

All hands on deck at the Port of Cork

Captain Pat Murphy, Port Facility Security Officer, Port of Cork, Cork, Republic of Ireland

The Port of Cork

The Port of Cork is a key seaport in the south of Ireland, offering all six shipping modes: lift-on lift-off, roll-on roll-off, liquid bulk, dry bulk, break bulk and cruise. Over 3,000 ships and on average 10 million tonnes of cargo pass through the port each year, making it one of the busiest ports in Ireland. Due to its favorable location on the south coast and its modern deepwater facilities, the Port is ideally positioned for European trading, as well as direct deep-sea services.

The need for an integrated security system

Responsible for the ownership and management of five facilities in Cork harbor, the second largest natural harbor in the world, the Port of Cork operates dedicated terminals for cruise ships, passenger ferries, dry bulk, containers and general cargo storage. Additional facilities include a 100-meter yacht marina in Cork city; a commercial fishing pier in Crosshaven, and several other smaller facilities catering for the leisure industry.

These facilities are situated in various parts of the harbor, sometimes up to 15 kilometers apart, and the sheer size of the operation created a real challenge for the security team in terms of monitoring and securing the entire facility. For the Port of Cork security team, the main challenge was the lack of connectivity between disparate security systems and a need to make functions such as CCTV, access control, remote monitoring and intruder alarms 'talk' to one another, and operate on a more integrated level. This lack of integration was potentially impacting on the ability of the security team to monitor all areas efficiently, potentially threatening the overall security of the Port.

Meeting international standards of port security

Aside from the size of the facility, Port Facility Security Officer (PFSO), Captain Pat Murphy also faced additional challenges from increased volumes of traffic coming into the Port. With this additional traffic came a greater responsibility to protect both the Port itself and also cargo arriving into Cork from theft or smuggling activity. Given the heightened risk of terrorism, Captain Murphy and his team also required technologies that could provide greater intelligence than its current security systems could provide.

Additionally, as PFSO, Murphy has responsibility for ensuring the Port of Cork Company fulfils the requirements of the International Ship and Port Security (ISPS) Code and EU Directive 2005/65 on delivering Port security. The Department of Transport's approved Port Facility Security Plans (PFSP) are set out to enhance the security of ships as well as the protection of port facilities through appropriate measures. These PFSPs have various levels, ranging from normal day-to-day security operations to the heightened level associated with an imminent security threat. Having the right technology in place to meet these requirements is instrumental in allowing the Port to be classified as an approved gateway port. This means the Port of Cork can provide a direct outward route for the movement of cargo and passengers to the USA, which is crucial to the economic development for the Port, Cork City and hinterland.

Taking all these aspects into consideration, as well as the ever-changing and demanding cargo industry, the Port was encouraged to review its security back in 2005. The Port of Cork Company



Cork Harbor is the world's second largest natural harbor, which means excellent deepwater facilities for large vessels.



The Port site's sheer size necessitated a fully integrated security system, made up of complementary technologies and services.

prepared tender documents outlining its security requirements and, after reviewing submissions from several leading companies, the organization selected global security company ADT Fire & Security to meet these objectives.

The benefits of a networked access control system and CCTV

ADT's successful solution consisted of a networked access control system and Closed Circuit Television (CCTV) system across the Port, complemented by the use of Automatic Number Plate Recognition (ANPR) and passive infrared beams in certain key areas. The entire system needed to be user-friendly and capable of retaining CCTV images for up to 30 days, as well as retain the ability to access confidential information indefinitely. This requirement was stipulated by the Port of Cork not only for operational needs, but also for auditing by National and EU Commission Auditors and by U.S. Homeland Security Personnel.

One of the key criteria was that ADT's installation and commissioning of the new system would have the minimum disruption to daily activities across all Port facilities. This system also had to provide security cover for the Port operations building in Cobh, from which all ship traffic movements are managed, as well as the Port of Cork Company head office in Cork City, almost 20 kilometers away.

Crime prevention was one of the key drivers behind the implementation, and ADT placed choosing the right access control system at the heart of its solution. The installed system delivered advanced access control using CEM Etherpox intelligent card readers, and ID badges can be controlled centrally. The Port of Cork Company issues photo ID access cards and 'permits' as and when necessary to its employees and to personnel engaged in Port-related activities, such as shipping agents, stevedores and marine surveyors. This ensures that only authorized personnel can access pre-defined areas on-site, but also that the Port has a degree of flexibility to change access rights as needs arise.

