Spain's leading railway infrastructure company

CLIENT

Renfe, officially **Renfe Operadora**, is Spain's main railway infrastructure company. It is currently the only company in its industry that operates passenger rail services through the national General Interest Rail Network, and one of several freight transport companies that uses this network.

Since 2014, its operations have been managed indirectly via four different companies, all owned and managed by Renfe. Together, they are known as "Grupo Renfe". Passenger focused products and services are managed through Renfe Viajeros, freight transport through Renfe Mercancias, manufacturing and maintenance of rolling stock is managed by Renfe Integria, whilst the material leased by

Renfe is managed by Renfe Alquiler de Material Ferroviario.

Surveillance solution to prevent acts of vandalism

CUSTOMER NEEDS

Arenys de Mar is a station on the R1 line in Barcelona and the RG1 Girona de Rodalies Renfe line in this municipality.

The station is by the beach, since the Maresme stretch of track runs alongside the sea, separated from the town and the n-II must be crossed to access it.

These facilities are used to store trains overnight, hence the problem of vandalism, such as graffiti. Imagine how difficult it is to keep the trains clean. The paint damages the trains' bodywork, as it is acidic and fast drying. Depending on the extent of the graffiti, a train can be out of service in a workshop for cleaning for between one and seven days. The cost at the end of 2018 exceeded 16 million euros.

Last year there was more than 60% graffiti-type acts of vandalism in Spain.

As well as this increase, the vandals are becoming increasingly violent, and in many cases work in organised gangs. This is a threat to passengers, Renfe staff and security guards alike.

To avoid these situations and act efficiently the client needed a surveillance solution.

SOLUTION

Davantis equipment is designed to enable a quick response to any incident.

Alarms are sent to an alarm monitoring station, so you can take action in mere seconds if there is a real alarm. This avoids the inconvenience caused by false alarms.

Advanced Smart PTZ function to install dome cameras in the incident area

TECHNOLOGY

In this case, DAVANTIS used its Daview LR solution with four channels, and all the cameras in the perimeter of the railway station were linked.

Four thermal cameras were installed to cover the longest stretches, where intruders can penetrate via the n-II or over the beach.

For perpendicular access points from both sides of the station, directly from the tracks, we chose to use visible cameras with a much smaller detection range.
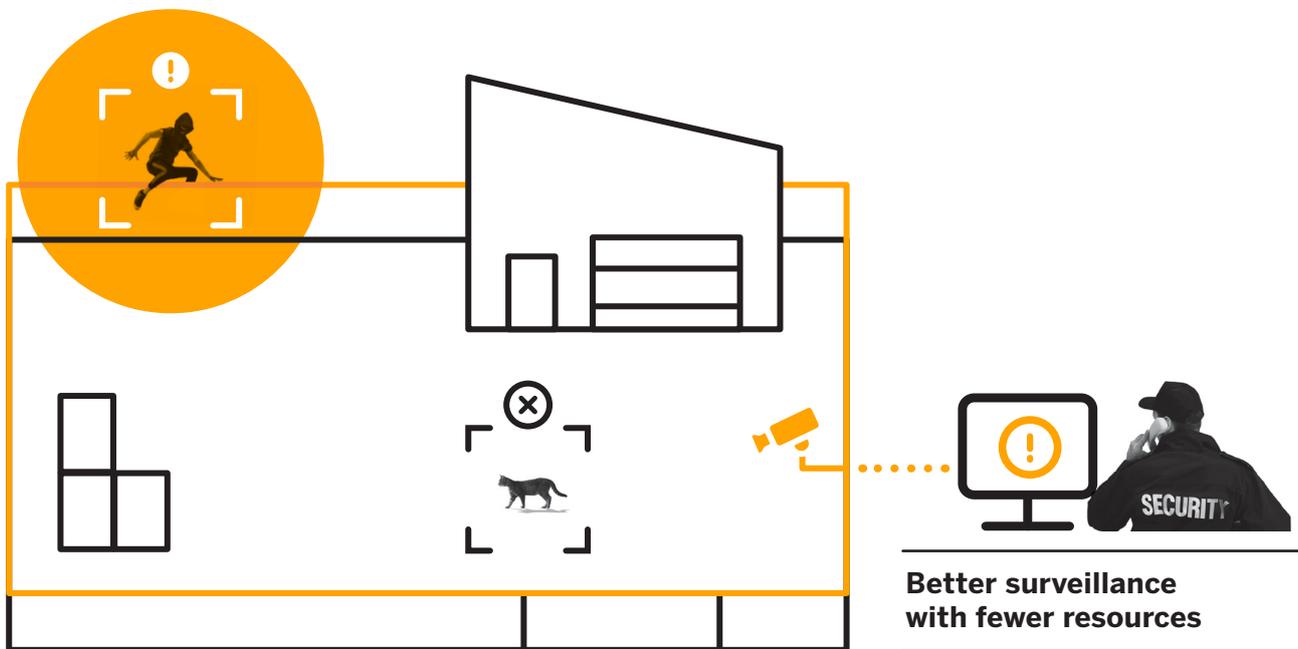
In this case, the advanced feature of the Daview LR Smart Ptz allows the dome cameras to be focused on the area where the incident has taken place. This gives you supporting video, which can help when verifying the fixed camera, whether thermal or day/night.

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The DAVANTIS video analysis system gives traditional CCTV an added value, implementing a reliable early detection system that improves security levels on our assets in complex situations.

David López · Project Manager of Renfe

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Better surveillance with fewer resources

Click 1
Snapshot
with a box highlighting the cause of the alarm.

Click 2
Video
of the alarm at the activation point.

Click 3
Live access
to the camera for immediate verification.

Once the alarm has been verified, the system activates dissuasive devices

BENEFITS FOR INSTALLERS

The combination of thermal and day/night technology optimises resources, depending on the range that each camera must reach.

The image stabiliser used by Daview LR is essential to minimise false alarms produced by the camera shake. Railway sites are very suitable for these features due to trains passing relatively close to cameras.

In these types of facilities, where the eventual installation of this equipment is determined largely by safety aspects, the movement of trains and the presence of catenary, and virtual IR is extremely useful for improving contrast with thermal cameras at certain times of the day and night.

BENEFITS FOR END USERS

The Daview AMs alarm control software, was installed in the Control Centre to improve the quick verification of the alarms, This way, the response time is optimised in the case of an incident and it allows you to act in a coordinated manner with physical monitoring present during the installation.

Not only do Daview AMs receive intruder alarms produced in the suburban station, but Davantis video analytics solutions can also trigger alarms when cameras are blacked out, sabotaged or moved from their original positions. The system also sends an alarm when the camera loses its signal. In railway stations, quick action is of the essence when such incidents occur.

The use of a loudspeaker to disturb intruders, only in the case of a real alarm, activates deterrent measures and avoids unnecessary nuisance for residents who live near the station, who would be inconvenienced by unnecessary activation of these devices due to false alarms.