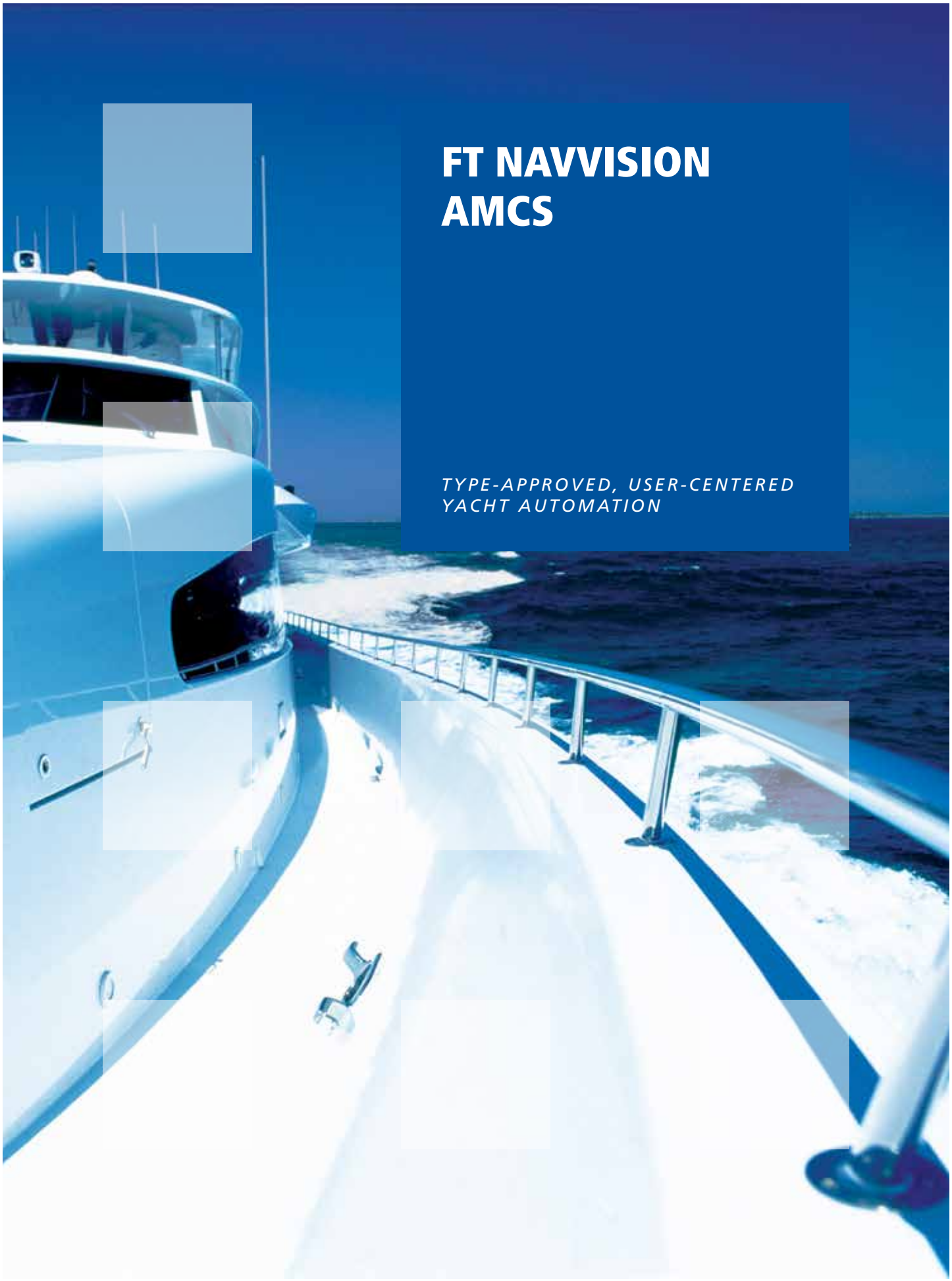
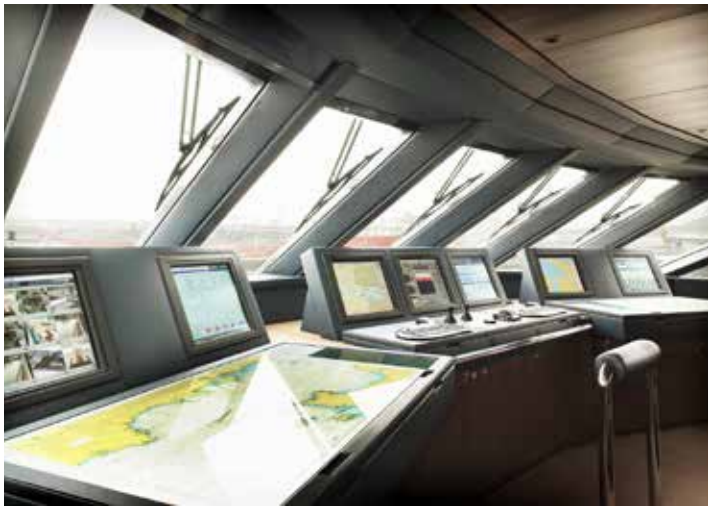


FT NAVVISION AMCS

TYPE-APPROVED, USER-CENTERED YACHT AUTOMATION



"Yachting has never been so easy and comfortable."

