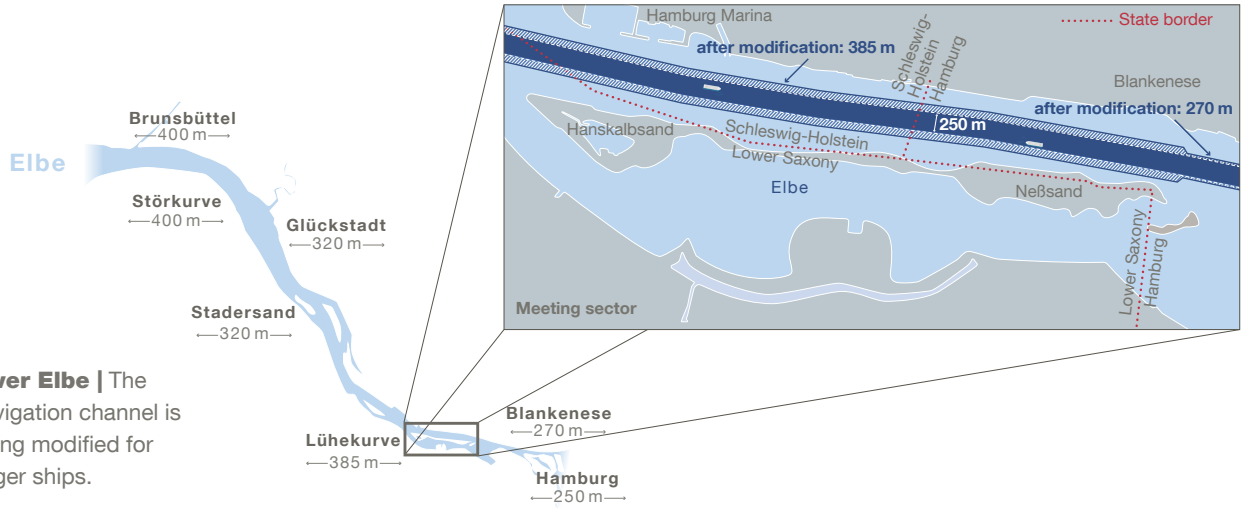
Centralised expertise: The Hamburg Vessel Coordination Center directs large ships into the river Elbe and feeder vessels through the port. This centralised coordination benefits shipping companies, terminal operators, pilots and port authorities.

The large container ship has already been under observation for some time. The Hamburg Vessel Coordination Center (HVCC) has been tracking the freighter's journey on its monitors for days. And it will be another few days yet before the ship, which is classed as an ultra large vessel (ULV), docks at the quay wall of Container Terminal Burchardkai in Hamburg.

"We start coordinating ship traffic to and from the Port of Hamburg well in advance," says Gerald Hirt, Operations Manager of the HVCC. For him and his team, this includes taking note of whether a ship is arriving earlier or later than planned, for example. If this happens, the HVCC can liaise with the terminal's berth planning unit and then suggest new time slots to the shipping companies for their passage of the river Elbe. This ensures that the ships approach the port at the optimal speed. "This centralised coordination means that our team is able to prevent ships from having to drop anchor in the German Bight and can also avoid passing problems on the river Elbe. It also allows us to optimise the amount of time that ships spend at the port," says Hirt, explaining the benefits provided by the control centre, which operates 24 hours a day.

A rising tide | The HVCC monitors and coordinates a total of approximately 2,500 mega-ship calls (almost half of which are ULVs) and 4,000 calls at terminals by smaller feeder ships every year. Although the number of ships calling at the Port of Hamburg is not increasing, the ships themselves are getting bigger and wider. This goes for container ships, bulk carriers, vessels for rolling cargo (RoRo freighters) and cruise ships. In addition, many of them are only able to pass from the mouth

Gerald Hirt, Operations Manager at the HVCC
Together with his team, he coordinates and optimises a large volume of the ship traffic in the port – on behalf of the terminals, shipping companies and captains. The Feeder Logistics Center was established in 2004 as an internal project at HHLA Container Terminal Tollerort (CTT). In 2009, it became an autonomous limited company whose shares are split between HHLA and Eurogate.



River Elbe | The navigation channel is being modified for larger ships.

Passing | The arrival and departure of container giants is meticulously planned.

of the river Elbe into the port when the tide is high. They can sail into the Port of Hamburg with the incoming tide and then return to the North Sea against the tide.

The HVCC, which is a joint venture between the two terminal operators HHLA and Eurogate Container Terminal Hamburg, is in charge of the centralised operational coordination in close partnership with the Vessel Traffic Service Centre of the Harbour Master Authority. It began in 2004 with the Feeder Logistics Center (FLC) in order to optimise the rotation of the feeder ships from terminal to terminal.

These feeder ships bring and collect containers to and from several terminals in Hamburg before calling at mostly smaller seaports on the coasts of the Baltic Sea. “The partnership among terminals and the role of the FLC as a link between shipping companies and terminals has significantly reduced the handling times for the feeder ships,” says Hirt, describing the success of the FLC. What has proven to be effective on a small scale also works on a large scale – in other words, at the Nautical Terminal Coordination (NTC). Since 2014, it has been the central interface for the arrival and departure of ships wider than 30 metres. In 2015, the FLC and NTC were amalgamated to form the new HVCC, which has since taken charge of coordinating calls by inland vessels as well.

A customised coordination software program assists with the detailed planning. It records all the relevant data such as schedule data, position data of ships, travel speed, water levels and weather forecasts. Based on this, the NTC draws up a passage plan for the shipping company, for example. “Our software continuously compares the available information. Traffic situations can thus be optimally analysed in advance and shipping companies and terminals informed,” says Hirt, enthusing about the software-aided efficiency gains.

The interaction between all the responsible units enables optimal use of the infrastructure, benefiting all the stakeholders in the port. At the same time, pressure is taken off public authorities such as the Vessel Traffic Service Centre. The latter is part of the Hamburg Port Authority and gives ships the green light to enter the port – based also on the recommendations of the HVCC developed far in advance.

Modifying the navigation channel

It is one of the most important infrastructure projects in Germany. The navigation channel of the river Elbe before Hamburg (Glückstadt, Stadersand) is to be widened from 300 to 320 metres and also dredged. Ships with a draft of up to 15.60 metres (at high tide) and 13.50 metres (at low tide) will then be able to call at the Port of Hamburg. In addition, the river Elbe is to obtain a passing place measuring seven kilometres in length between Wedel and Wittenbergen (see map). A navigation channel with a width of 385 metres is planned here.