

CASE STUDY

GOVERNMENT OF CATALONIA, DEPARTMENT OF JUSTICE, RIGHTS AND MEMORY



MOTOTRBO™ IP SITE CONNECT DELIVERS MISSION-CRITICAL COMMUNICATIONS AT PRISONS ACROSS CATALONIA, SPAIN

IMPROVED RADIO COVERAGE AND AUDIO QUALITY PROVIDING ENHANCED ON-SITE SECURITY AND STAFF SAFETY



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Catalonia is an autonomous community of Spain, designated as a nationality by its Statute of Autonomy. It is situated in the north-east of Spain, has borders with France and Andorra to the north, covers more than 32 million km² and is home to a population approaching 8 million people. The capital of Catalonia is Barcelona, one of the most visited cities in Europe, and home to the Palau de la Generalitat, headquarters of the Ministry of the Presidency and of the Government of Catalonia.

The Generalitat de Catalunya, or Government of Catalonia, is the institution through which Catalonia politically organises its self-government as an autonomous community of Spain. Its origins date back to the 13th century, and can be considered to be one of the most democratic and pluralistic institutions in Europe. After a long history, the establishment was abolished in 1714 by King Philip V of Spain after Catalonia's military was defeated in the War of the Spanish Succession. In 1931, the Spanish State agreed to a new form of self-government for the region under the name of Generalitat of Catalonia. However, it remained in exile following the Spanish Civil War and was not fully recognised until 1977, after the restoration of democracy in Spain.

The Departament de Justícia, Drets i Memòria de la Generalitat de Catalunya, or Department of Justice, Rights and Memory of the Government of Catalonia, is the ministry within the Executive Council of Catalonia that is responsible for administering the justice system, including penitentiary services, across the region.

CUSTOMER PROFILE

Organisation:

Government of Catalonia, Department of Justice, Rights and Memory (Departament de Justícia, Drets i Memòria de la Generalitat de Catalunya)

Partners:

Mercury Barcelona SL

Industry:

Prisons

Location:

Catalonia, Spain

Motorola Solutions Products:

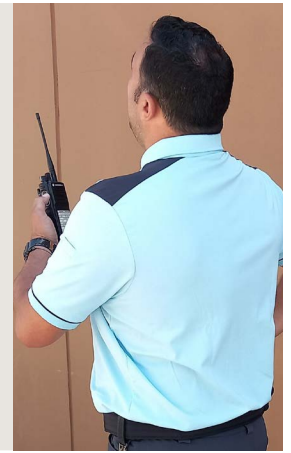
- 9x MOTOTRBO IP Site Connect systems, comprising:
- 20x SLR 5500 two-way repeaters
 - 1200x DP4401e portable radios
 - 6x DM4600e mobile radios
 - Accessories including IMPRES batteries and chargers

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“The Department of Justice needed to renew its portable radios, as well as increase the capacity of the radio infrastructure in the prisons and for this purpose it called a tender, which was awarded to Mercury Barcelona utilising the technology of Motorola Solutions. The solution presented by Mercury Barcelona allowed full use of all the elements in the existing infrastructure while offering growth in radio resources and providing additional functionalities that were very important for us, such as indoor and outdoor location tracking of the equipment. We are extremely satisfied with the performance of the new system and with the support that Mercury Barcelona has given us.”

Head of the Internal Penitentiary Regime Area, Department of Justice, Generalitat de Catalunya



CHALLENGE

When reviewing the existing communications systems in place at its prisons, the Justice Department identified improvements that were needed in order to help provide greater safety and security for its workers in the daily performance of their duties. It needed to increase the capacity of its systems to allow more users to make and receive calls without experiencing problems, and it needed to improve coverage in some of the prisons, including in underground areas where it is essential to have radio communications. The Department wanted to retain as much of its existing radio infrastructure as possible, both to maximise the return on investment of its current equipment, and to minimise disruption during installation and staff training on the new network.

After a competitive tendering process run by the Department of Justice to identify a supplier for the new systems, Mercury Barcelona SL was awarded the project in 2022. Mercury is a long-term Motorola Solutions partner specialising in the design, deployment and maintenance of digital two-way radio networks and has a track record of more than 35 years in the professional mobile radio communications market. In 2016, Mercury won a tender and successfully migrated all analogue radio systems in the Department of Justice's prisons to DMR digital technology, so was ideally suited to upgrade the equipment to a new system.

SOLUTION

Mercury carried out an extensive investigation of the technical requirements and conditions at each of the nine prisons, and identified the exact specifications in terms of repeaters and antenna systems needed to provide the necessary call capacity and coverage for all areas.

MOTOTRBO IP Site Connect was selected to make efficient use of existing repeaters and to connect all areas within each prison, including their Security Control Centre. Bluetooth Low Energy (BLE) beacons were also installed at defined locations to allow indoor location monitoring of staff as they move around the prisons.

All staff working in the prisons, including prison officers, medical staff, assistants, teachers, and maintenance and cleaning services personnel, were issued with MOTOTRBO DP4401e digital portable radios fitted with long-lasting IMPRES™ batteries to power a full shift. The radios are also fitted with earpieces that allow workers to discreetly receive calls without being overheard. 40-bit enhanced privacy encryption is used to prevent eavesdropping on the system, and the radios are IP68 rated and robust enough to withstand knocks and drops. They feature a dedicated orange emergency button that can be used to generate a silent alarm call that is received and managed through DM4600e mobile radios and TRBOnet software in the Security Control Centre. The software reports the identity of the radio that generated the alert and provides an indication of its location, allowing rapid response to provide aid. The software also logs and records all communications sent over the radio network, allowing calls to be reviewed or analysed at a later time if necessary.

The system has proven to be reliable, but Mercury Barcelona are on hand to provide service and support 24x7 if needed, ensuring a solution that can be relied upon to help improve security for the workers at the prisons.

BENEFIT

Thanks to its advanced features and clear audio, the DP4401e radios are providing reliable communications for workers at each of the prisons. The improved MOTOTRBO infrastructure, with new repeaters added to the existing ones, was a cost effective solution that is providing full radio coverage in all prison spaces, even in those that are difficult to reach and that entail a greater risk for workers, such as the underground service areas and corridors, and other critical risk areas.

The scalable system can expand and develop as requirements change with time, so will continue to help increase the security and safety of workers at the prisons in Catalonia today and into the future.

Other Products:

- TRBOnet control room solution for voice recording, location monitoring & fleet management
- 1000x BLE beacons for indoor location
- Earpieces with microphones for discreet, private communications

Benefits:

- Clear audio quality and excellent coverage across the prison, which is essential as the radio system provides the best and fastest way of communicating between workers
- Enhanced safety for workers, including indoor & outdoor location and sending of silent alarm calls
- 40-bit enhanced privacy for secure communications for day-to-day operations and during any emergency situation
- Advanced Lone Worker safety solution for prison personnel
- Swift, overnight deployment, with no loss of service
- Scalable systems with ongoing maintenance and service support provided 24x7 by Mercury Barcelona for a long-term solution