Case Study
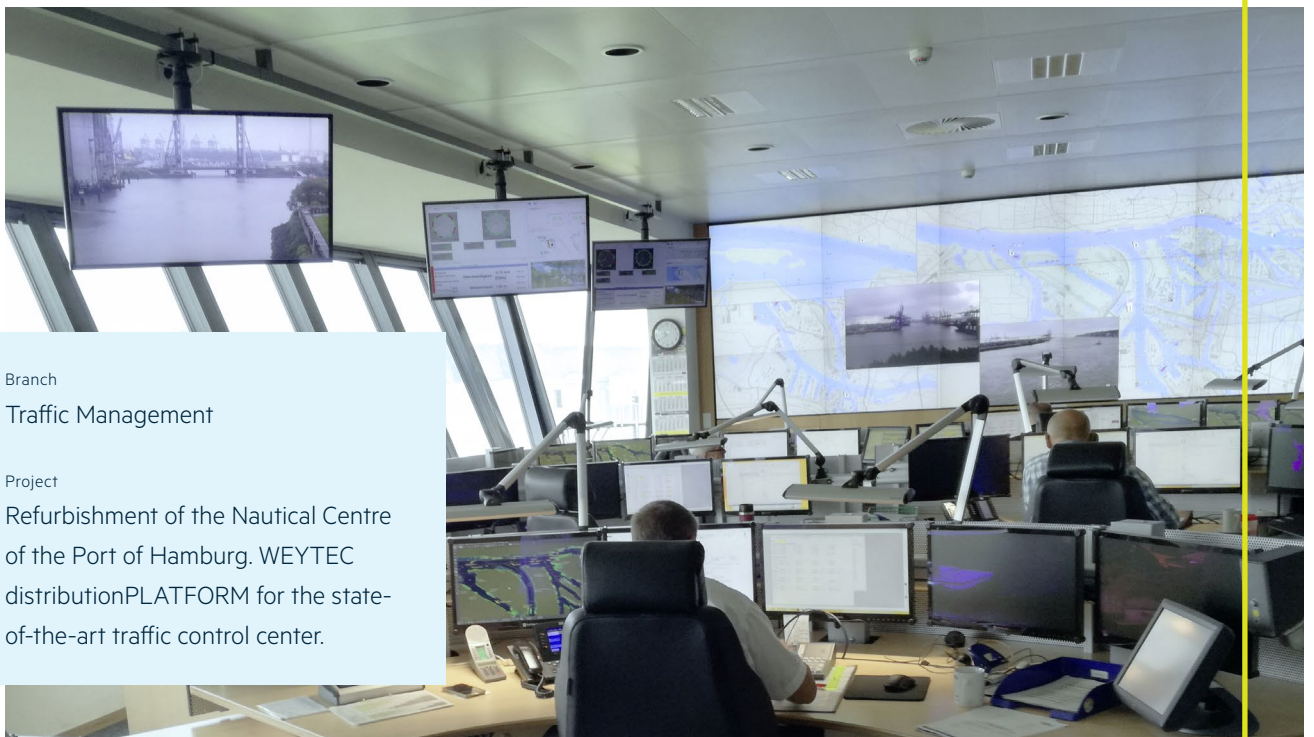
HAMBURG PORT AUTHORITY

Hamburg, Germany

Branch
Traffic Management

Project
Refurbishment of the Nautical Centre of the Port of Hamburg. WEYTEC distributionPLATFORM for the state-of-the-art traffic control center.

Objectives

The Hamburg Port Authority (HPA) is a benchmark for traffic management on land and by sea. As part of the leading-edge smartPORT initiative, HPA completely modernized the Nautical Centre, which regulates shipping traffic in the port.

The HPA needed to integrate dozens of data sources and services, over 50 computers, communication channels and more. Obsolete IT systems were to be replaced. Five advanced workplace environments were needed for marine engineers. A completely new control concept was required because engineers had been using multiple keyboards to perform their tasks in the past. A video wall was necessary to dynamically visualize port activities because engineers were still working with handwritten notes on a magnetic board.

Solution

The WEYTEC distributionPLATFORM integrates all of the HPA's internal and external data sources. All the engineers can instantaneously access all computers, sources, functions and visualizations from any workplace - in accordance with their individual user rights profiles. True Channel Communications connects the computers and systems in the Nautical Centre's new network. This means that the systems can be operated with KVM signals alone - without drivers or installations on the sources. The computers are housed in a cooled, secured, 44 m² server room.

Visualization

The Nautical Center's new video wall automatically visualizes all necessary information distortion-free and in real-time. This includes the port facilities, electronic maps, vessel movements, ship identification data, etc. Using the WEYTEC distribution-PLATFORM and a multifunctional keyboard, engineers intuitively switch between all their systems (e. g. messages, control center information, weather conditions, vessel movement data, surveillance cameras) and display any source onto any screen.

This way, they can instantly see exactly what is happening in the harbor and vicinity. High-resolution, energy-efficient LED technology provides brilliant images that can easily be seen from all operator positions.

Facts & Figures

Workplaces:
- 10 Desks for navigators,
- office workplaces

10 Keyboards:
- WEYTEC MK06

Remote Solution:
- IP Remote II

WEYTEC distributionPLATFORM

Video Wall
- 5 x 3 Cubes
- Harbor overview map

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Background

A fleet of 10,000 ocean-going vessels calls at the port of Hamburg every year. Among them are the world's largest container ships. Each ship finds its berth immediately - one of 300 along the 43-km long quay. Traffic flows night and day, during low tide and high, fog and storm. Whoever bears the responsibility and masters the enormous volume of goods and traffic around the clock needs the best possible working tools.

Hamburg is committed to being an intelligent, digitally networked and seamlessly functioning transportation hub and its program is called smartPORT. The aim is to use comprehensive control systems to ensure that shipping, road and rail traffic all remain fluid. The Port of Hamburg thus continues to be a competitive leader and able to cope with growing logistics challenges. The HPA is currently the hub for around 140 million tons of freight per year.

workplace with multifunctional MK06 keyboard

The University of Hamburg and the Technology Center Hamburg have been working with the HPA on the realization of the smartPORT project since 2011. One result was the recognition that the Nautical Center needed modern workplaces and state-of-the-art control center technology.

With WEY Technology, HPA found the answers to their questions and the partner to supply operational and visualization solutions from a single source. It was important to HPA that WEYTEC could respond to their specific needs and develop system components in-house. Support services ranged from planning and testing to installation and training. The intuitive operation of systems with WEYTEC keyboards and screens has ushered in a new era for the harbor captain and engineers: the era of the smart nautical center.