FT NavVision AMCS.
As versatile as you need it.

The FT NavVision Alarm, Monitoring & Control System is the automation solution for super and mega yachts. The system is developed to provide our customers a modular and scalable AMCS system. The smart HMI and Duty Alarm Panels are designed to fit right in the yacht's luxury. FT NavVision AMCS provides monitoring and control of all equipment such as pumps, HVAC, generators, engines, power management systems, tanks, valves: anything you my have on board. All this power is still compliant with the automation requirements for an Unmanned Machinery notation.

Anything but *"one size fits all"*.

Every vessel is unique, so why should its automation system be any different? FT NavVision AMCS is highly flexible, configurable and customizable. In other words: it can be tuned to perfectly fit your vessel and its requirements. Just as the vessel is built to serve its passengers, FT NavVision AMCS is built to serve the vessel and its crew.

FT NavVision AMCS is designed with the end-user in mind. We go to great lengths to discover the best setup for the vessel, and how to present this to the crew in the most usable way possible. Doing this, not only can we design a system that's not cluttered with irrelevant data or distracting visuals, but we can also keep the entire system to its leanest form, providing the crew with only the necessary information where and when they need it. This focus on simplicity keeps the system fast, simple and relevant. Combined with its proven operational capabilities and ease of support, FT NavVision AMCS is one of the most reliable vessel automation systems on the market.

System Architecture

- The FT NavVision AMCS infrastructure is based on a fail-safe redundant Local Area Network with distributed I/O. The AMCS application is installed on 2 servers, which are usually located in the Engine Control Room and Wheelhouse.

- The FT NavVision AMCS is highly scalable. No matter how complex or simple your system needs to be, FT NavVision AMCS will have no problem whatsoever monitoring and controlling it. Based on a TCP/IP Local Area Network (in a ring configuration or perhaps even a dual ring for added redundancy), the AMCS allows for a fast, stable and reliable connection between the equipment on board and its human operators.
  Combining full-featured servers and dedicated Duty and/ or Alarm Panels into one network, the FT NavVision AMCS guarantees availability of duty selection and safe alarm handling on every location on board, measuring well over 10.000 distinct data inputs at the same time.

- The FT NavVision AMCS is type-approved by Germanischer Lloyds. Classifications by other bureau is done on a system-specific basis. Many systems have already been delivered under LR, BV, DNV, ABS and Rina. Approvals by other bureaus are just as easily met.

Options

- Remote access: Have Imtech identify & solve problems and/or change settings from the office.

- Conning: Display all navigation data —like heading, depth, log, weather, GPS— on a special conning page.

- Remote monitoring: Transmit all data available to the AMCS to the shore via the web.

- Helicopter Approach & Landing Operations: Help helicopters land safely with a CAP437-compliant mimic (regulations for helicopter landing on board vessels).

