

Case Study



MOTOTRBO™ delivers robust critical communications to coordinate the restoration of drinking water supplies following the Valencia DANA floods

EMIVASA is a mixed group created by Valencia's City Council and Global Omnium to manage the public service of water supply and the provision of drinking water to Valencia and the surrounding areas. With over a century of accumulated experience, it aims to offer the best possible service, always respecting the highest parameters of quality and environmental care, whilst driving social development.



Customer
EMIVASA

Partner
ANFER RADIOCOMUNICACIONES, S.L.

Industry
Integrated Water Cycle Management

Solutions

- A MTR3000 repeater
- 33 x MOTOTRBO R2 y 13 x MOTOTRBO R7 two-way portable radios
- 16 x DP4600e, 5 x DP4401e, 4 x DP4800e y 4 x DP4801e MOTOTRBO digital portable radios
- 4 x MOTOTRBO DM4600e two-way mobile radios used as base stations



MOTOROLA SOLUTIONS

Challenge

On 29 and 30 October 2024, Valencia suffered historic flooding. The catastrophe left the area with 211 dead, 93 missing, and 95,000 people affected by the floods, as well as unquantifiable damage to housing, infrastructure, and public roads. These flash floods were caused by an intense meteorological phenomenon known as a DANA (Isolated High-Level Depression) or Cold Drop. This phenomenon occurs when a pocket of cold air breaks away from the jet stream and collides with warm, moist Mediterranean air.

EMIVASA, like other utility companies, used to have radio communications networks for voice and data. However, although EMIVASA had maintained its radio network for data, it had dismantled its voice network, due to the increasing use of mobile phone technology. Therefore, it did not have a backup communications system for emergencies. However, during and after the floods, all mobile networks in the affected areas were out of service, and it therefore had no means of communicating with its field teams.

As a result, on Saturday, 2 November, there was an urgent need for a radio communications system (to be deployed by 3 pm on the same day) to facilitate the coordination of the work needed to repair the affected water supply infrastructure. EMIVASA contacted ANFER RADIOCOMUNICACIONES, its trusted supplier for more than 30 years.

Solution

ANFER successfully deployed a MOTOTRBO network for EMIVASA in just five hours from receiving the request, and this was achieved with only two technicians (most of them could not reach the offices in the circumstances) and without being able to access the affected areas to establish coverage between these areas, the drinking water treatment plants, and the central control room. In addition, there was neither the time nor the means to install repeaters (the logistics platforms were in no position to dispatch goods). Therefore, ANFER decided to convert one of its existing remote-control repeaters into a voice repeater. Fortunately, one of these backup system repeaters was an MTR3000, with a duplexer, licensed frequencies, and a collinear antenna (radiating system), so it could be used to establish a network. The technicians reconfigured it as a DMR digital voice repeater, with eight direct channels for local communications, and two long-range channels (10km and 11km) for communications with the two drinking water treatment plants serving the affected areas.

ANFER had to source the 77 requested radio terminals from its own radio fleet. These consisted of 33 MOTOTRBO R2 and 13 MOTOTRBO R7 portable two-way radios, as well as DP4600e, DP4401e, DP4800e, and DP4801e MOTOTRBO digital portable radios, and 4 MOTOTRBO DM4600e mobile two-way radios used as base stations. All field workers coordinating the infrastructure repairs and reinstating the water supply used the radios for efficient and reliable communications.

“Following DANA, our efforts to coordinate the urgent restoration of the drinking water supply were seriously hampered by our inability to communicate with our displaced personnel, due to ongoing mobile phone network outages. ANFER deployed an emergency MOTOTRBO radio system for us in the space of a morning. This proved essential to optimise our coordination and speed of response, as we worked to restore our service. Indeed, although EMIVASA commissioned the deployment, all the companies in the Global Omnium Group used the radios.”

**Arantxa Gamón, Telecontrol Systems Manager,
EMIVASA (Global Omnium)**



Benefits

EMIVASA was very satisfied with both the system's performance and the lengths ANFER went to, to ensure the success of this urgent deployment. The team was aware that, without the MOTOTRBO network, it would have been extremely difficult for them to have worked effectively. And that was not the only time the system showed its worth. Arantxa Gamón summarises: "Our MOTOTRBO radio communications network also proved to be essential during the April blackouts on the Iberian Peninsula, as, once again, all the mobile communications networks went down. These emergencies have taught us the importance of having our own private communications systems and reaffirmed the strategic importance of this network. We plan to maintain it and enhance it in the future".



Benefits

- Emergency system deployed in just a morning, in challenging conditions
- Robust network coverage of the affected area
- Reliable, clear radio communications when mobile networks were not operational
- Effective team coordination, as EMIVASA and the other companies in the group worked to restore the water supply to residents and repair the infrastructure
- Intelligent and scalable system, with broader integration possibilities, which has once again proved its worth during the recent blackouts across the Iberian Peninsula
- Proof of the strategic importance of the network, which EMIVASA will maintain and strengthen in the future





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