

# Security in the Port of Rotterdam



Jan Gardeitchik, *Manager Policy Department, harbour master division, Port of Rotterdam Authority, Rotterdam, the Netherlands*

In an open port area, an integrated approach to port security is essential. Establishing a physically tightly guarded overall port area is almost impossible in Rotterdam, due to the nature of its size. A mix of port facilities, roads, residential and recreational areas and lots of open water create the need for creativity and cooperation.

Most far reaching is our opinion that port security, and of course safety and environmental protection, should be

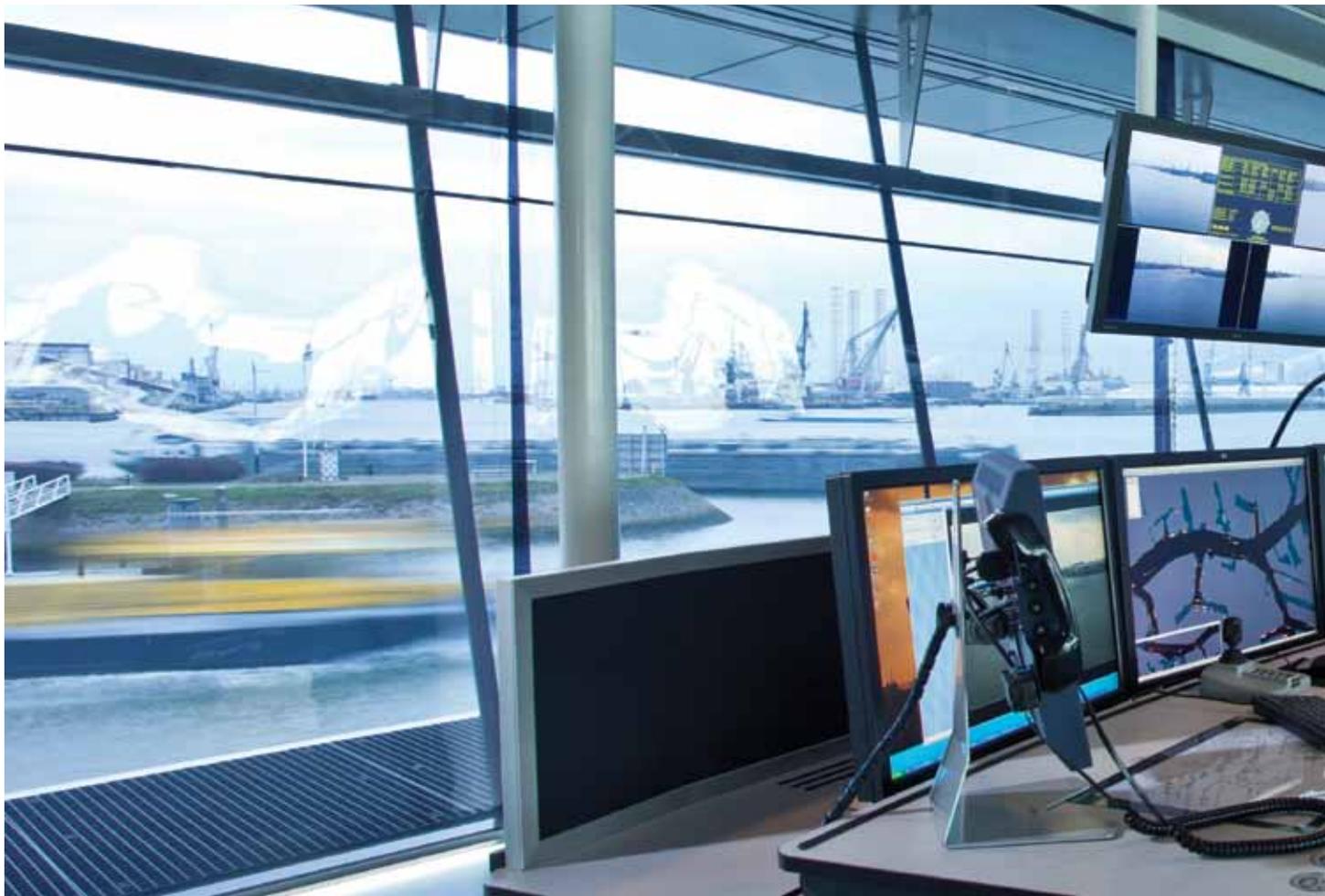
included in the design process of facilities as is done for logistics and efficiency. Operational aspects are dealt with through technical innovations but even more importantly, with smart cooperation between the responsible authorities and between authorities and private companies.

## **Rotterdam overview**

The Port of Rotterdam is one of the main ports and the largest logistic and industrial hubs in Europe. With an annual

throughput of 450 million tonnes of cargo, Rotterdam is by far the largest seaport of Europe. The port stretches out over 40 kilometres and is about 12,500 hectares (including Maasvlakte2). Including port approaches and anchorages the total length of the area is around 100 kilometres.