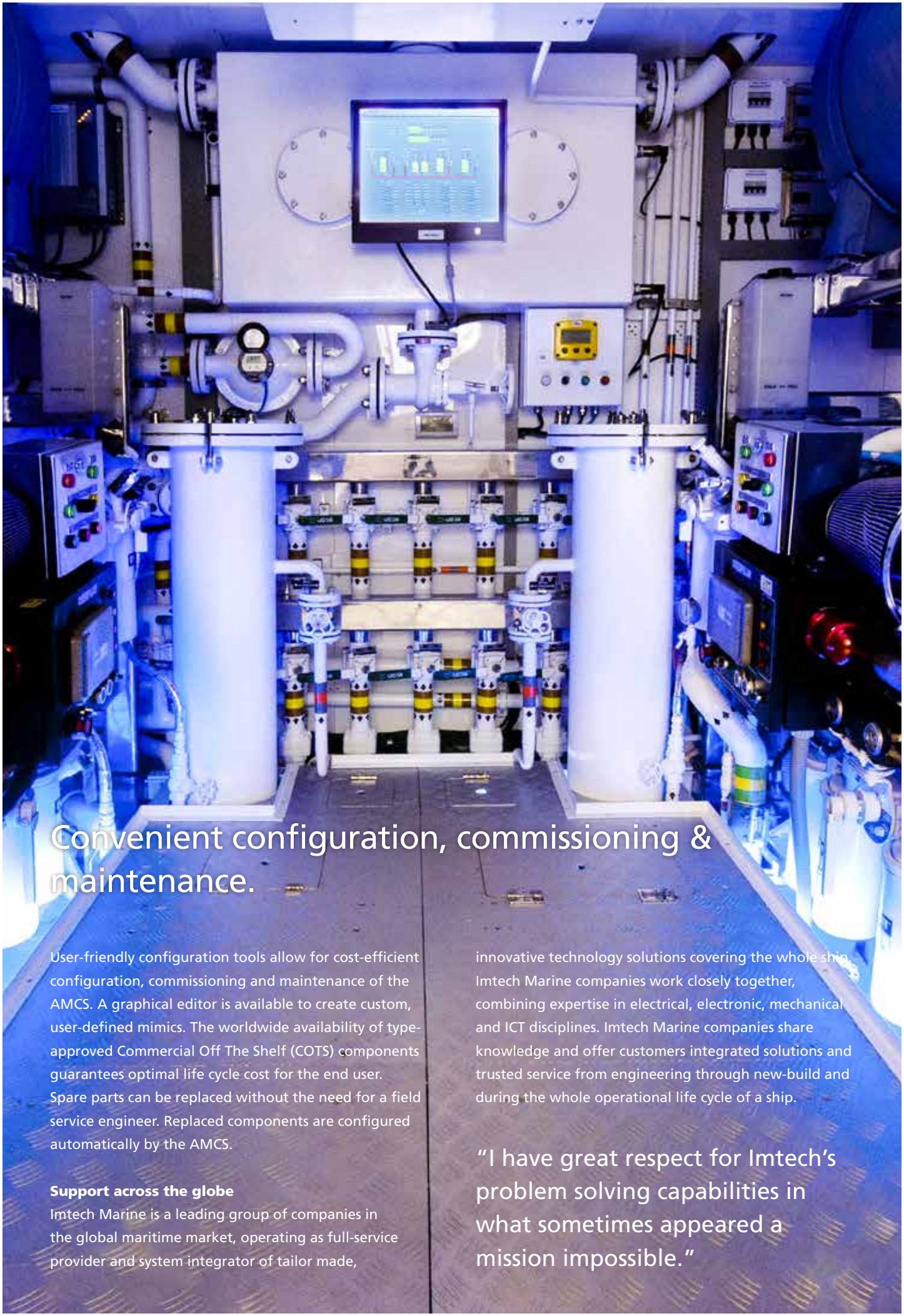
- CCTV: Display camera images within the FT NavVision AMCS.

Capabilities

- Alarm handling/logging
- Standby pump control
- Automatic control sequences
- Running hours
- Tank content measuring
- Duty engineer alarm
- Engineer call
- Engine room personal alarm
- Data log
- Trending
- Group viewer
- System logbook

Features

- Modular and flexible design
- 2 x Server workstations
- More than 10.000 controllable measuring points.
- SoftPLC based on CoDeSys
- Type-approved Commercial Off The Shelf (COTS) components
- Windows embedded system with redundant Ethernet topology
- Rugged PC workstations with SSD
- Graphic Duty Alarm Panels
- Integrated Engineering Calling / Personal Alarm system
- Smart HMI and free design of user defined mimics
- Worldwide available spare parts
- Easy replacement of spare parts without need of external service engineer



Convenient configuration, commissioning & maintenance.

User-friendly configuration tools allow for cost-efficient configuration, commissioning and maintenance of the AMCS. A graphical editor is available to create custom, user-defined mimics. The worldwide availability of type-approved Commercial Off The Shelf (COTS) components guarantees optimal life cycle cost for the end user. Spare parts can be replaced without the need for a field service engineer. Replaced components are configured automatically by the AMCS.

Support across the globe

Imtech Marine is a leading group of companies in the global maritime market, operating as full-service provider and system integrator of tailor made, innovative technology solutions covering the whole ship. Imtech Marine companies work closely together, combining expertise in electrical, electronic, mechanical and ICT disciplines. Imtech Marine companies share knowledge and offer customers integrated solutions and trusted service from engineering through new-build and during the whole operational life cycle of a ship.

"I have great respect for Imtech's problem solving capabilities in what sometimes appeared a mission impossible."

