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Port Deploys Zebra Technologies Narrowband Network To Optimise Operations

ABOUT PORT OF TILBURY

Port of Tilbury is London's major distribution port, providing quick and efficient processing of container ships. It manages a full range of cargo with specialist expertise in the handling of paper, grain and bulk commodities. The port is located in a favourable position – with 18 million people living within 75 miles – and it has excellent transport links to and from the capital and the south east.

Challenge

The port has 7.5 kilometres of quay, stretches across 850 acres and has 500,000 square metres of warehousing. It's also a challenging area for radio frequency (RF) systems – with cranes, containers, buildings and inclement weather impairing performance. With these demands in mind, the port looked for an alternative wireless solution to replace its existing communications network, which was coming to the end of its life. The port also needed new rugged mobile devices

that could cope with working in an industrial setting in all weathers.

Solution

Renovotec recommended installing a narrowband network that, operating in the 458MHz range, would provide far greater coverage with fewer access points. Its wireless experts carried out a detailed site audit and recommended the positioning of just six narrowband base stations to cover the site. After reviewing available options, the port agreed with Renovotec's recommendation to install Zebra Technologies' 9500 Communications Software Server to control and manage network traffic. This server connects to Zebra's 9160 G2 Narrowband Wireless Gateways, which are configured to automatically extend coverage should any gateway fail.

In addition to the core network, the port needed to upgrade its handheld and vehicle-mounted mobile computers (used on forklifts). The computers would need to cope with being outside in all weathers, be capable of using the terminal emulation interface to receive text-based instructions, and be able to connect to narrowband and Wi-Fi networks, with Wi-Fi used in its warehouses.

Port of Tilbury conducted an extensive review of available devices before selecting Zebra Technologies' XT15 rugged mobile computers and Zebra VH10 vehicle-mounted computers. Both devices could seamlessly connect to narrowband and Wi-Fi and had several features that stood out against comparable devices. These included, in the case of the XT15, excellent scanning capabilities, superior Wi-Fi connectivity, flexible configuration and a very tough build to cope with drops and bangs and the dust, moisture and fluctuating temperatures on the site. For example, an attachable Bluetooth scanner allows teams to easily scan up to high shelves in the warehouse. The VH10 is rugged too – with shock and vibration mitigation that meets military standards. The VH10s are used to manage cargo movements on the Ro-Ro berths.

The network and devices are backed by service and support provided by Renovotec as part of the contract price.

Results

The biggest advantage is the affordability/ performance ratio. The network offers secure (privately licensed) and reliable operation at an affordable cost – a comparable Wi-Fi system would need 70 Wi-Fi access points with associated installation and maintenance costs.

The network is easily managed, with the communications server providing centralised and remote management of security, configuration profiles and software upgrades. It also provides the essential and reliable connectivity that teams need to access the port's ERP application for paper shipments. Using their devices, teams can receive tasks and efficiently manage a range of workflows from processing goods-in, to putting goods away in the warehouse, to managing inventory and picking shipments.

The technology from the core network to the handheld devices is designed for the rough and tumble of an industrial site and will provide many years' service. Add to this the assurance of service and support for a set cost and the port can focus on its core business, safe in the knowledge that its narrowband network will offer assured performance.

> "We now have robust, secure and reliable narrowband network coverage across our site. We've also deployed Zebra's XT15 rugged mobile and Zebra VH10 vehicle-mounted computers that are designed to cope with our industrial environment and connect to both our narrowband and Wi-Fi networks. Add to this the assurance of service and support from Renovotec and we have the trusted platform our teams need to continually connect to our ERP application."
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> **Alan Kinney,
> MIS manager,
> the Port of Tilbury**

FOR MORE INFORMATION, PLEASE VISIT WWW.ZEBRA.COM

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