For additional levels of protection within the dry bulk terminal and the ferry terminal, card readers were installed on the vehicle control barriers, and ANPR used in these areas to verify all vehicles coming in and out of the Port. This ANPR technology has proved to be a very useful and versatile tool to track and record vehicles entering and leaving the various Port facilities. The ANPR systems can be pre-programmed to raise an alarm

should a specific unauthorized vehicle enter or leave a site. With the heightened threat of terrorism and illegal activity, any systems which can provide the security team with additional resources to alert staff to suspicious activity or behavior is a useful contribution.

ADT is responsible for the maintenance and continuous update of the entire security system, and have enhanced the radio links to secure Ethernet links in order to transmit information digitally. This has, in turn, created a Local Area Network (LAN) for all data sent from the remote sites, and is centrally managed from the workstations in two control rooms. Any alarm events occurring from the intruder systems or any alarms from the access control system report to the same PC through this LAN. The operator viewing this PC in the control room also monitors the CCTV, so they can instantly view the alarm, identify its cause and respond quickly. This means the Port's incident response follows a consistent procedure, with the same operators in the control rooms monitoring the whole Port, instead of different people working across five separate terminals.

Remote access to CCTV feeds

Another crucial aspect of the organization's security strategy is that all relevant supervisors and managers have remote online access to the CCTV feeds from their laptops, so they can also



The Cobh cruise terminal at the Port of Cork.



The container terminal at the Port.

monitor any situation from anywhere in the world. Having the facility to verify the status of the system remotely, through IP-technology and the integrated network, provides senior personnel with an additional layer of reassurance that the Port is safe and secure. The benefit of not having to be in one location to access the security systems provides senior staff with flexibility and fluid management of the systems 24/7.

ADT is also responsible for the annual maintenance contract for all of the Port's electronic security equipment. An electronic fault reporting system is in place whereby the duty security personnel in a central security monitoring office generate a fault report to be sent to the PFSO and to the ADT Service Department for immediate action. Once a technician has rectified the fault, the report is closed and filed for future reference and audit purposes. Having an expert organization manage this entire process allows Port staff to focus on maintaining optimum levels of safety and security, rather than the ongoing maintenance of the system.

One additional key factor for the Port is that the new security systems installed are flexible, and staff can make changes for the good of the business, as and when required. All software

and equipment is upgradeable and fully compatible to the point where ADT can seamlessly add the latest version of the equipment into the existing solution without disrupting day-to-day activities.

The future of security technology at the Port of Cork

The Port is now looking ahead and planning to upgrade various sections of the security system to the latest technologies, ensuring it can maintain the safety and security of the Port of Cork. In particular, advances in megapixel CCTV technology and thermal imaging cameras could greatly enhance security systems and increase protection against terrorist and criminal activity. ADT has excellent local knowledge of Cork and the business in general, which keeps them one step ahead and very much in line with our objectives for the Port. The company's network of experts 'on the ground' will continue to provide the Port with ongoing support and assistance to ensure its security systems continue to be effective into the future, and that the Port of Cork remains a leader in on-land and harbor-based maritime security.

ABOUT THE AUTHOR AND ORGANISATION



Captain Pat Murphy, Master Mariner, has 23 years experience as ship Captain, including 10 years on highly sophisticated and technically advanced dynamically positioned

heavy-lift and pipe-lay vessels. He has spent six years as Port Facility Security Officer at the Port of Cork specializing in preparing and maintaining ISPS Code and EU Directive 2005/65 Port Facility Security Plans; ensuring that all security system hardware and software are fully functional, and providing training for Port security staff.

The **Port of Cork** is situated on the south coast of Ireland. The Port of Cork Company employs

111 full time employees in addition to 12 pilots. There are four main distinct port facilities in Cork: the City Quays, Tivoli Industrial Estate, Ringaskiddy Deepwater Berth and Cobh Cruise Terminal. The Port of Cork is one of only two Irish ports handling all six shipping modes such as RoRo, LoLo, liquid bulk, dry bulk, break bulk and cruise. Cork Harbor boasts the title of the world's second largest natural harbor, which means excellent deepwater facilities for both small and large shipping lines. As Ireland's premier gateway for exports of goods, the value of exports was estimated at approximately €18 billion, and imports were valued at approximately €7 billion.

ENQUIRIES

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