




CASE STUDY

OPTIMIZING CREW COMMUNICATIONS THROUGH THE POWER OF CELLULAR TECHNOLOGY



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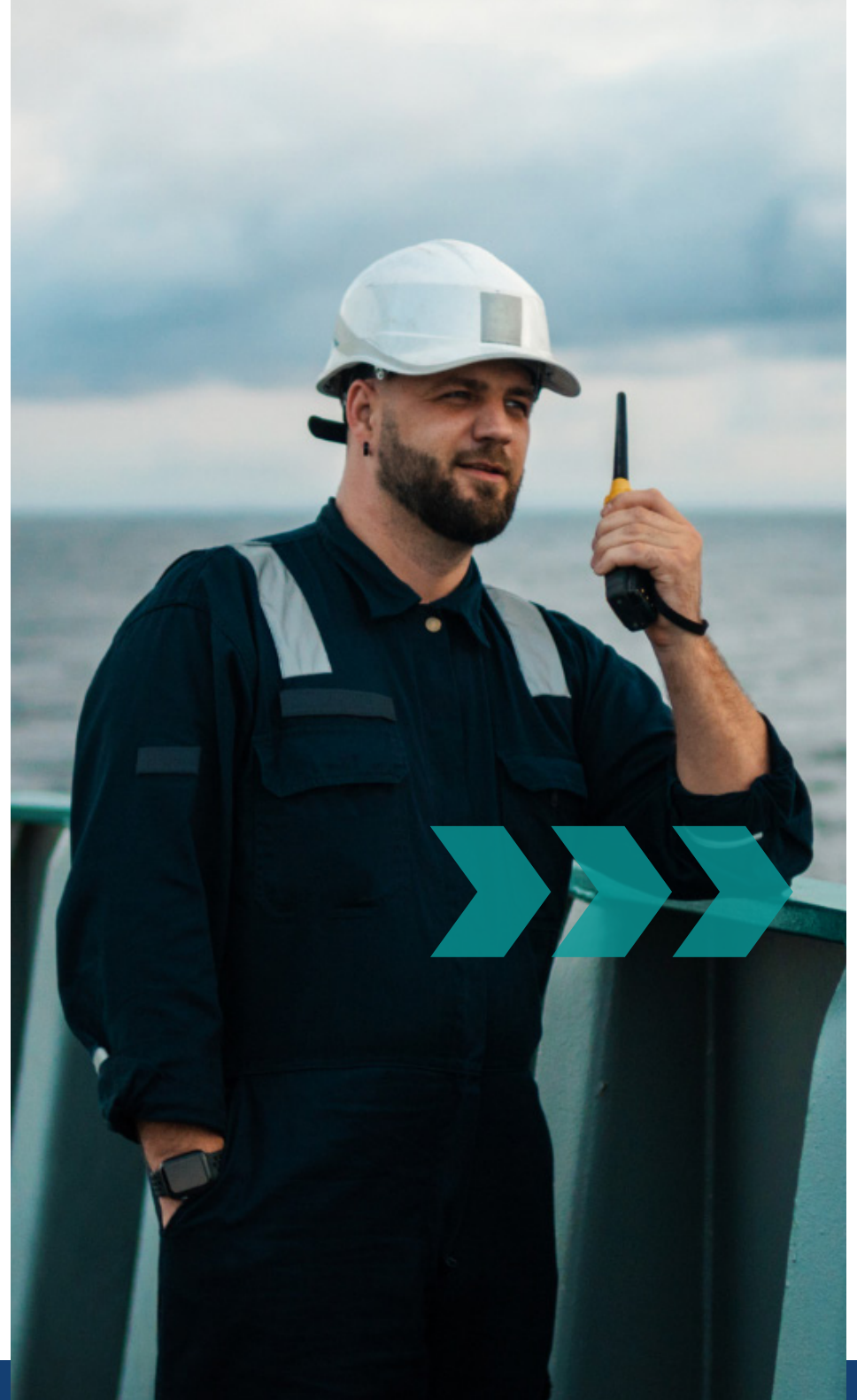
Network Innovations Maritime provides total-boat solutions tailored to specific operational needs. In this particular case, that meant ensuring reliable internet connectivity for newly built vessels and their forecasted crew members.

THE CHALLENGE

From checking navigational information to staying in touch with friends and family, access to the internet can make many aspects of being at sea easier. Prioritizing crew welfare ensures not only the well-being of individuals but also raises positive team morale, enhances productivity, and promotes safety, ultimately leading to the overall success of the mission or project.

However, disconnections while roaming are hard to avoid.

The construction of two government supply vessels created the need for reliable, high-speed internet access on board both ships via cellular connectivity. With over 300 crew members expected to be accommodated, ensuring their well-being was paramount. A partner with expertise in integrating onboard systems was sought to handle engineering, network setup, testing, and paperwork effectively.



THE SOLUTION

Working alongside the shipbuilder, the Network Innovations Maritime team got to work. After identifying 130 dedicated cellular access points per vessel, a project execution plan was drafted. This included creating a scalable network to support increasing numbers of devices and higher bandwidth requirements, ensuring adaptability to evolving needs.

This is where the Peplink MAX HD4 router came into play, serving as the “brains” of the solution. Given the unpredictable nature of connectivity at sea, utilizing multiple connections is essential for maintaining a reliable network. By seamlessly merging up to four cellular connections, the MAX HD4 ensures ultra-reliable and high-speed connectivity.

Network switches throughout the vessel and cellular antennas mounted on top facilitate the seamless distribution of cellular connectivity – from the central router to various access points and end devices.

Acting as a partner in all stages of implementation, the team extended their expertise beyond the proposal and installation of technology:

“Government contracts often require detailed deliverables, which include comprehensive documentation that’s essential for contract fulfillment,” This paperwork, including user guides and network drawings, provides a traceable record of all components used in the vessel, facilitating audits and reviews. This is something our team undertook, completing and submitting over 100 hours of documentation.” **Dave Brengelmann, Account Manager PNW at Network Innovations Maritime**



The four active cellular connections enable each vessel to have stable internet connectivity while near the coast, automatically switching to SATCOM for instant failover. This ensures coverage while crossing remote expanses of the sea and cellular connection is lost. Dave concludes, “This project was a great opportunity for our team. A chance to truly show the total breadth of our capabilities, and more importantly, make a difference to seafarers’ lives.”

THE IMPACT

The shipbuilder's connectivity and welfare goals were successfully met by the solution, with LTE network testing demonstrating 100% uptime during factory acceptance testing. Thanks to this new deployment crew members can stay in touch with loved ones via smart devices, access vital information, and maintain a sense of connection to the world beyond the ship's confines.

To ensure peace of mind, the network is monitored proactively. Both the onboard crew and remote offshore managers have complete access to network statistics, bandwidth, usage reports, and event logs.

