# INTELLIGENT TRANSPORTATION SYSTEMS On-board video surveillance system for urban transport in Seville

# The project

- On-board video surveillance equipment for 410 buses:
  - Embedded digital DVR equipment
  - Communications equipment
  - 1328 IP cameras
- Control center:
  - Central video surveillance in real time
  - Integration with emergency center

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«We set ourselves an ambitious goal, with a system that would offer us all the possibilities of the state of the art of the technology, and GMV has installed a system that meets all our requirements»

Alejandro Soult, head of IT systems at TUSSAM





## Initial situation and objectives

TUSSAM is the municipal company in charge of the operation of urban public transport by bus in Seville. With a fleet of more than 400 buses, including 8 night lines, one of TUSSAM's priorities is to guarantee the safety of its drivers and passengers. For this reason, TUSSAM set out to implement a modern video surveillance system which would allow both real-time visualization and analysis of the incidents that occurred.



# Video surveillance system to improve safety on board of passengers and drivers

Transportes urbanos de Sevilla, TUSSAM, committed to the safety of its drivers and passengers, has trusted GMV technology to implement an on-board video surveillance system that enables monitoring in real time the interior of the vehicle in the event of an alarm and selective download of recorded video. All of this in an automated and secure way thanks to the automatic systems for downloading encrypted files via wifi and the central video analysis tools

«The drivers have valued it positively and the passengers have also especially valued the safety on board section in the surveys carried out on perceived quality»

Alejandro Soult, head of ICT systems at TUSSAM

### Solution

The aim of implementing GMV's new solution has been to increase safety through on board surveillance in the buses. To do this, the system has, among other functions, the recording of the video from all the cameras on the bus, its download wirelessly in the control center, as well as the visualization and exploitation in the control center of the videos.

New digital equipment has been installed on board including video recorders, IP cameras, POE switches and communications routers.

In addition, the supply also includes the solution for the operation of the video surveillance system in the control center, through software that allows the central operator to view the images from the different cameras in real time, search for recordings and play them in different configurations on the screen, and carry out the configuration of the main parameters of the system.

The core of the video surveillance system is the digital recording equipment of GMV's own design, which has the most advanced certifications, also for railways, as well as ONVIF compatibility, and is capable of recording images in Full HD resolution with great quality.

#### Results

TUSSAM improves the safety of its passengers and drivers with an effective, robust and reliable tool.

The new CCTV system also acts as a dissuasive element when it comes to avoiding incidents inside the bus.

The system has been positively valued by both drivers and users, who have highlighted it in the satisfaction surveys carried out by TUSSAM.

TUSSAM has a very powerful analysis tool that facilitates the automated download of more than 1,000 video files per month.