Every year, some 34,000 deep sea ships and 133,000 inland waterway vessels call the port. The Rotterdam Port Authority supervises this shipping day and night with seven modern patrol vessels, mobile



inspection teams and a high tech vessel traffic service (VTS) system, with the harbour coordination centre as the focal point.

The harbourmaster of Rotterdam is responsible for realising a safe, clean, secure and efficient port. With the size of the port and the numerous port activities ranging from container terminals to dry and liquid bulk facilities including liquefied natural gas (LNG); this is a substantial task and demands cooperation.

With regard to port security, the harbourmaster of Rotterdam acts as the 'port security officer' and is responsible for the overall coordination, the risk assessment, the ISPS certification process and the organisation of enforcement. As stated before, effective and smart cooperation with industry and other authorities is vital to be able to realise a sound port security. In Rotterdam this cooperation takes place on different levels. On a strategic level the Justice Department, Safety Region, National Police Force, Customs, Environmental Protection Agency and Port Authority act together as part of the Port Security Policy Board. On the tactical level, cooperation

works in risk analysis and work planning. In the operations, authorities work together in multidisciplinary audit teams for ISPS certification and combined enforcement actions.

### **Ambitions**

It's the ambition of the harbourmaster organisation to develop the port to be a front runner in safety (including security) and efficiency. To monitor port performance, a set of indicators has been developed which measure nautical and external safety, efficiency as well as port security. The monitoring gives insight in the solidity of the going concern activities and the areas where further development is needed to realise the set ambitions.

### **Challenges**

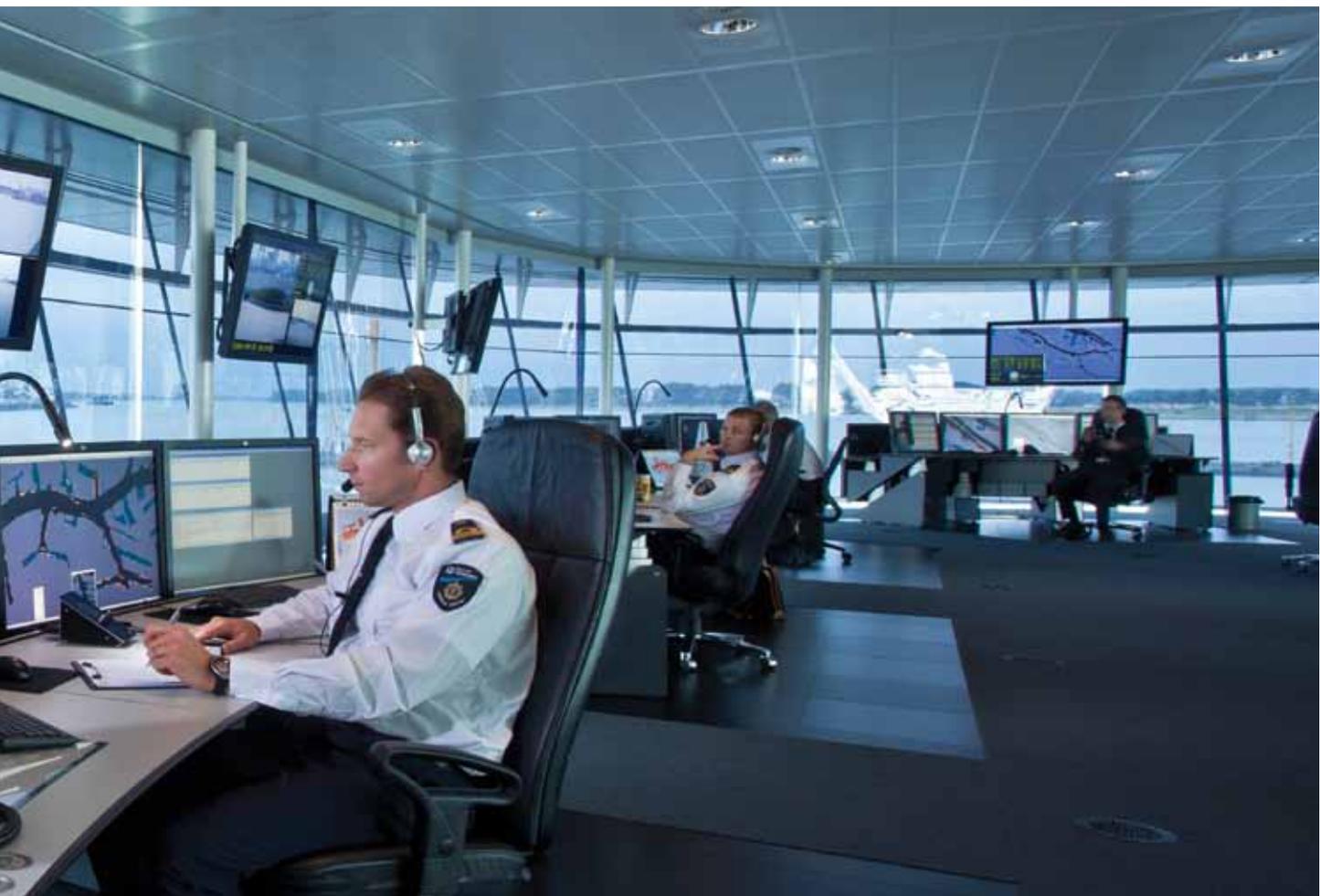
So what are the challenges and therefore the areas of further development that follow the monitoring of port performance combined with expert opinion? First of all the geometry of the port could be characterised as an 'open port area'. The port's size means that residential areas, recreational space and main roads must interlink with port facilities. For this reason it's impossible to close off the port