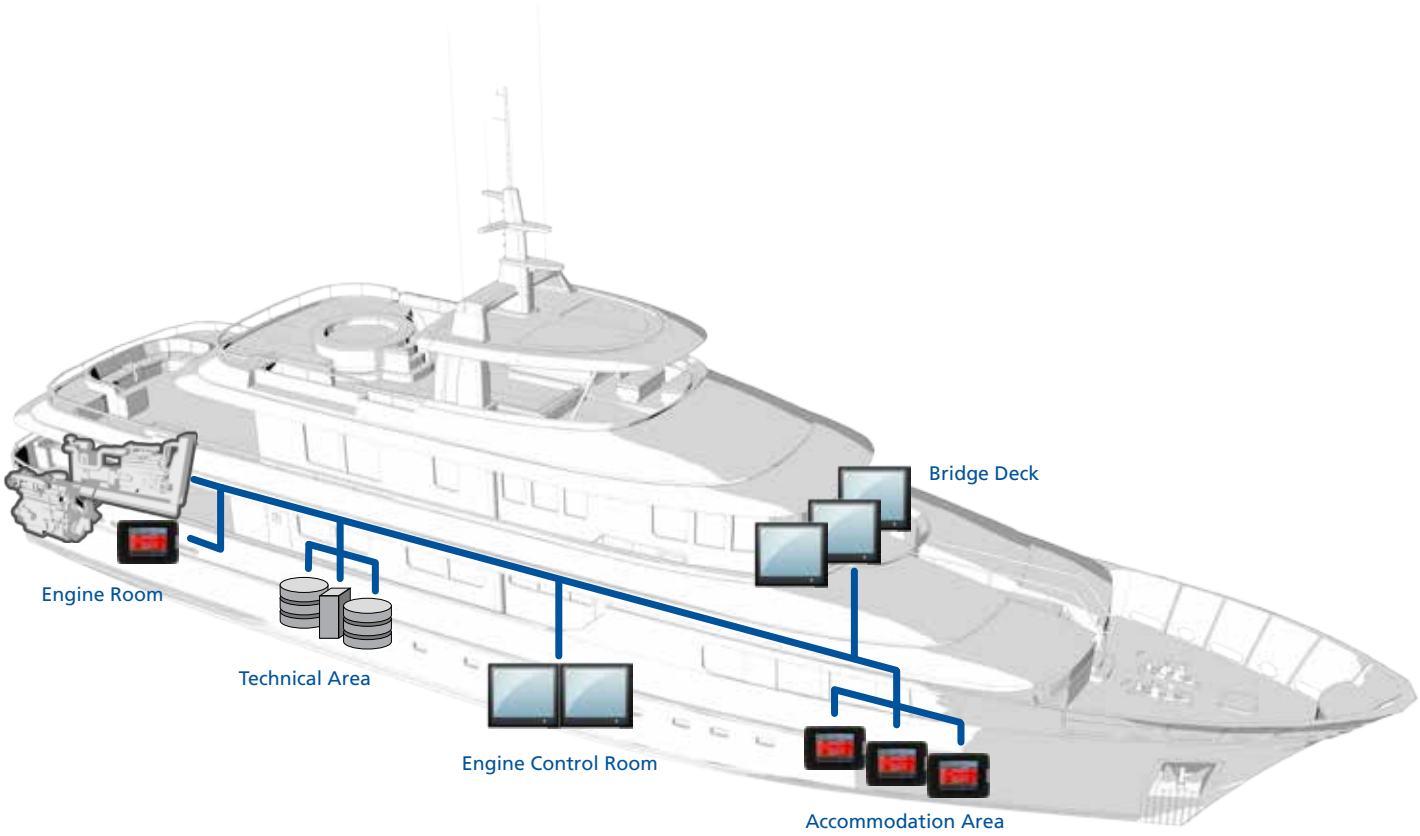
Reliability. It's built in.

The Operator Work Stations (OWS's) are type-approved PC's with a solid state hard drive and Windows Embedded operating system, all to ensure a long Mean Time Before Failure. These OWS's can be controlled with a keyboard, trackball and touch screen. Besides these 2 servers, the system can be extended with up to 50 client OWS's. In addition to the OWS, the AMCS supports Graphic Duty Alarm Panels (DAP). The DAPs are usually located in the crew mess, cabins and other locations. The 6,5" touch screen contains a simplified alarm page. Engineering calling and duty alarm functions are included.

Dependable on every level

The I/O substations are used to connect the platform sensors, actuators and serial connections to third party devices.

The substation used for connecting the hardwire I/O to the LAN is the Wago PLC 750 Series. Many varying protocols are already integrated, for example J1939, NMEA 0183 and ModBus for different devices like PMS, HVAC and Fire Detection. Automatic Control Sequences can be programmed for logic control of valves, pumps and other devices. The FT NavVision AMCS first checks if all requirements and conditions are met, after which the system performs the sequence fully automatically.



Focus on what's important.

Mimics custom designed for

- Propulsion.
- Doors & hatches.
- Power management.
- Tank levels & bilges.
- Piping, valves & pumps.

Logged events

- Alarms & warnings.
- Network traffic.
- User actions.
- Duty shifts.
- Data history.

Global support

- Support locations at every major port
- Remote support for fast troubleshooting ■
- Support for every aspect of your vessel

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