area for the general public and therefore -historically - security has largely focused on the individual terminal. This also applies to the port's vast waterway network.

On the other hand the security threat in the Netherlands is qualified by the authorities as 'substantial' although the risk on a port level is not considered as elevated. This makes it a challenge to keep awareness high for the port companies and general public. This also makes finding the vulnerabilities in the system hardly possible based just on terrorist threats. For this reason a more integrated approach to monitoring is adopted and the existing cooperation between the partners is used to find indications of criminal activities in the port. This information is useful to address port security in a broader perspective.

### **Forward planning**

In the Port of Rotterdam there is a strong belief that the integral approach is the way forward to deal with port security risks. Integral in this context means working closely together and establishing a smart cooperation between the various public and private partners in technical procedures and design.



Picture courtesy of the Port of Rotterdam Authority

Picture courtesy of the Port of Rotterdam Authority



On the technical side, the port recently explored the options available for underwater detection. Here, a test bed was provided for underwater intrusion detection for divers etc. In practice it was demonstrated that this type of support will work but it will also induce high costs. Within the radar chain a radar high definition CCTV coupling was established for a scanner near the shore, making it possible to control small ship movements and interact with ships approaching the port and at anchor.

The port currently carries out research on the feasibility for further integration of public and private CCTV capabilities within the port area. Nowadays, a lot of sensors are installed throughout the port but the information is processed in a fragmented way. The aim of this new initiative is to combine the information to generate an integrated picture of activities in the area.

Within the framework of European cooperation, the port takes part in a practical study on the use of unmanned aerial vehicles. In the summer of 2014 the first results will be available with respect to technical feasibility, operations and possible legal obstacles. This is on top of the already existing automatic gate control, x-ray scanning and nuclear detection at the terminal gates. To keep awareness high the port works on the development of E-learning modules to train personnel without disrupting their operational shifts. This enables for a higher frequency of training on the job.

As part of necessary procedures, enforcement agencies such as the Justice Department, Police, Customs and the Port Authority work closely together in sharing and analysing information and responses to ensure that port companies comply with ISPS certification and likewise Authorised Economic Operator status. This fits perfectly in the nationwide cooperation scheme on safety and security enforcement. The willingness to cooperate in the Netherlands dates back from the old ages and originates from the constant fight against the water. As you might know major parts of the country are below sea level so a constant awareness of the need for mutual assistance is embedded within the Dutch DNA.

### Design

Cooperation within the Port of Rotterdam provides a solid base for security within the port. One step further is the inclusion of port security as a parameter in terminal design. In practice not every terminal has the same risk characteristics and of course priority is given to higher risk terminals. Taking port security, among other issues such as safety and sustainability, into account when considering the design of terminals and surrounding port areas, is in our view an important step in helping to realise the Port of Rotterdam's security ambitions. This can be achieved without major amendments to its current set up, helping to preserve the benefits of the port for transport, living and recreation.

### About the author

Jan Gardeitchik is head of the harbour master policy department within the Port of Rotterdam Authority. The department is responsible for the set up and implementation of new developments within the port for nautical aspects, safety, environmental aspects and security. It advises the port's users, stakeholders and the internal organisation on new developments, safety and security issues, legal and enforcement aspects. Jan is a member of the harbour master organisation's management team and participates as duty manager in the Rotterdam regional crisis management organisation.

### About the organisation

The Port of Rotterdam is responsible for the development, construction, management and operation of the port and industrial area in Rotterdam and promotes the effective, safe and efficient handling of shipping in the port of Rotterdam and the offshore approaches to the port. The Harbour Master's Division (DHMR) ensures the smooth, safe, clean and secure handling of shipping traffic (approximately 33,000 ocean-going and 110,000 inland vessels annually). The nautical management area runs from the Van Brienoordbrug - 40 km inland to the end of the Eurogeul - 60 km off the coast. In addition, the Harbour Master's Division monitors order and safety in the port 24 hours a day. Incident response within the Rotterdam/Rijnmond safety region is a core task here. As a result of its public duty, the division occupies a special position within the Port of Rotterdam Authority.

### Enquiries

Jan Gardeitchik  
j.gardeitchik@portofrotterdam.com  
www.portofrotterdam.com